

Bob McMurray
Dept. of Psychological and Brain Sciences
Secondary Appointments: Dept. of Communication Sciences and Disorders,
Dept. of Linguistics, Dept. of Otolaryngology
Tuesday, July 15, 2025

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EDUCATION AND PROFESSIONAL HISTORY

Education

- 2004 **Ph.D.** Brain and Cognitive Sciences, University of Rochester
Mentor(s): Tanenhaus, Michael and Aslin, Richard N.
Dissertation: Within-Category Variation is Used in Spoken Word Recognition: Temporal Integration at Two Time Scales.
- 2003 **M.S.** Brain and Cognitive Sciences, University of Rochester
Mentor(s): Tanenhaus, Michael and Aslin, Richard N.
- 1998 **B.A.** Psychology, Cornell University, *Magna Cum Laude*
Concentration: Cognitive Studies

Professional and Academic Positions

- 2019 - F. Wendell Miller Professor of Psychological and Brain Sciences
- 2018 - Associate Research Scientist, Haskins Laboratories
- 2017 - Secondary Appointment, Department of Otolaryngology, University of Iowa
- 2017 - Director, DeLTA Center (Development, Learning, Theory and Application), University of Iowa
- 2015 - 2019 Professor and Collegiate Scholar, Department of Psychology, University of Iowa
- 2013 - Director, Cognitive Science of Language Certificate Program, University of Iowa
- 2010 - 2015 Associate Professor, Department of Psychology, University of Iowa.
Secondary Appointment, Department of Communication Sciences and Disorders
Secondary Appointment, Department of Linguistics
- 2004 - 2010 Assistant Professor, Department of Psychology, University of Iowa
- 1998 - 2004 Research Assistant, Infant Development Laboratory, University of Rochester (Supervisor Richard N. Aslin, Ph.D.)

Research Assistant, Language Processing Laboratory, University of Rochester (Supervisor Michael Tanenhaus, Ph.D.)
- 1996 – 1998 Research Assistant, Human Information Integration Laboratory, Cornell University (Supervisor: Michael Spivey, Ph.D.)

Professional Development

- 2015 Visiting Scholar, Max Planck Institute for Psycholinguistics, Nijmegen, NL
- 2014 Visiting Scholar, Dept. of Experimental Psychology, Oxford, UK
- 2003 Categorization Summer School, University of Quebec at Montreal

Honors and Awards

| | |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025 | Honorary Member, Association for Laboratory Phonology |
| 2024 | Regents Award for Faculty Excellence, University of Iowa |
| 2024 | Elected Fellow, American Association for the Advancement of Science (AAAS). |
| 2024 | Distinguished Undergraduate Mentor Award, University of Iowa |
| 2019 | Scholar of the Year, University of Iowa |
| 2016 | European Society for Cognitive Psychology (ESCoP) Early Career Publication Award <i>awarded to Ph.D. student, Efthymia Kapnoula</i> for Kapnoula & McMurray (2016, <i>Journal of Experimental Psychology: General</i>). |
| 2015 | Meritorious Poster Submission, Meeting of the American Speech Language Hearing Association (Rigler, Farris-Trimble & McMurray, 2015) |
| 2015 | Collegiate Scholar, University of Iowa, College of Liberal Arts and Sciences |
| 2013 | Recognition of Excellence Prize, <i>Learning to Attend, Attending to Learn Workshop</i> , for Kucker, Samuelson & McMurray (2013) |
| 2013 | Psychonomic Society Outstanding Young Investigator Award |
| 2012 | International Society on Infant Studies Graduate Student Paper Award. For paper co-authored with graduate student Gwyneth Rost (Rost & McMurray, 2010) |
| 2012 | Distinguished Scientific Award for Early Career Contribution to Psychology, Developmental Psychology (American Psychological Association) |
| 2011 | Boyd McCandless Award (American Psychological Association, Division 7) |
| 2010 | Deans Scholar, University of Iowa, College of Liberal Arts and Sciences |
| 2009 - 2010 | NIH loan repayment program renewal: <i>The interaction of online competition and statistical learning: Word recognition and development in normal and impaired listeners</i> |
| 2008 | Junior Faculty Travel Award (International Conference on Infant Studies) |
| 2008 | Best Perception and Action Model, Meeting of the Cognitive Science Society (see Toscano & McMurray, 2008) |
| 2007 - 2008 | NIH loan repayment program: <i>Lexical and Statistical Processes in Speech Perception and Development: Normal and Impaired Listeners</i> |
| 1998 | TA Ryan Undergraduate Research Award, Cornell University, Dept. of Psychology |
| 1998 | Honorable Mention, NSF Graduate Research Fellowship |

Memberships

| | |
|--------|------------------------------------------------------------------------------------------------|
| 2020 - | University of British Columbia, Language Sciences Initiative (2020-) |
| 2021 - | Member, Society for Neurobiology of Language |
| 2019 - | Member, Association for Research in Otolaryngology |
| 2018 - | Fellow, Psychonomic Society (2018-, Member since 2012) |
| 2017 - | Member, Iowa Neuroscience Institute |
| 2017 - | Member, American Academy for the Advancement of Science |
| 2014 - | Member (etc), DeLTA (DEvelopment, Learning, Theory and Application) Center, University of Iowa |
| 2004 - | MidPhon (Mid-Continental Phonetics and Phonology) (2004-) |

TEACHING**Courses Taught at the University of Iowa**

| Term | Course# | Title | Ten-Day Enrollment | Final Enrollment |
|--------------|----------------|---------------------------------------------------------------------------|---------------------------|-------------------------|
| Fall, 2004 | 31:121 | Experimental Psychology II | | 28 |
| Spring, 2005 | 31:118 | Infant Development | | 40 |
| | 31:280 | Developmental Science Proseminar | | 3 |
| Fall, 2005 | 31:118 | Infant Development | | 31 |
| | 31:121 | Experimental Psychology II | | 23 |
| Spring, 2006 | 31:121 | Lab in Psychology | | 14 |
| Fall, 2006 | 31:210 | Developmental Science Proseminar | | 14 |
| | 31:118 | Infant Development | | 34 |
| Spring, 2007 | 31:210 | Developmental Science Proseminar | | 7 |
| Fall, 2007 | | -- <i>Developmental Leave</i> -- | | |
| Spring, 2008 | 31:210 | Developmental Science Proseminar | | 8 |
| Fall, 2008 | 31:118 | Infant Development | | 41 |
| Spring, 2009 | 31:210 | Developmental Science Proseminar | | 8 |
| Fall, 2009 | 31:118 | Infant Development | | 28 |
| | 31:137 | Language Processes | | 18 |
| Spring, 2010 | 31:210 | Developmental Science Proseminar | | 8 |
| Fall, 2010 | 31:330 | Seminar on Speech Perception, Word Recognition and Development | | 20 |
| | 31:137 | Language Processes | | 14 |
| Spring, 2011 | 003:186 | Problems in speech and hearing sciences (overload) | | 8 |
| | 31:210 | Developmental Science Proseminar | | 8 |
| Fall, 2011 | | -- <i>No courses due to service release</i> - | | |
| Spring, 2012 | 31:210 | Developmental Science Proseminar | | 9 |
| Fall, 2012 | 31:330 | Seminar on Speech Perception | | 8 |
| Spring, 2013 | 31:291 | Auditory Cognitive Neuroscience | | 3 |
| Fall, 2013 | | -- <i>No courses due to CDA</i> -- | | |
| Spring, 2014 | 31:210 | Developmental Science Proseminar | | 7 |
| | 31:273 | Cognitive Science of Language Proseminar | | 16 |
| Fall, 2014 | | -- <i>No courses taught due to grant release</i> -- | | |
| Spring, 2015 | PSY:6102 | Cognitive Science of Language Proseminar II | | 12 |
| | PSY:3670 | Language Processes | | 20 |
| Fall, 2015 | | -- <i>No courses due to grant / service release</i> - | | |
| Spring, 2016 | PSY: 5610 | Proseminar in Cognition and Perception (co-taught with A. Hollingworth) | | 14 |
| Fall, 2016 | PSY: 6102 | Cognitive Science of Language Proseminar | | 6 |
| Spring, 2017 | NSCI: 7301 | Directed Study in Neuroscience | | 7 |
| Spring, 2017 | PSY: 3670 | Language Processes | | 8 |
| Fall, 2017 | PSY: 4090 | Senior Seminar. The Science of Learning: From the Laboratory to Real Life | | 16 |

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|--------------|-----------|--------------------------------------------------------|----|----|
| Spring, 2018 | PSY: 5610 | Proseminar in Cognition and Perception | | 17 |
| | PSY: 3998 | Special Section of Laboratory in Psychology (overload) | | 4 |
| Fall, 2018 | PSY 5410 | Proseminar in Developmental Science | | 10 |
| Spring, 2019 | PSY 6101 | Cognitive Science of Language Proseminar | | 7 |
| Fall, 2019 | | -- No courses taught due to grant release -- | | |
| Spring, 2020 | PSY: 5610 | Proseminar in Cognition and Perception | 12 | 12 |
| Fall, 2020 | PSY: 7610 | Seminar: Cognitive Psychology | 16 | 16 |
| Spring, 2020 | | -- No courses taught due to CDA -- | | |
| Fall, 2021 | PSY: 3670 | Language Processes | 16 | 16 |
| Spring, 2022 | | -- No courses taught due to grant release -- | | |
| Fall, 2022 | PSY:5610 | Proseminar in Cognition and Perception | | 7 |
| Spring, 2023 | PSY:6102 | Cognitive Science Language Proseminar II | | 7 |
| Fall, 2023 | | -- No courses taught due to grant release -- | | |
| Spring, 2024 | PSY:3670 | Language Processing | 16 | 16 |
| | PSY:7610 | Psychology of Language | 8 | 8 |
| Fall, 2024 | PSY: 5610 | Proseminar in Cognition & Perception | | 8 |

Innovations in Teaching (Teaching Contributions)

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|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2022 | Co-led redesign of Cognition Area Proseminar |
| Spring 2021 – 2023 | <i>Discover, Engage, Innovate.</i> Developed a pilot program with the Iowa Center for Research by Undergraduates to break down barriers to research participation by students from under-represented groups by paying them to engage in research. |
| Fall, 2019 – present | Developed collaboration with Coe College to place Psychology undergrads at Coe in our Cedar Rapids laboratory to give them a “big science” research experience. |
| Spring, 2018 | <i>Senior Seminar. The Science of Learning: From the Laboratory to Real Life.</i> Developed innovative senior seminar on applying the cognitive science of learning to the real world. Featured field trips to observe medical student training, UI sports program, speech pathology clinic and others. |
| Fall, 2018 | <i>Special Section of Laboratory in Psychology.</i> Hosted four students from the senior seminar to develop their ideas into a research project. |
| 2013 – present | <i>Cognitive Science of Language Certificate.</i> Co-developed a new graduate certificate in the Cognitive Science of Language that serves students from Psychological and Brain Sciences, Communication Sciences and Disorders and Linguistics |
| 2013 | As coordinator for undergraduate studies, designed a learning outcomes evaluation using a quasi-experimental design to rigorously evaluate learning outcomes. |

Student Mentoring Summary

| Semester | Undergrad | Graduate |
|--------------|--------------------------------------------|----------|
| Fall, 2004 | RAs: 4 | |
| Spring, 2005 | RAs: 5 | |
| Fall, 2005 | RAs: 8 | PBS: 2 |
| Spring, 2006 | RAs: 9 | PBS: 2 |
| Fall, 2006 | RAs: 7 | PBS: 3 |
| Spring, 2007 | RAs: 8; Honors – PBS: 2 | PBS: 3 |
| Fall, 2007 | RAs: 5 | PBS: 3 |
| Spring, 2008 | RAs: 6; Honors – PBS: 2; Honors- CSD: 1 | PBS: 3 |

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|--------------|---------------------------------------------|----------------------------------------------|
| Fall, 2008 | RAs: 4 | PBS: 4 |
| Spring, 2009 | RAs: 8 | PBS: 4 |
| Fall, 2009 | RAs: 7 | PBS: 5 |
| Spring, 2010 | RAs: 7; Honors – Ling: 1 | PBS: 5 |
| Fall, 2010 | RAs: 6 | PBS: 5 |
| Spring, 2011 | RAs: 4; Honors – CSD: 1 | PBS: 5 |
| Fall, 2011 | RAs: 5 | PBS: 5 |
| Spring, 2012 | RAs: 2; Honors – PBS: 2 | PBS: 4 |
| Fall, 2012 | RAs: 7 | PBS: 4; Neuro: 1; Ling: 1 |
| Spring, 2013 | RAs: 5 | PBS: 4; Neuro: 1; Ling: 1 |
| Fall, 2013 | RAs: 5 | PBS: 2; Biostats: 1; Neuro: 1 |
| Spring, 2014 | RAs: 4; Honors – PBS: 1 | PBS: 2; Biostats: 1; Neuro: 1 |
| Fall, 2014 | RAs: 5; Honors – PBS: 1 | PBS: 2; Biostats: 1; Neuro: 1 |
| Spring, 2015 | RAs: 8; Honors – CSD: 1 | PBS: 2; Biostats: 1; Neuro: 1 |
| Fall, 2015 | RAs: 7 | PBS: 2; Biostats: 1; Neuro: 2 |
| Spring, 2016 | RAs: 6 | PBS: 2; Biostats: 1; Neuro: 2 |
| Fall, 2016 | RAs: 7 | PBS: 2; Biostats: 1; Neuro: 2 |
| Spring, 2017 | RAs: 10; Honors – CSD: 1 | PBS: 2; Biostats: 1; Neuro: 2 |
| Fall, 2017 | RAs: 7 | PBS: 2; Biostats: 1; Neuro: 1 |
| Spring, 2018 | RAs: 9; Honors – PBS: 1; Honors – CSD: 1 | PBS: 2; CSD: 1; Grad = Biostats: 1; Neuro: 1 |
| Fall, 2018 | RAs: 10 | PBS: 2; CSD: 1; Neuro: 1 |
| Spring, 2019 | RAs: 8 | PBS: 2; CSD: 1; Neuro: 1 |
| Fall, 2019 | RAs: 10; Honors – CSD: 2 | PBS: 2; Neuro: 1; CSD: 1 |
| Spring, 2020 | RAs: 9; RAs – Coe: 4 | PBS: 1; CSD: 1; Neuro: 1 |
| Fall, 2020 | RAs: 9; RAs – Coe: 2 | PBS: 4; Neuro: 1; |
| Spring, 2021 | RAs: 7; RAs – Coe: 1 | PBS: 3; Special Ed: 1 |
| Fall, 2021 | RAs: 2; Honors CSD: 2 RAs – Coe: 1 | PBS: 3; Special Ed: 1 |
| Spring, 2022 | RAs: 7; Honors CSD: 2 RAs – Coe: 1 | PBS: 3; Special Ed: 1 |
| Fall, 2022 | RAs: 8 RAs – Coe: 1 | PBS: 3 |
| Spring, 2023 | RAs: 12 | PBS: 3 |
| Fall, 2023 | RAs: 9 | PBS: 4 |
| Spring, 2024 | RAs: 9 | PBS: 4 |
| Fall, 2024 | RAs: 9 | PBS: 3 |

Student Mentoring

Post-doctoral Trainees – Mentor or Co-Mentor

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|------------------------------|----------------------------------------------------------------------------------------------------------------|
| August, 2024 – present | Carruturo, Sita (ongoing) |
| July, 2022 – present | Kim, Hyoju (Ongoing) |
| February, 2025 – April, 2025 | Tifani Biro |
| July, 2021 – July, 2023 | Ethan Kutlu. Currently Assistant Professor of Linguistics, University of Iowa |
| August, 2018 – August, 2024 | Colby, Sarah. Currently, Post-doctoral associate, University of Ottawa |
| August, 2018 – July, 2018 | Hendrickson, Kristi. Currently Assistant Professor of Communication Sciences and Disorders, University of Iowa |

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|-----------------------------|-----------------------------------------------------------------------------------------------|
| August, 2017 – July, 2018 | Liu, Andrew. Left to become Fellow in Otolaryngology, University of Iowa |
| May, 2012 – August, 2016 | Rhone, Ariane. Currently Assistant Research Scientist, Dept. of Neurosurgery |
| August, 2008 – July, 2013 | Farris-Trimble, Ashley. Currently Associate Professor of Linguistics, Simon Fraser University |
| August, 2007 – August, 2008 | Ross-Sheehy Shannon. Currently: Assistant Professor, University of Tennessee, Knoxville |

Doctoral Students – Mentor or Co-Mentor

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|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| August, 2023 – present | Gur, Ege, ongoing, Psychology (Cognition) |
| January 2023 – present | Dzan Zelihic, Dept. of Special Education, University of Oslo (Co-Mentored with Thanassi Protopapas) |
| August 2020 – present | Jeppsen, Charlotte, ongoing, Psychology (Cognition) |
| August 2020 – present | Muegge, John, ongoing, Psychology (Cognition) |
| August 2020 – September, 2024 | Chiu, Samantha, Psychology (Cognition). Left program to pursue work in the Office of Inspector General, Dept. of Health and Human Services. |
| August 2020 – July, 2022 | Zimmermann, Leah, Ph.D. (Special Education, Co-Supervised with Shawn Datchuk) Currently Instructional Track Professor, Dept. of Teaching and Learning, University of Iowa |
| August, 2014 – December, 2020 | Smith, Francis X., Ph.D., Psychology (Cognition). Currently Post-doc, Dept. of Communication Sciences and Disorders, University of Iowa |
| August, 2014 – December, 2020 | Sarrett, McCall, Ph.D., Neuroscience, Currently Assistant Professor, Dept. of Psychology, Gonzaga University |
| January, 2018 – July, 2020 | Klein, Kelsey, Ph.D., Communication Sciences and Disorders (Audiology). Currently Research Scientist, House Ear Institute |
| August, 2014 – March, 2019 | Roembke, Tanja, Ph.D., Psychology (Cognition). Currently Post-doc, Aachen Technical Institute, Germany |
| August, 2019 – December, 2019 | Urbanski, Dana, Psychology. Did not complete Left to pursue training in Audiology. Currently Assistant Professor at Indiana University, Bloomington. |
| August, 2013 – May 2018 | Seedorff, Michael, Ph.D. (co-mentored with Jake Oleson), Biostatistics. Currently Data Scientist, Google |
| August, 2010 – July, 2015 | Quinn, Michelle, did not complete, (co-mentored with J. Bruce Tomblin), Communication Sciences and Disorders |
| August, 2012 – April, 2017 | Schreiber, Kayleen, Ph.D., Neuroscience, Currently Freelance Science Communication |
| August, 2010 – March, 2016 | Kapnoula, Efthymia, Ph.D., Psychology (Cognition and Perception). Currently Ikerbasque Research Fellow [equivalent to US Assistant Professor], Basque Center for Brain and Language |
| August, 2008 – | Galle, Marcus, Ph.D., Psychology (Developmental Science). |

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| May, 2014 | Currently Lecturer, Rio Grande Valley State University |
| August, 2009 – May, 2013 | Kucker, Sarah, Ph.D. (co-mentored with Larissa Samuelson), Psychology (Developmental Science). Currently Assistant Professor of Psychology, Southern Methodist University |
| August, 2012 – July, 2013 | Quin-Wreidt, Lin, Ph.D. (co-mentored with Cathy Ringen) Linguistics. Currently Lecturer, English as a Second Language, University of Iowa |
| August, 2008 – July, 2013 | Apfelbaum, Keith, Ph.D., Psychology (Cognition & Perception). Currently Data Scientist, Children's Hospital of Philadelphia. |
| August, 2005 – November, 2011 | Munson, Cheyenne, Ph.D., Psychology (Cognition & Perception). Currently Adjunct Professor of Psychological and Brain Sciences at Villanova University |
| August, 2005 – July, 2011 | Toscano, Joseph, Ph.D., Psychology (Cognition & Perception). Currently Associate Professor of Psychological and Brain Sciences at Villanova University |
| June, 2007 – January, 2008 | Kovack-Lesh, Kristine, Ph.D. (co-mentored with Lisa Oakes), Psychology (Developmental Science). Currently Professor of Psychology at Ripon College |

Doctoral Students – Significant Projects

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|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2022 – 2023 | Eldon Sorensen, Dept. of Biostatistics |
| 2021 – 2025 | Paige Nelson, ongoing, Psychological and Brain Sciences |
| 2021 – 2023 | Collin Nolte, Dept. of Biostatistics, will be Assistant Professor in Dept. of Mathematics, Grinnell University |
| 2016 – 2017 | Hall, Jessica, Ph.D., Communication Sciences and Disorders |
| 2015 – 2016 | Smith, Jodi, Ph.D., Clinical Psychology |
| 2014 – 2015 | Freedberg, Michael, Ph.D., Neuroscience |
| 2012 | Brooks, Dan, Ph.D., Psychology |
| 2011 – 2013 | Zhao, Libo, Ph.D., Psychology, Currently Assistant Professor of Psychology, Beihang University |
| 2010 - 2012 | Kulikov, Vladimir, Ph.D., Linguistics. Currently Assistant Professor, University of Qatar |
| 2009 – 2012 | Wifall, Tim, Ph.D., Psychology |
| 2008 – 2010 | Stephanie Packard, left program, Psychology |
| 2007 - 2011 | Rost, Gwyneth, Ph.D., Communication Sciences and Disorders. Currently Senior Lecturer of Communication Sciences and Disorders, University of Massachusetts, Amherst |
| 2006 - 2008 | Horst, Jessica, Ph.D., Psychology (Developmental Science). Currently reader in Psychology, University of Sussex |
| 2005 | John Lipinski, Ph.D., Psychology |
| 2005 | Sunghie Lee, left program, Communication Sciences and Disorders |
| 2005 – 2006 | Vicki Samelson, Ph.D., Communication Sciences and Disorders |

Fullbright Scholars

2013 – 2014

Roembke, Tanja

Honors Theses

| | |
|------|-------------------------------------------------------------------------------------------------------------------------------|
| 2025 | Hannah Fricke, B.S., Psychology and Linguistics. Currently works as research assistant at Children's Hospital of Philadelphia |
| 2022 | Morales, Camila, Communication Sciences and Disorders, Currently, M.S. In Speech Pathology, University of Iowa |
| 2022 | Woolsey, Evita, Communication Sciences and Disorders, Currently, M.S. In Speech Pathology, University of Iowa |
| 2019 | Plock, Sarah, B.S., Communication Sciences and Disorders |
| 2019 | Simon, Abigail, B.S., Communication Sciences and Disorders. Currently, Au.D. Ohio State University |
| 2018 | Shihadah, Victoria, B.S., Communication Sciences and Disorders |
| 2017 | Blomquist, Christina, B.S., Communication Sciences and Disorders. Currently Doctoral Candidate, University of Maryland |
| 2015 | Danelz, Ani, B.S., Communication Sciences and Disorders |
| 2014 | Hiolski, Kathryn, B.A., Psychology |
| 2014 | Wiggs, Kelsey, B.A., Psychology, Currently Doctoral Candidate, Indiana University |
| 2012 | Marino, Aimee, B.A., Psychology |
| 2012 | Vangsness, Lisa, B.A., Psychology |
| 2011 | Walker, Jessica, B.S., Communication Sciences and Disorders |
| 2010 | Bullock-Rest, Natasha, B.A., Linguistics |
| 2008 | Greiner, Lea, B.S., Communication Sciences and Disorders |
| 2008 | Gannon, Mary, B.S., Psychology |
| 2008 | Mathews, Megan, B.S., Psychology |
| 2007 | Robinson, Molly, B.S., Psychology |
| 2007 | Huette, Stephanie, B.S., Psychology, Currently Associate Professor of Psychology, University of Memphis |

Significant Undergraduate Work (Thesis-level)

| | |
|-----------|-------------------------------------------------------------------------------|
| 2024-2025 | Mitchell Stick, B.A., Psychology |
| 2023-2024 | Kate Hinz, B.S. Communication Sciences and Disorders |
| 2018 | Wan, Luyuan, B.A., Psychology |
| 2018 | Miller, Kenzie, B.A., Psychology |
| 2018 | Praska, Rochelle, B.A., Psychology |
| 2018 | Montiero, Elissa, B.A., Psychology |
| 2018 | Keysar, Max, B.S., Music. Doctoral Study, University of Nevada, Las Vegas |
| 2011 | Anderson, Nathaniel, B.S., Psychology. Doctoral Study University of Illinois |
| 2009 | Overgard, Brooke, B.A., Psychology |
| 2009 | Wallett, Ashley, B.A., Psychology |
| 2008 | Merickel, Jennifer, B.A., Linguistics. Doctoral Study University of Rochester |
| 2007 | McEchron, William, B.A., Psychology. Currently at SR Research |
| 2006 | Spilger, Scott, B.A., Linguistics |
| 2005 | Kellog, Leslee, B.S., Psychology |
| 2005 | Struck-Marcel, Andrew, B.S., Psychology, B.M., Music |
| 2005 | Dennhardt, Joel, B.S., Psychology |

Doctoral Committee

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|-----------|------------------------------------------------|
| 2024- | Lucas Carsten, Genetics |
| 2024-2025 | Francisca Diaz, Psychology |
| 2023 | Jina Kim, Communication Sciences and Disorders |

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|-------------|-------------------------------------------------------------|
| 2022 – 2023 | Collin Nolte, Biostatistics |
| 2022 | Ellen O'Donoghue, Psychology |
| 2021 – 2022 | Aldugom, Mary, Psychology |
| 2019 – 2022 | Rangel, Ben, Neuroscience |
| 2019 – 2020 | Pruner, Todd |
| 2019 – 2020 | Chen, Mengtian, FLARE |
| 2018 – 2019 | Lorenz, Megan, Psychology |
| 2017 | Yang, Shuyi, FLARE |
| 2017 | Biswas, Sampurna, Electrical Engineering |
| 2017 – 2019 | Jardine, Niccole, Psychology |
| 2016 – 2019 | Hertsberg, Naomi, Communication Sciences and Disorders |
| 2014 – 2016 | Hilliard, Caitlin, Psychology |
| 2014 – 2016 | Carden, Kelly, Linguistics |
| 2014 – 2016 | Klooster, Nathaniel, Neuroscience |
| 2014 – 2016 | Pugh, Melissa, Biostatistics |
| 2014 – 2015 | Guzman-Valez, Edmarie, Neuroscience |
| 2013 – 2016 | Freedberg, Michael, Neuroscience |
| 2013 – 2015 | Belfi, Amy, Neuroscience |
| 2013 – 2014 | Wifall, Timothy, Psychology |
| 2012 – 2014 | Buss, Aaron, Psychology |
| 2011 | Perry, Lynn, Psychology |
| 2010 – 2011 | Mendez-Gallardo, Valerie, Psychology |
| 2010 | Soto, Fabian, Psychology |
| 2010 | Perone, Sammy, Psychology |
| 2010 | Rost, Gwyneth, Communication Sciences and Disorders |
| 2010 | Kulikov, Vladimir, Linguistics |
| 2009 | Ng, Damon, Psychology |
| 2008 | Hsu, Hsin-Jen (Julie), Communication Sciences and Disorders |
| 2008 | Sasa, Tomosasa, Linguistics |
| 2008 | Recker, Kara, Psychology |
| 2008 | Johnson, Jeff, Psychology |
| 2008 | Simmering, Vanessa, Psychology |
| 2007 – 2008 | Lee, Hyunkyu, Psychology |
| 2007 | Horst, Jessica, Psychology |
| 2007 | Abbes, Brandon, Psychology |
| 2006 – 2007 | Yu-Hisang Wu, Speech Pathology |

External Ph.D. Evaluation

| | |
|------|--------------------------------------------------------------------|
| 2023 | Pan Lei, Nanyang Technical University of Singapore |
| 2022 | Rebecca Abrahamse, Macquarie University |
| 2020 | Rebecca Holt, Macquarie University |
| 2018 | Felix Desmeules-Trudel, Dept. of Linguistics, University of Ottawa |
| 2013 | Titia Bender, Dept. of Linguistics, University of Amsterdam |

Comprehensive Exam Committee (Doctoral)

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|------|-------------------------------------------------------------------------------------------------|
| 2025 | Hyoji Ha |
| 2023 | Ashby Martin (Neuroscience) |
| 2021 | Francisca Diaz |
| 2020 | Ellen O'Donoghue |
| 2019 | Andy Mistak |
| 2017 | Jonathan Schacherer, Victor Navarro |
| 2016 | Todd Pruner |
| 2015 | Shaorong Yan |
| 2014 | Sojeong Yoon (CSD), Eli Asikin-Garmager (linguistics), Paul Morris (linguistics), Francis Smith |

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| 2013 | Nicole Jardine, Caitlin Hilliard, Kelly Cole (Linguistics), Elizabeth O'Neal |
| 2012 | Mouna Attarha, Bryan Brown (CSD), Dan Vatterott |
| 2011 | Lynn Perry, Shan-Ju Lin (CSD) |
| 2010 | Michelle Quinn (CSD), Sarah Kucker, Caglar Tas, Fang Chi Chou (CSD), Vladimir Kulikov (Linguistics), Katy Mueller (CSD) |
| 2009 | Tim Wiffal, Stephanie Packard, Aaron Buss, Katherine Hagerty |
| 2008 | Fabian Soto, Stephanie Packard, Libo Zhao, Lynn Perry, Valerie Mendez-Gallardo |
| 2007 | Christine Ziemer, Gwyneth Rost (Speech Pathology), Sasa Tomosasa (Linguistics) |
| 2006 | Sammy Perone |
| 2005 | Brandon Abbs, Hyunkyu Lee, Wendy Troob |
| 2004 | Kristine Kovack, Vanessa Simmering, Kara Kosun, Jennifer Lee |

MA Committee (Doctoral)

| | |
|------|------------------------------------------------------|
| 2012 | Abdallah, Marwa, Psychology |
| 2010 | Grieb, Melinda, Communication Sciences and Disorders |
| 2009 | Rigler, Hannah, Communication Sciences and Disorders |
| 2005 | Klein, Vicki, Communication Sciences and Disorders |

Professional Mentoring

| | |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2020 - 2025 | Wang, Xin, Assistant Professor, Dept. of Psychology, Macquarie University |
| 2018 – 2020 | Black, Alexis, Post-doc, Haskins Laboratories |
| 2017 – present | Grieco-Callub, Tina, Assistant Professor, Dept. of Communication Sciences and Disorders, Rush University |
| 2017 – 2018 | Tessier, Anne Michelle, Assistant Research Scientist, University of Michigan, K99 preparation |
| 2015 – 2017 | Smith, Nicholas, Assistant Scientist, Boys Town National Research Hospital |
| 2015 – 2017 | Benitez, Viridiana, Post-Doc, University of Wisconsin. Mentor on grant to support careers of scholars from underrepresented groups |
| 2015 | Dial, Heather, Doctoral Candidate, Rice University. Mentor on application of eye-tracking / visual world methods to understand language processing in brain damaged individuals |
| 2015 | Leung, Keith, Doctoral Student, Simon Fraser University and Redmon, Charles, Doctoral Student, Kansas University. Three day intensive work shop on application of logistic regression to phonetic data. |

SCHOLARSHIP**Areas of Research Interest**

My research examines speech perception, spoken word recognition and reading and their development across the lifespan. My laboratory seeks to develop cognitive science and cognitive neuroscience theories of language, and to apply these models to development and aging, and to individuals facing a variety of language, hearing and reading disorders. I use eye-tracking, EEG, Electrocardiography, MRI and cognitive psychology to investigate these issues.

Publications

* = Senior Author, Major Contribution, ** = Secondary Contribution, *** = Equal Contribution, **** = Minor Contribution
 + = undergraduate student (11 total), ++ graduate student, +++ post-doctoral

Refereed Articles

157. * Jeppsen⁺⁺, C., and McMurray, B. (in press) Cochlear Implants Convey Less Speech Information for Experienced Listeners with Single-Sided Deafness. *Journal of the Association for Research in Otolaryngology*. https://osf.io/preprints/psyarxiv/x4pdz_v1
156. ** McMurray, B., Oleson, and Kutlu, E. (in press) From Real-Time Measures to Real World Differences New [and Old] Statistical Approaches to Individual Differences in Real-Time Language Processing. Invited submission to *Brain Research*. <https://osf.io/preprints/psyarxiv/2c5b6>
155. * Roembke, T., and McMurray, B. (in press) Unlearning incorrect associations in word learning: Evidence from eye-tracking. *Cognitive Science*.
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15. * Apfelbaum, K., Brown, C., Zimmermann, J., and McMurray, B. (2018) Validation and Reliability Testing of the WordFlight Diagnostic Assessment Tool for Secondary School Readers. *Foundations in Learning, Inc.* Coralville, IA.
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4. ** Tanenhaus, M., Magnuson, J., McMurray, B., and Aslin, R. (2000). Does lexical knowledge mediate perceptual effects of compensatory coarticulation? Evidence from research with an artificial lexicon. *Proceedings of the Workshop on Spoken Word Access Processes*.
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2. * McMurray, B., Spivey, M., and Aslin, R. (2000). The Perception of Consonants by Adults and Infants: Categorical or Categorized? Preliminary Results. In Crosswhite, K., and Magnuson, J., eds., *The University of Rochester Working Papers in the Language Sciences, 2000(2)*, 215-256.
1. * McMurray, B. (1998). The Hebbian Acoustic/Phonetic Category Acquisition Model (HAPCAM): a neurologically plausible connectionist account of the development of speech perception abilities. Senior Honors Thesis, Cornell University, Department of Psychology

Refereed Book Chapters

9. ** Jongman, A., & McMurray, B. (2017). On invariance: Acoustic input meets listener expectations. In A. Lahiri and S. Kotzor (Eds) *The Speech Processing Lexicon: Neurocognitive and Behavioural Approaches* (pp. 21-52). Berlin: Walter de Gruyter GmbH & Co.
8. * McMurray, B., Kapnola⁺⁺, E., & Gaskell, M. G. (2016). Learning and integration of new word-forms: Consolidation, pruning and the emergence of automaticity. In M. G. Gaskell & J. Mirković (Eds.), *Speech Perception and Spoken Word Recognition* (pp. 116-142). London: Taylor & Francis.
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4. * McMurray, B., Zhao⁺⁺, L., Kucker⁺⁺, S., and Samuelson, L. (2013). Pushing the envelope of associative learning: Internal representations and dynamic competition transform association into development. In G. Hollich and L. Gogate (Eds) *Theoretical and Computational Models of Word Learning: Trends in Psychology and Artificial Intelligence* (pp. 49-80). Hershey, PA: IGI Global
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1. * McMurray, B., Horst⁺⁺, J., Toscano⁺⁺, J., and Samuelson, L. (2009) Towards an integration of connectionist learning and dynamical systems processing: case studies in speech and lexical development. In Spencer, J., Thomas, M., and McClelland, J. (Eds) *Toward a Unified Theory of Development: Connectionism and Dynamic Systems Theory Re-Considered* (pp. 218-252). London: Oxford University Press

Educational Clearing House

1. ** McMurray, B., and Klein-Packard, J. (2024) *Randomized Control trial of Word Flight by the Cedar Rapids Community Schools*. Report submitted to the *Every Student Succeeds Act (ESSA) What Works Clearinghouse*. Intervention was rated as “Promising”. Product of the Randomized Control trial funded

by a contract from Foundations in Learning, Inc, 2023-2024.

Abstracts

1. ** Dial, H. R., McMurray, B., & Martin, R. (2016) Lexical processing depends on sublexical processing: Evidence from the visual world paradigm with aphasia. Abstract for 54th Annual Academy of Aphasia Meeting, Llandudno, United Kingdom. *Frontiers in Psychology*.

Publications In Progress

12. ** Wang, Z. & McMurray, B. (submitted) Bilinguals automatically access both languages based on “irrelevant” acoustic detail: evidence from lexical tone. *Journal of Experimental Psychology: General*.
11. ** Zelihic⁺⁺, D., Kyriakidou, S., Ziaka⁺⁺, L. McMurray, B. and Protopapas, A. (submitted) Interference from Adjacent Words in Visual Word Recognition. *Cognition*.
10. * Jeppsen⁺⁺, C., Zimmermann, L., Baxelbaum, K., and McMurray, B. (submitted) Eye-Movement Components Underlying Children’s Passage Reading. *Journal of Educational Psychology*.
9. * Kutlu, E., Oleson, J., Kim, H., and McMurray, B. (in revision) Longitudinal Changes in the Structure of Speech Categorization Across School Age Years: Evidence against perceptual narrowing in later developmental periods. *Developmental Science*. https://osf.io/preprints/psyarxiv/vgybc_v1
8. ** Zelihic, D., Ziaka, L., McMurray, B., Altani, A., and Protopapas, T., (submitted) Children’s Visual Word Recognition is Hampered by Adjacent Stimuli. *Journal of Experimental Psychology: General*.
7. * Gur⁺⁺, E., Fergus, A., Baxelbaum, K.S., and McMurray, B. (submitted) The Gradual Development of Lateral Inhibition During Word Recognition in School-Age Children. *Cognitive Science*. https://osf.io/preprints/psyarxiv/kfx52_v1
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5. ** Demir-Lira, E., Nelson⁺⁺, P., Klein-Packard, J., Fell, A., Homan, N., Fergus, A., Kelly, E., Madero⁺⁺, B., Tomblin, J.B., and McMurray, B. (submitted). Relations between real-time language processing, cortical thickness and language outcomes in school-aged children. *Neuroimage*.
4. * Jeppsen, C., Baxelbaum, K., & McMurray, B. (submitted). The Development of Oculomotor Coordination During the School Age Years: Effects of Reading and General Speed of Processing. *Child Development*. https://osf.io/preprints/psyarxiv/ptsq4_v2
3. * Kim⁺, H., Tomblin, B., & McMurray, B. (in revision). Speech Categorization Consistency Predicts Overall Language Abilities. *Psychological Science*, <https://osf.io/preprints/psyarxiv/u46pj>.
2. * Seedorff⁺⁺, M., Oleson, J. and McMurray, B. (in limbo) Maybe maximal: Good enough mixed models optimize power while controlling Type I error. <https://psyarxiv.com/xmhfr/edit>
1. * Smith, F.X and McMurray, B. (in preparation) Lexical Access in the Face of Degraded Speech: Adapting to Moment by Moment Uncertainty. *Attention, Perception and Psychophysics*. <https://psyarxiv.com/kpv2d/>

Musical Recording

- 2022 Falk, M. (songwriting, music, guitar and vocals), McMurray, B. (music writing, Fender Rhodes, piano, organ, harmonica), Petchers, S. (music writing, bass and backing vocals), and Looney, A. (music writing, drums) (2021) *Essential Workers*. Four song EP. Available on iTunes, Spotify, YouTube Music.
- 2021 Falk, M. (songwriting, music, guitar and vocals), McMurray, B. (music writing, Fender Rhodes and organ), Petchers, S. (music writing, bass and backing vocals), and Looney, A. (music writing, drums, recording) (2021) *G.O.Y.P (Get Off Your Phone)*. Single Available on iTunes, Spotify, YouTube Music.

Assessments

- 2018 Brown, C., McMurray, B., Hazeltine, R.E., Reed, D., and Zimmerman, J. (2018) *The Iowa Assessment of Skills and Knowledge for Reading*. Foundations in Learning, Inc., Coralville, IA

Computer Software

- 2022 McMurray, B. (2023) Subject Manager: a tool for managing large clinical and longitudinal studies. (5 users)
- 2018 McMurray, B. (2018) Nonlinear curvefitting for Psycholinguistics. Available from: <https://osf.io/4atgv/>
- 2015 Seedorff, M., Oleson, J., Cavanaugh, J., Brown, G. and McMurray, B., (2015) BDOTs: Bootstrapped difference of time series. R package.
- 2014 McMurray, B. (2014) ECOGANAL: Matlab toolbox for data visualization and analysis of electro-corticography data (4 users)
- 2005 McMurray, B. (2005) EyelinkAnalysis: Software for analysis of eye-movement data for the visual world paradigm. <https://osf.io/c35tg/> (approx 20 users)
- 2002 McMurray B. (2002) KlattWorks speech synthesis application (>150 users)

Grants and Contracts

Current External Support – Principal Investigator

- 2025 - 2027 *Categorization Consistency: A Fundamental Dimension of Individual Variation in Speech Perception*. NSF BCS – 2444664. \$794,490 (total). Role: PI.
- 2023 - 2024 *The real-time dynamics of language processing across the lifespan*. R21-AG080206. Funded by NIA. \$424,875 (total). Investigators: McMurray, B. (MPI) and Colby, S. (MPI)
- 12/1/2020–11/30/2023 *Development of Real Time Spoken & Written Word Recognition: Neural Bases*. R01 DC008089S1 Funded by NIDCD. \$2,422,727. Investigators: McMurray, B. (PI), Tomblin, J.B. (Co-I), Demir-Lira, E. (Co-I), Hazeltine, E. (Co-I), Brown, G. (Co-I). Score: 13, 1st percentile
- 12/1/2018 – 11/30/2023 *The Development of Real Time Spoken and Written Word Recognition: Cognitive Bases of Language and Educational Outcomes*. R01 DC008089 Funded by NIDCD. \$3,800,000 (total) Investigators: McMurray, B. (PI), Tomblin, J.B. (Co-I), Hazeltine, E. (Co-I), Petersen, I. (Co-I), Reed, D. (Co-I) and Oleson, J. (Co-I).
- 7/1/2023 – 6/30/2028 *Iowa Cochlear Implant Center VII*. P50DC000242. Funded by NIDCD. \$13,888,659. Investigators: Gantz, B. (Project Director); Hansen, M. (Associate Project Director), McMurray, B. (Associate Project Director)
- 7/1/2023 – 6/30/2028 *Iowa Cochlear Implant Center VII. Project 3: Language Processing Efficiency*. P50DC000242. Funded by NIDCD. \$1,790,735 (total for this subproject; total for P50 is \$13,888,659). Investigators: McMurray, B. (PI)
- 9/1/2022 – 9/1/2024 *Testing the Efficacy of WordFlight*. Contract with Foundations in Learning, Inc., to test efficacy of a computer-based reading intervention. AMT:

Current Internal Support

Current External Support – Other Roles

- 2023 – 2028 *Iowa Cochlear Implant Center VII. Project 4: Human Ecology (Quality of Life)*. P50DC000242. Funded by NIDCD. \$2,120,715 (total for this subproject; total for P50 is \$13,888,659). Investigators: Hoth, Karen. (PI), Wu, Yu-Hsiang (PI), McMurray, B. (Co-I)
- 2023 – 2028 *Iowa Cochlear Implant Center VII. Project 2: Central Auditory Integration Mechanisms*.

P50DC000242. Funded by NIDCD. \$2,684,420 (total for this subproject; total for P50 is \$13,888,659). Investigators: Griffiths, T. (PI), Choi, I. (PI), McMurray, B. (Co-I)

2020 – 2025 *Cognitive Control in the Development of School readiness in Early Childhood*. R01HD098235 Funded by NICHD. Investigators: Petersen, I. (PI), McMurray, B. (Co-I).

2020 – 2025 *Human Auditory Cortex Physiology*, R01 DC 004290. Funded by NIDCD. \$3,334,135 (total) Investigators: Howard, M. (PI), McMurray, B. (Co-I)

2019 – 2023 *Cerebellar Interactions with the Amygdala and Prefrontal Cortex during Learning*. R01 NS-0088567. Funded by NINDS. \$3,497,503 (total). Investigators: Freeman, J. (PI), McMurray, B. (Co-I)

2021 – 2023 *Beyond Segments: Towards a lexical model for tonal bilinguals*. DP210102789. Funded by Australian Research Council. \$222,078 (AUD). Investigators: Wang, X. (Macquarie University, Chief Investigator), McMurray, B. (Partner Investigator)

External Support - Pending

2025 – 2028 *Categorization Consistency: A Fundamental Dimension of Individual Variation in Speech Perception*. NSF BCS – 2444664. 829,572. Role: PI.

2025 – 2030 *The perceptual and lexical foundations of language and reading outcomes in adolescents: The Growing [More] Words project*. NIH R01 DC 0008089. \$3,776,240 (total). Role: PI.

External Support - Submitted but not Funded

2023 – 2028 *Auditory integration in single-sided deafness with cochlear implants*. R01 NIDCD. \$ 3,677,547. Investigators: McMurray, B. (MPI), Choi, I. (MPI), Litovsky, R. (MPI)

2022 – 2026 *Effects of School Disruption on Language and Reading: Real-time processes and outcomes*. NICHD. \$2,167,789. Investigators: McMurray, B. (MPI), Apfelbaum, K. (MPI), Tomblin, J.B. (Co-I)

2022 – 2024 *Effects of School Disruption on Language and Reading: Real-time processes and outcomes*. NSF. \$798,944 (total). Investigators: McMurray, B. (MPI), Apfelbaum, K. (MPI), Tomblin, J.B. (Co-I).

2022 - *The Listening Brain – an ARC Center for Excellence*. Australian Research Council. Role: international collaborator.

2022 – 2026 *The timing of dialogue: Mothers and children in poverty*. NICHD. \$76,684 (direct, Iowa Sub-contract; total amount is not available). Investigators: Smith, N. (University of Missouri, PI), McMurray, B. (Co-I), Petersen, I. (Co-I).

Completed External Support

2/12/2023 – 3/15/2023 *Constructing a Language: Eshawa*. Contract with DreamsQuest, LLC, to construct a language for videogame, book, graphic novel and movie. \$73,000 (direct) + royalties. Investigators: McMurray, B. (PI), Dadan, M. (Co-I), Devitt, D. (Co-I), Kutlu, E. (Co-I)

12/1/2018 – 11/30/2020 *Decoding the neural time-course of spoken word recognition*. R21DC017596 Funded by NIDCD. \$275,000 (total). Investigators: Aslin, R. (MPI) and McMurray, B. (MPI)

12/1/2018 – 11/30/2023 *Iowa Cochlear Implant Center VII. Project 4: Cognitive Dynamics of Language Processing*. P50DC000242. Funded by NIDCD. \$1,792,485 (total for this subproject; total for P50 is \$12,321,100). Investigators: McMurray, B. (PI)

12/1/2018 – 11/30/2023 *Iowa Cochlear Implant Center VII. Project 2: Central Processing Integration and Plasticity*. P50DC000242. Funded by NIDCD. \$2,256,240 (total for subproject; total for P50 is \$12,321,100) Investigators: Griffiths, T. (MPI), McMurray, B. (MPI), Ponto, L. (Co-I), Choi, I. (Co-I)

2019 *Support for Middle School Reading Assessment (Contract)*. DSP# J028900-C. Funded by Foundations in Learning, Inc. \$3131 (total), Investigators: McMurray, B. (PI)

2016 *The Iowa Assessment of Skills and Knowledge for Automatic Word Recognition and Decoding*

- (iASK): Phase II. FIL050115 (subcontract, primary grant: EDIES15C0023). Institute for Education Sciences SBIR program. \$900,000 (total) / UI subcontract: \$100,000. Investigators: Brown., C. (PI), Zimmerman, J. (Co-I), McMurray, B. (Co-I, director of Iowa subproject and lead grant writer), Hazeltine, E. (Co-I) and Reed, D. (Co-I)
- 2015 *The Iowa Assessment of Skills and Knowledge for Automatic Word Recognition and Decoding (iASK): Phase I.* Funded by IES SBIR program. \$150,000 (total). Investigators: Brown., C. (PI), Zimmerman, J. (Co-I), McMurray, B. (Co-I, director of Iowa subproject and lead grant writer), Hazeltine, E. (Co-I) and Reed, D. (Co-I)
- 2013 – 2016 *Common Principles in Reading and Skill Learning.* BCS 1330318 Funded by NSF. \$493,000 (total). Investigators: Hazeltine, E. (PI), McMurray, B. (Co-PI)
- 2012 - 2016 *Iowa Cochlear Implant Center VI.* P50DC000242. Funded by NIDCD. \$14,076,191 (total for P50). Investigators: McMurray, B. (MPI) and Kirk, K.I. (MPI)
- 2011 - 2016 *Speech perception, acoustic variability and time: normal and impaired listeners.* R01DC008089. Funded by NIDCD. \$1,570,000 (total). Investigators: McMurray, B. (PI) and Tomblin, J.B. (Co-I)
- 2010 – 2011 *Scaling learning theory to multiple pathways: Early reading as a model system.* BCS 1026794. Funded by NSF, Brain and Cognitive Sciences. \$105,000 (total). Investigators: McMurray, B. (PI), Hazeltine, E. (Co-PI)
- 2006 – 2011 *Iowa Cochlear Implant Clinical Research Center Project 5,* P50DC000242. Funded by NIDCD. \$11,849,169 (total for P50) Investigators: Tomblin, J.B. (PI), McMurray, B. (Co-I).
- 2009 – 2010 *Lexical Integration of Acoustic Detail in Word Recognition: Cochlear Implants,* ARRA supplement to DC008089. Funded by NIDCD. \$201,686 (total). Investigators: McMurray, B. (PI) and Tomblin, J.B. (Co-I)
- 2007 – 2010 *Lexical Integration of Acoustic Detail in Word Recognition: Normal and Disordered Speech,* R01DC008089. Funded by NIDCD \$751,336 (total). Investigators: McMurray, B. (PI) and Tomblin, J.B. (Co-I)
- 2003 – 2004 *Temporal Integration of Acoustic Detail in Speech,* 31DC006537-01 Ruth L. Kirchstein Predoctoral National Research Service Award. Role: PI.

Internal Support – Pending

- 2025 – 2028 *Auditory, Behavior and Cognition (ABC) Research Program of Excellence: Linking Hearing Loss to Age Related Cognitive Decline in Human and Animal Models.* Carver Trust, Research Program of Excellence. \$600,000. Recommended for funding. Role: Sort of an MPI.

Completed Internal Support

- 2022 – 2023 *Discover, Engage, Innovate: A program for supporting undergraduate researchers from disadvantaged backgrounds.* Office of the Vice President for Research.
- 2011 *Pruning the associative thicket: Word learning in pigeons, people, and individuals with language learning disabilities.* Vice President for Research, Major Project Grant. \$55,000 (total). Investigators: McMurray, B. (PI), Wasserman, E. (Co-I) and McGregor, K. (Co-I)
- 2006-2007 *The microstructure of word recognition in language impairment: Different deficits in inhibition and excitation?* Center for Advanced Studies, Spellman-Rockefeller Awards. \$9000 Investigators: McMurray, B. (PI) and Tomblin, J. (Co-I).
- 2005 *Acoustic Detail Facilitates Word Recognition,* Old Gold Summer Fellowship, University of Iowa. Investigators: McMurray, B. (PI)

Support - Students

- 2021 *Spoken Word Recognition in Sentences in Second Language Learners.* Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Investigators: Morales, C. (student /

- undergraduate), McMurray, B. (mentor)
- 2021 *Spoken and Written Word Recognition in Prelingually Deaf Cochlear Implant Users.* Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Investigators: Woolsey, E. (student / undergraduate), McMurray, B. (mentor)
- 2017 *Cortical Mechanisms of Expectation Driven Modulation of Speech Perception in Normal Hearing Listeners and Cochlear Implant Users.* Ruth Kirchstein Post-doctoral NRSA. NIDCD. Investigators: Liu, A. (student / post-doc) and McMurray, B. (mentor). Funded but funding was declined.
- 2013 *The development of speech categorization in late childhood.* Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Investigators: Danelz, A. (student / undergrad), McMurray, B. (mentor)
- 2013 *Early word learning in Infancy: Associative Engines, or Language-Specific Learners.* Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Investigators: Wiggs, K. (student / undergrad), McMurray, B. (mentor)
- 2011 - 2013 *Online speech processing in pediatric and adult cochlear implant users.* Ruth L. Kirchstein National Research Service Award: NIDCD. Investigators: Farris-Trimble, A. (students / Post-Doc), McMurray, B. (mentor)
- 2010 *Examining neural processing during speech perception.* Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Investigators: Vangsness, L. (student / undergraduate), McMurray, B. (mentor)
- 2009 *Perfecting the visual world paradigm.* Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Investigators: England, M. (student / undergraduate), McMurray, B. (mentor)
- 2007 *Spoken word recognition: the relationship between lexical structure and acoustic detail.* Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Investigators: Merickel, J. (student / undergraduate), McMurray, B. (mentor)
- 2006 *Exploring joint influences on infant categorization: Previous experience and how infants compare on-line between stimuli.* University of Iowa Student Government Research Grant. \$1000. Investigators: Kovack-Lesh, K. (student / graduate), McMurray, B. (mentor)
- 2006 *Spoken word recognition in Specific Language Impairment* Old Capitol Kiwanis Club. \$200. Investigators: Overgard, B. (student / undergraduate), McMurray, B. (mentor)
- 2006 *Acoustic Cues for Anticipation in Speech Perception.* Sigma Xi: Grants in Aid of Research Program. \$400. Investigators: Munson, C. (student / graduate), McMurray, B. (mentor)
- 2006 *The Phonetic Garden Path: Infinite Sounds on a Three Lane Road.* University of Iowa Honors Program, Senior Honors Thesis Grant. \$500. Investigators: Huette, S. (student / undergraduate), McMurray, B. (mentor)
- 2006 *Spoken word recognition: normalized or exemplar-based?* University of Iowa, Dewey Stuit Fund. \$300. Investigators: Robinson, M. (student / undergraduate), McMurray, B. (mentor)
- 2006 *Spoken word recognition: normalized or exemplar-based?* University of Iowa Student Government / University Honors Program. \$500. Investigators: Robinson, M. (student / undergraduate), McMurray, B. (mentor)
- 2005 *The Interplay of Continuous and Categorical Information in Speech Perception,* Iowa Research Experiences for Undergraduates Award, University of Iowa. Investigators: Spilger, S. (student / undergraduate) and McMurray, B. (mentor)

Grant Consulting

- 2018 - *ESRC International Centre for Language and Communicative Development (LuCiD).* Role: Consultant.

- 2012 – 2015 *Center for Perception and Communication in Children*. NIDCD. Role: Mentor for Subproject 3 (PI: Nicholas Smith; Project Director: Walt Jesteadt, Boys Town National Research Hospital).
- 2008 *Seeing Speech: Building a Community*. NSF. Role: Board of Advisors (PI: Diana Archangeli, University of Arizona).

Invited Lectures and Conference Presentations:

International– Invited Address

- 2024 McMurray, B. (2024, December) *Towards a Psycholinguistics of All People: Studies of word recognition across the lifespan, and across differences in language and hearing ability reveal the fundamental dimensions of language processing*. Keynote address to Architectures and Mechanisms of Language Processing - Asia. Singapore.
- 2024 McMurray, B. (2024, November) *Individual differences in the mechanisms of word recognition reflect a small number of fundamental dimensions: Insights from aging adults and cochlear implant users*. Invited Virtual Address to Jee Eun Sung lab, Ewha Women's University, Seoul Korea
- 2023 McMurray, B. (2023, May) *The Myth of Categorical Perception*. Invited virtual presentation to the Chinese University of Hong Kong.
- 2023 McMurray, B. (2023, May) *Decoding the real-time neural dynamics of language processing*. Invited colloquium to Seoul National University, Seoul, S. Korea
- 2023 McMurray, B. (2023, May) *The Slow Development of Real Time Spoken and Written Word Recognition*. Invited colloquium to Dept. of Communication Sciences and Disorders, Ewha Women's University, Seoul, South Korea.
- 2023 McMurray, B. (2023, May) *Decoding the real-time neural dynamics of language processing*. Invited colloquium to Korea Advanced Institute of Science & Technology (KAIST), Daejeon, South Korea
- 2023 McMurray, B. (2023, May) *Cognitive mechanisms of speech processing in people who use cochlear implants*. Invited colloquium to Samsung Medical Center, Dept. of Otolaryngology, Seoul, South Korea.
- 2023 McMurray, B. (2023, January) *Do we need to [statistically] model everything? Returning to an index approach allows true hypothesis testing in complex timeseries*. Invited colloquium at University of Oslo, Oslo, Norway
- 2023 McMurray, B. (2023, January) *The Slow Development of Real Time Spoken and Written Word Recognition*. Invited colloquium at Dept. of Special Education, University of Oslo, Oslo, Norway
- 2022 McMurray, B. (2022, November) *Mathematical approaches to speech categorization: The problem of missing data*. Invited address at *Banff International Research Station*.
- 2022 McMurray, B. (2022, September) *The Slow [Lifespan] Development of Real Time Spoken and Written Word Recognition*. Invited colloquium to the Macquarie Center for Language Sciences.
- 2022 McMurray, B. and Wang, X. (2022, September) *An Insider's Guide to the Methodological Craft and Lore of the Visual World Paradigm*. Invited presentation to the Macquarie Center for Language Sciences, Eye-tracking Workshop 2.
- 2022 McMurray, B. (2022, September) *Hypothesis-based approaches to analysis of fixations in the Visual World Paradigm*. Invited presentation to the Macquarie Center for Language Sciences, Eye-tracking Workshop 2.
- 2019 McMurray, B. (2019, December) *The real-time dynamics of word recognition in prelingually deaf cochlear implant users (and other populations): New thinking about the development of speech perception and language*. Keynote address at the *CLaS Workshop on Language Acquisition in Children with Hearing Loss*. Macquarie University, Sydney, Australia
- 2019 McMurray, B. (2019, July) *The dynamics of word recognition in people with communicative impairments: Pushing the boundaries of basic theory*. Invited colloquium to the Basque Center for

Brain and Language, Donostia-San Sebastian, Spain

- 2019 McMurray, B. (2019, July) Slow learning and Even Slower Evolution. Invited presentation to KLI Focus Group on Language Evolution. Konrad Lorenz Institute, Vienna, Austria
- 2019 McMurray, B. (2019, June) Language acquisition as skill learning: The development of real-time processing. Keynote address to LuCiD, Manchester, UK.
- 2018 McMurray, B., Galle⁺⁺, M., Farris-Trimble, A., Seedorff⁺⁺, M. (2018, November) What the /f/? We're not done with fricatives yet. Integrating across time and frequency bands. Invited address to the 176th Meeting of the Acoustical Society of America, Victoria, BC, Canada.
- 2018 McMurray, B., Klein-Packard, J., Sarrett, M., Freeman, J., and Curtu, R. (2018, November) *Reinforced Statistical Learning (Preliminary Ideas)*. Invited Colloquium to Dept. of Linguistics, Simon Fraser University, Vancouver, BC.
- 2018 McMurray, B. (2018, January) It's not what you know, It's how you use it: The slow development of real-time lexical processing. Invited colloquium to Dept. of Psychology, Goettingen University, Goettingen, Germany
- 2018 McMurray, B. (2018, January) How do you achieve abstraction from an associative system? Invited colloquium to Dept. of Psychology, Goettingen University, Goettingen, Germany
- 2017 McMurray, B. (2017, April) It's not what you know, It's how you use it: The slow development of real-time lexical processing for oral and written language. Keynote address to *The Developing Lexicon: Representations and Processing*. Sydney, Australia
- 2017 McMurray, B. (2017, April). Long-term adaptation to uncertainty in lexical processing by Cochlear Implant Users: Beyond perceptual retuning. Invited Colloquium to Dept. of Speech and Hearing Sciences, Macquarie University, Sydney Australia
- 2016 McMurray, B. (2016, October) Long-term adaptation to uncertainty in lexical processing by Cochlear Implant Users: Beyond perceptual retuning. Invited address to *Psycholinguistic Approaches to Speech Recognition in Adverse Conditions (PASRAC)*, Nijmegen, The Netherlands.
- 2016 McMurray, B. (2016, October) It's not what you know, its how you get there: Real-time lexical processing, and its importance for understanding language and hearing impairments. Invited address to 8th National Audiology and Speech Disorders Conference, Ankara, Turkey
- 2016 McMurray, B. (2016, October) Learning the speech categories of your language: It's not what you know, it's what you do with it. Invited Colloquium to Dept. of Audiology and Speech Pathology, Hacettepe University, Ankara, Turkey.
- 2016 McMurray, B. (2016, February) *It takes a team. Multiple mechanisms for real-time speech processing: Evidence from computational modeling, eye-tracking, electro-corticography, event related potentials*. Invited Colloquia to Western University (Ontario), Dept. of Psychology
- 2015 McMurray, B. (2015, July) The slow development of real-time language processing: Interactions across timescales in lexical development. Keynote address to *Symposium on Child Language*, Coventry, UK.
- 2015 McMurray, B. (2015, October) *The role of computational modeling in developmental systems theory: Revealing emergence and highlighting principles of development*. Invited colloquium to Dept. of Mathematics, Simon Fraser University, Vancouver, BC.
- 2015 McMurray, B. (2015, October) *What information is in the speech signal? Not quite enough. Real-time processes and demands on development*. Invited colloquium to Dept. of Linguistics, Simon Fraser University, Vancouver, BC.
- 2015 McMurray, B. (2015, March) What information is in the speech signal? Not quite enough. Real-time processes and demands on development. Invited colloquium to Max Planck Institute of Psycholinguistics, Nijmegen, The Netherlands.

- 2015 McMurray, B. (2015, March) Language processing in real-time: Using ECoG to investigate the dynamics of spoken word recognition. Invited address to Neurobiology of Language Division, Max Planck Institute of Psycholinguistics, Nijmegen, The Netherlands
- 2015 McMurray, B. (2015, March) The immediate plasticity of intra-lexical inhibition: New data and new thoughts on lexical integration and consolidation. Invited address to *Workshop on Memory consolidation & word learning*, Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands
- 2014 McMurray, B. (2014, October) *Building abstraction from simple developmental mechanisms: Case studies in speech perception, word learning, reading and communicative disorders*. Invited address in Perspectives on Language Development, Symposium at Max Planck Institute for Psycholinguistics, Nijmegen, NL.
- 2014 McMurray, B. (2014, August) *The role of computational modeling in developmental systems theory: Revealing emergence and highlighting principles of development*. Keynote address to the *Neural Computation and Psychology Workshop*, Lancaster, UK
- 2014 McMurray, B. (2014, February) *The Emergent Power of Simple Principles: Accounting for language and individual differences at multiple time-scales*. Invited colloquium to the Warwick University, Dept. of Psychology.
- 2014 McMurray, B. (2014, February) *What information is in the speech signal? Not quite enough. The implications of phonetic analysis for psychological theories of perception and development*. Invited colloquium to the York University, Dept. of Psychology
- 2014 McMurray, B. (2014, February) *Speech perception: Hard alone but easy with a team. The graded, incremental, lexical, and interactive nature of speech processing*. Invited Colloquium to the University College London Ear Institute
- 2014 McMurray, B. (2014, February) *The Emergent Power of Simple Principles: Accounting for language, speech and individual differences at multiple time-scales*. Invited colloquium to the Oxford University, Dept. of Psychology.
- 2013 McMurray, B. (2013, March) *Speech perception: Hard alone but easy with a team. The graded, incremental, lexical, interactive and developmental nature of speech*. Master Class taught at Radboud University Nijmegen, The Netherlands
- 2012 McMurray, B. (2012, July) *Evo/Devo in the 3rd Dimension: The role of real-time processes in language development and evolution*. Invited talk to the *Workshop on Language Evolution*, Konrad Lorenz Institute, Vienna, Austria

Domestic– Invited Address

- 2025 McMurray, B. (2025, April) *Towards a Psycholinguistics of All People: Studies of word recognition across the lifespan, and across differences in language and hearing ability reveal the fundamental dimensions of language processing*. Colloquium at Dept. of Language Sciences, University of California, Irvine. Irvine, CA.
- 2025 McMurray, B. (2025, April) *Towards a Psycholinguistics of All People: Studies of word recognition across the lifespan, and across differences in language and hearing ability reveal the fundamental dimensions of language processing*. Keynote address to North Carolina Cognitive Science Society. Chapel Hill, NC.
- 2024 McMurray, B. (2024, October) *Spoken word recognition, speech perception and even eye-movement control develop slowly: From their roots in infancy to the branches and blossoms of late childhood*. Invited address to *2024 Minnesota Symposium on Child Development. The Infant as Integrated System: From Perception and Sensation to Learning and Memory*. University of Minnesota, Minneapolis, MN.
- 2024 McMurray, B. (2024, May) *Individual differences in the mechanisms of word recognition reflect a small number of fundamental dimensions: Insights from cochlear implant users, aging, and listening in challenging conditions*. Workshop on Individual Differences in Speech Perception. University of

Connecticut, Storrs, CT.

- 2023 Kutlu, E., Chiu, S., and McMurray, B. (2023, September) Dimensionalizing speech categorization in linguistically diverse listeners. Invited Colloquium to the Dept. of Modern Languages, Carnegie Mellon University.
- 2023 McMurray, B. (2023, September) The Myth of Categorical Perception. Invited Colloquium to the Dept. of Modern Languages, Carnegie Mellon University.
- 2023 McMurray, B. (2023, April) *Towards a Cognitive Science of All People: Examining the mechanisms of word recognition across the lifespan, and across differences in language and hearing ability lead to fundamental insights*. Invited program to Cognitive Science Program at Villanova University.
- 2022 McMurray, B. (2022, October) *The Slow [Lifespan] Development of Real Time Spoken and Written Word Recognition*. Invited Address to Dept. of Psychology, Princeton University.
- 2022 McMurray, B. (2022, October) Do we need to [statistically] model everything? Returning to an index approach allows true hypothesis testing in complex timeseries. Invited Address to Dept. of Psychology, Princeton University.
- 2021 McMurray, B. (2021, June) Categorical perception: Lesson from an enduring myth. Invited presentation to the *Meeting of the Acoustical Society of America*
- 2021 McMurray, B. (2021, March) Decoding the neural dynamics of spoken word recognition. Invited address to University of Wisconsin 'Brain and Bagels' (aka 'Hearing and Donuts') seminar, Madison WI.
- 2020 McMurray, B. (2020, October) Decoding the neural dynamics of spoken word recognition. Invited address to Haskins Laboratories, New Haven, CT.
- 2019 McMurray, B. (2019, March) The dynamics of recognizing words in people with language and hearing impairments: Revealing mechanisms of disordered language; pushing the boundaries of basic theory. Plenary address to the CUNY Sentence Processing Conference, Boulder, CO.
- 2018 McMurray, B., Klein-Packard, J., Sarrett, M., Chiu, S., Freeman, J., and Curtu, R. (2018, December) *Reinforced Statistical Learning*. Invited address to Statistical Learning Workshop #3. The Haskins Laboratories, New Haven, CT.
- 2018 McMurray, B. (2018, April) Who knows where the time went? Invited address to *Diehlapalooza: A Festschrift in Honor of Randy Diehl*. Austin, TX.
- 2018 McMurray, B. (2018, March) Signal + Knowledge \neq Performance: Real-time lexical processing over development and in language and hearing impairment. Invited colloquia to Dept. of Speech and Hearing Sciences, University of Washington, Seattle, WA.
- 2018 McMurray, B. (2018, January) It's not what you know, It's how you use it: The slow development of real-time lexical processing. Invited colloquium to Dept. of Psychology, University of Wisconsin, Madison, WI
- 2018 McMurray, B. (2018, January) Long-term adaptation to uncertainty in lexical processing by Cochlear Implant Users: Beyond perceptual retuning. Invited colloquium to Waisman Center, University of Wisconsin, Madison, WI
- 2017 McMurray, B. (2017, November) It's not what you know, It's how you use it: The slow development of real-time lexical processing for oral and written language. Invited Colloquium to the Haskins Laboratories, New Haven Connecticut.
- 2017 McMurray, B. (2017, February) Managing ambiguity: Changes in real-time lexical competition with development, individual differences and degraded input. Invited Colloquium to Dept. of Psychology, The Ohio State University, Columbus, OH.
- 2017 McMurray, B. (2017, February) A data explanatory account of speech perception (and its limits). Invited address to the *Center for Brain, Mind and Machines Workshop on Speech Perception*. Massachusetts

Institute of Technology, Boston, MA.

- 2017 McMurray, B. (2017, January) Competition. What is it good for? Invited address to The Language Group, Dept. of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Boston, MA.
- 2016 McMurray, B. (2015, November) *Mechanisms of learning and processing in speech perception and reading: application to cochlear implants, SLI, and teaching*. Invited seminar to 2015 Meeting of the American Speech-Language-Hearing Association, Denver CO.
- 2015 McMurray, B. (2015, September) *Lexical Development at two timescales. Slow associative learning, real-time inhibition and the development of automaticity*. Invited colloquium to Dept. of Psychology, Washington University in St. Louis, St. Louis, MO.
- 2015 McMurray, B. (2015, April) *Building abstraction from simple developmental mechanisms: Case studies in speech perception, word learning, reading and communicative disorders*. Invited colloquium to Dept. of Psychology, University of Tennessee, Knoxville, TN.
- 2015 McMurray, B. (2015, April) *What information is in the speech signal? Not quite enough. Real-time processes and demands on development*. Keynote address at Illinois Language and Linguistics Society, Champaign, IL.
- 2015 McMurray, B. (2015, February) Does irrelevant variability help children learn early reading skills? Field testing principles of associative learning in the classroom. Invited address to *Workshop on Translating Language Science Research to Practice*, Arlington, VA.
- 2015 McMurray, B. (2015, February) *Vocabulary acquisition in an Evo-Devo Framework*. Invited address to the University of Memphis Cognitive Science Program, Memphis, TN
- 2015 McMurray, B. (2015, January) *Principles of learning and processing in reading and oral language: Implications for assessment and remediation*. Invited address to the Florida Center for Reading Research, Florida State University, Tallahassee, FL.
- 2014 McMurray, B. (2014, June) *Language processing in real-time: Neural underpinnings and implications for communication disorders*. Invited colloquium to the Mind Brain Research Network, Albuquerque New Mexico.
- 2014 McMurray, B. (2014, May) *What information is in the speech signal? Not quite enough. The implications of phonetic analysis for theories of the development of speech perception*. Invited address to the *Workshop on Influences of Input on Child Language Development*, Boys Town National Research Hospital, Omaha, NE.
- 2013 McMurray, B. (2013, October) *What information is in the speech signal? Not quite enough. The implications of phonetic analysis for psychological theories of perception and development*. Invited colloquium to the University of Arizona, Dept. of Linguistics
- 2013 McMurray, B. (2013, May) *A real-time view of individual differences in cognition: Language processing and language disorders*. Invited address to The Midwest Psychological Association, Chicago, IL.
- 2013 McMurray, B. (2013, February) *The Emergent Power of Simple Principles: Accounting for language, speech and individual differences*. Invited talk to University of Wisconsin, Dept. of Psychology.
- 2013 McMurray, B. (2013, February) *The Emergent Power of Simple Principles: Accounting for language, speech and individual differences*. Invited talk to University of Psychology, Dept. of Psychology.
- 2012 McMurray, B. (2012, November) *The Emergent Power of Simple Principles: Accounting for language, speech and individual differences*. Invited talk to University of Rochester, Dept. of Brain and Cognitive Sciences.
- 2012 McMurray, B. (2012, September) *Speech perception: Hard alone but easy with a team. The graded, incremental, lexical, interactive and developmental nature of speech*. Invited talk to Indiana University, Cognitive Science Program
- 2012 McMurray, B. (2012, April) *Speech perception, hard alone but easy with a team: The graded, incremental,*

- lexical, interactive and developmental nature of speech.* Invited colloquium to the University of Kansas, Dept. of Linguistics
- 2012 McMurray, B. (2012, February) *Speech perception, hard alone but easy with a team: The graded, incremental, lexical, interactive and developmental nature of speech.* Invited colloquium to the University of Chicago, Workshop on Language, Cognition, and Computation.
- 2011 McMurray, B. (2011, December) *Two timescales are better than one: The interaction of online and developmental processes in auditory word recognition and learning.* Invited colloquium to the University of Las Vegas, Nevada, Department of Psychology.
- 2011 Samuelson, L. and McMurray, B. (2011, October) *How do you learn to learn words? A computational perspective.* Invited paper for *Cognitive Development Society Pre-Conference: Creating Development: Integrating Processes over Multiple Time Scales.* Philadelphia, PA.
- 2011 McMurray, B. (2011, June) *Speech perception as a window on language: evidence from online processing in normal listeners, listeners with language impairment, and cochlear implant users.* Plenary address to Society for Research on Child Language Disorders
- 2011 McMurray, B. (2011, February) *Two timescales are better than one: The interaction of online and developmental processes in word recognition and learning.* Invited colloquium to The Ohio State University, Department of Psychology
- 2009 McMurray, B. (2009, September) *Two timescales are better than one: The interaction of online and developmental processes in word recognition and learning.* Invited address to Northwestern University, Language and Cognition Interdepartmental Group
- 2009 McMurray, B. (2009, May) σ^2 . Invited address to *The Future of Cognitive Science*, Merced, CA.
- 2009 McMurray, B. (2009, March) *Language use at two timescales: Word recognition and learning as the interaction of online processes and developmental history.* Invited colloquium to the University of Illinois, Language Processing Brown Bag.
- 2009 McMurray, B. (2009, March) *What do phonemes do all day? Seeking the computational reality of sub-lexical processes.* Invited colloquium to the University of Illinois, Dept. of Linguistics.
- 2008 McMurray, B. (2008, October) *Language use at two timescales: Word recognition and word learning as the interaction of online processes and developmental history.* Invited colloquium to University of California at Merced, Dept. of Cognitive Science.
- 2008 McMurray, B. (2008, September) *Language use at two timescales: Word recognition and word learning as the interaction of online processes and developmental history.* Invited colloquium to Johns Hopkins University, Dept. of Cognitive Science.
- 2008 McMurray, B. (2008, May) *Continuing a tradition of Big Red subversion: The radical role of simple mechanisms in speech perception and development.* Invited presentation to the 20th Anniversary of the Cornell University Cognitive Science Program.
- 2007 McMurray, B. (2007, September) *The power of parallelism, the grace of gradiency: Core computations in word recognition, and development.* Invited presentation to University of Memphis, Department of Psychology.
- 2006 McMurray, B. (2006, February) *Back to the future: Where we're going, we don't need phonemes. Implications of a gradient lexicon.* Invited colloquium presented at the Rice University Department of Linguistics.
- 2006 McMurray, B. (2006, February) *Back to the future: Where we're going, we don't need phonemes. Implications of a gradient lexicon.* Invited colloquium presented at the University of Iowa Department of Linguistics.
- 2006 McMurray, B. (2006, January) *Continuous detail is used in language comprehension and language learning: Temporal Integration at two time scales.* Invited colloquium presented at the University

of Illinois Department of Psychology.

- 2006 McMurray, B. (2006, January) *Perceptual Categories: Old and gradient, young and sparse*. Invited colloquium presented at the Texas A&M Department of Psychology
- 2005 McMurray, B. (2005, September) *Continuous acoustic detail affects spoken word recognition Implications for cognition, development and language disorders*. Invited colloquium presented at the Indiana University School of Medicine.
- 2005 McMurray, B. (2005, March) *Within-category information is used in language processing: Temporal Integration at two timescales*. Invited talk presented at the Purdue University Dept. of Psychology
- 2004 Gow, D. and McMurray, B. (2004, June) *From sound to sense and back again: the integration of lexical and speech processes*. Invited paper for From Sound to Sense: 50+ Years of Discoveries in Speech Communication, Boston, Massachusetts.
- 2003 McMurray, B. (2003, September). *Within-category acoustic variation is signal, not noise: A new look at Categorical Perception and the problem of covariance*. Invited talk presented at the Massachusetts Institute of Technology, Speech Communication Group.
- 2002 McMurray, B. (2002, April). *Two B or not two B: categorical perception in lexical and non-lexical tasks*. Invited talk presented at the Brown University Department of Cognitive and Linguistic Sciences
- 2001 McMurray, B. (2001, July). *The eyes betray the ears. Speech perception: categorical or categorized?* Invited talk presented at the University of Calgary, Department of Psychology

Regional – Invited Addresses

- 2024 McMurray, B. (2024, October) *Language at the Speed of Thought: Accidents and Undergraduate Research*. Invited Address to Undergraduate Research Conference. University of Iowa
- 2023 McMurray, B. (2023) *Towards a Cognitive Science of All People: Characterizing Real-Time Spoken and Written Word Recognition across diverse groups leads to fundamental insights about the nature of language*. Invited colloquium to Center for the Interdisciplinary Study of Language and Literacy, Northern Illinois University
- 2022 McMurray, B. (2022) *Development, disorders, and aging of language skills: Insights from the real-time dynamics of language*. Invited Grand Rounds to University of Iowa, Dept. of Neurology
- 2022 McMurray, B. (2022) *I'm not sure that curve means what you think it means: The chunky stochasticity of the fixation system challenges methods for understanding the dynamics of language*. Invited colloquia to the Dept. of Mathematics, University of Iowa
- 2018 Choi, I., Kim, S., Schawljje, A., Gander, P., Liu, A., Ponto, L., McMurray, B. and Griffiths, T. (2018, May) *Cortical Dynamics of Speech-in-Noise Perception*. Invited address to University of Iowa Auditory Neuroscience Symposium
- 2018 McMurray, B., Kapnoula, E., Sarrett, M. and Schreiber, K. (2018, May) *The timecourse of speech perception: How and when the brain combines literally everything to understand spoken language*. Invited address to University of Iowa Auditory Neuroscience Symposium
- 2016 McMurray, B. (2016, April) *Learning a phonology: It's not what you know, It's what you do with it*. Keynote address at *Sound to Word in Bilingual and Second Language Speech Perception*, Iowa City, IA.
- 2015 McMurray, B. (2015, October) *How people understand spoken language. It's about time*. Invited colloquium to University of Iowa Dept. of Biology, Iowa City, IA.
- 2014 McMurray, B. (2014, November) *Speech processing in real-time: Neural underpinnings and implications for hearing disorders*. Keynote address to Iowa Center for Molecular Auditory Neuroscience Symposium. Iowa City, IA.

- 2010 McMurray, B. (2010, October) *Embracing Variability: real-time speech perception as a graded, interactive process. Evidence from eye-movements, ERPs, and computational models.* Invited address to University of Iowa Hospitals and Clinics, Department of Neurosurgery.
- 2005 McMurray, B. (2005, February) *Perception & Cognition: One at last in spoken word recognition.* Invited talk presented at the University of Iowa Dept. of Otolaryngology and Cochlear Implant Group

Domestic – Uninvited Addresses

- 2024 McMurray, N. (2024, October). Open Science is the New Behaviorism. Bold Assertion to the DeLTA Center, University of Iowa.
- 2018 McMurray, B. (2019, January). Behavior and the P-Word: I'm talking to you, Cognitive Neuroscience. Rant presented the *Auditory Cognitive Neuroscience Society*, Gainesville, FL.

Conference Symposia

- 2016 McMurray, B. (2016, November) Knowing your language is not enough. Real-time lexical processing and speech perception develops through adolescence. In Creel, S. (chair) Beyond brilliant babies and rapid learning in lexical development: The long and short of language acquisition. Symposium presented at the *Boston University Conference on Child Language*, Boston, MA.
- 2015 Kucker, S., McMurray, B., and Samuelson, L. (2015, March) Word learning from uncertainty in vocabulary knowledge. Presentation in Kucker, S. (chair) From Initial Exposure to Retention: The Impact of Non-Linguistic and Linguistic Factors on Word Learning. Symposium presented at the *Society for Research in Child Development*, Philadelphia, PA.
- 2013 McMurray, B. (2013) Individual differences in real-time language processing: Language Impairment and Cochlear Implants. Invited presentation in Van Horne, A. (chair) Expanding the Horizons of Research on Developmental Language Disorders: A Seminar Illustrating Bruce Tomblin's Work. Symposium presented at the *Meeting of the Association of Speech-Language Hearing Association*. Chicago, IL.
- 2013 Kucker, S., Samuelson, L.S., and McMurray, B. (2013, March) The Role of Novelty in Categorization and Word Learning. In S. Kucker (chair) The Role of Novelty in Categorization and Word Learning. Symposium presented at the *Society for Research in Child Development*, Seattle, WA.
- 2012 McMurray, B. and Toscano, J. (2012, November) The consequences of lexical sensitivity to fine grained detail: solving the problems of integrating cues, and processing speech in time. In A. Jongman and J. Sereno (chairs) The Nature of Lexical Representations in the Perception and Production of Speech. Symposium presented at the *164th Meeting of the Acoustical Society of America*, Kansas City, MO.
- 2012 McMurray, B., Apfelbaum, S. and Samuelson, L. (2012, May) Throwing out Lucienne and Laurent with the bathwater: How the development of abstraction via perception and action can emerge from associative systems. In J. Spencer (chair) *From complex insights to complex systems: Rethinking how development happens.* Invited Symposium presented at the *Meeting of the Jean Piaget Society*, Toronto, ON, Canada.
- 2011 Van Dam, M., McMurray, B., Ambrose, S., Moeller, M.P., and Tomblin, J.B. (2011, April) Auditory Ability and Language Development: Quantitative Assessments of Input, Output, and Outcomes in Hard-Of-Hearing Children. In J. Gilkerson (chair) What we can learn from counting words: Applications and implications of the automatic measurement of natural environments. Symposium presented at the *Society for Research on Child Development*, Montreal, QC, Canada.
- 2011 McMurray, B. (2011, April) Lexical Processes at two Timescales: The Circular Relationship Between Learning and Processing. In A. Fernald & R. Bion (chairs) Constraints on 'Lexical Constraints': How Robust Is Fast Mapping, and What Do Children Actually Learn? Symposium presented at the *Society for Research on Child Development*, Montreal, QC, Canada.
- 2010 McMurray, B., and Samuelson, L., (2010, March) Associations: A Foundation for Lexical Development? In L. Samuelson & S. Kucker (chairs) *The Interaction of Auditory and Visual Information in Early Word and Category Learning.* Symposium presented at the International Conference on Infant Studies,

Baltimore, MD.

- 2010 Apfelbaum, K., Galle, M., and McMurray, B. (2010, March) The Development of Speech Perception is Continuous and Slow, but Multifaceted. In K. Graf Estes (chair) *Infants' Processing of Variation in Speech*. Symposium presented at the International Conference on Infant Studies, Baltimore, MD.
- 2010 McMurray, B., Apfelbaum, K., Toscano, J., and Samuelson, L. (2010, March) Something old and something new: Word learning as the interaction of statistical association and dynamic competition. In C. Yu (Chair) *Modeling Statistical Word Learning*. Symposium presented at the International Conference on Infant Studies, Baltimore, MD.
- 2009 McMurray, B., and Mitchell, C. (2009, April) Word Frequency, Difficulty, and the Form of Vocabulary Growth. In M. Frank (chair) *From Input to Uptake: Word Frequency Effects as a Window Into the Mechanisms of Early Language Learning*. Symposium presented at the Biennial Meeting of the Society for Research on Child Development, Denver, CO.
- 2009 Horst, J., Samuelson, L., and McMurray (2009, April) When Word Learning is Not About Words: Referent Selection and Visual Familiarity. In S. Grassmann & J. Horst (Chairs) *New Perspectives on Mutual Exclusivity*. Symposium presented at the Biennial Meeting of the Society for Research on Child Development, Denver, CO.
- 2008 Rost, G., and McMurray, B. (2008, March) Phonetic variability and early word learning. In McMurray, B. (Chair) *The emergence of phonological contrast from lexical and perceptual processes*. Symposium presented at the International Conference on Infant Studies, Vancouver, BC.
- 2008 Galle, M., and McMurray, B. (2008, March) Early discrimination of positional variants of consonants: Acquiring subphonemic sensitivity. In K. Onishi, and A. Seidl (Chairs) *Processing and learning of allophonic contrasts in infancy*. Symposium presented at the International Conference on Infant Studies, Vancouver, BC.
- 2008 Rost, G., and McMurray, B. (2008, July) Phonological variability and word learning: Infants can learn lexical neighbors. In A. Owen (Chair), *The role of input variability on language acquisition and use*. Symposium presented at the XI International Congress for the study of child language (IASCL): Edinburgh, Scotland.
- 2007 Spencer, J. (chair) and McMurray, B. (organizer) (2007, April) *An(other) Inconvenient Truth? Why Substantive Interactionism Should Move Us Beyond the Nature/Nurture Debate*. Roundtable discussion presented at the Biennial Meeting of the Society for Research in Child Development, Boston, MA.
- 2007 McMurray, B., Horst, J., and Samuelson, L. (2007, April) The interdependence of long-term learning and real-time behavior: computational investigations with a word learning model. In L. Samuelson & L. Smith (chairs) *It's About Time: New Approaches to Timescales, Computation and Processes in Early Word Learning*. Symposium presented at the Biennial Meeting of the Society for Research in Child Development, Boston, MA.
- 2005 McMurray, B., and Aslin, R.N. (2005, April) Statistical learning of phonetic categories: Computational insights and limitations. In B. McMurray & G. Hollich (chairs) *Core Computational Principles of Language Acquisition*. Symposium presented at the Biennial Meeting of the Society for Research in Child Development, Atlanta, GA
- 2004 McMurray, B., and Aslin, R.N. (2004, May) Stop-consonant perception in 7.5-month-olds: evidence for gradient categories. In R. Aslin (Chair) *The lexical/phonetic interface in infancy: Coping with multiple sources of variability*. Symposium presented at the International Conference on Infant Studies, Chicago, IL.

Conference Presentations

- 2025 Colby, S., Kutlu, E., Knight, S., and McMurray, B. (2025, May) Social network indices impact spoken word recognition across the adult lifespan. Poster presented at the 188th Meeting of the Acoustical Society of America .New Orleans, LA

- 2025 Muegge, J., and McMurray, B. (2025, May) Real-Time Word Recognition in Challenging Listening Conditions is Defined by Two Primary Dimensions, each of which Exhibit Within-Subject Stability and Link to Outcomes. Poster presented at the 188th Meeting of the Acoustical Society of America .New Orleans, LA
- 2025 Knight, S., Kim, H., McMurray, B., and Colby, S. (2025, May) Lexical status influences response variability in older adults' speech perception. Poster presented at the 188th Meeting of the Acoustical Society of America .New Orleans, LA
- 2025 Gur, E., and McMurray, B. (2025, May) Phonetic Variability Leads to Gradient Speech Perception. Poster presented at the 188th Meeting of the Acoustical Society of America .New Orleans, LA
- 2025 Kim, H., Muegge, J., and McMurray, B. (2025, May) Extending the Buffer: Real-Time Cue Integration Requires Encapsulated Auditory Memory, even at Absurdly Long Durations. Poster presented at the 188th Meeting of the Acoustical Society of America .New Orleans, LA
- 2025 Kim, H., Kutlu, E., Carraturo, S., Muegge, J., and McMurray, B. (2025, May) Is Speech Categorization Consistency Achieved in Part Through Lexical Knowledge? Poster presented at the 188th Meeting of the Acoustical Society of America .New Orleans, LA.
- 2024 Kim, H., Tomblin, J.B., and McMurray, B. (2024, October) Speech Categorization Consistency Predicts Overall Language Abilities. Poster presented at the *Mid-Continental Workshop on Phonology*, Champaign, IL
- 2024 Kim, H., Kutlu, E., and McMurray, B. (2024, October) Lexical Knowledge Stabilizes Speech Categorization Consistency. Poster presented at the *Mid-Continental Workshop on Phonology*. Champaign, IL
- 2024 Jeppsen, C., Klein-Packard, J., Apfelbaum, K., and McMurray, B. (2024, June) Investigating the Real-Time Components Underlying Children's Passage Reading. Poster presented at the *Society for Research in Child Language Disorders*, Madison, WI
- 2024 Kim, H., Klein-Packard, J., Sorensen, E., Oleson, J., Tomblin, B., and McMurray, B. (2024, June) Noisier Speech Categorization in Children with Language and Reading Disabilities. Poster presented at the *Society for Research in Child Language Disorders*, Madison, WI
- 2024 Tomblin, B., Klein-Packard, J., Kim, H., and McMurray, B. (2024, June) Real Time Processes during Word Recognition in Children with and without DLD and/or Dyslexia. Poster presented at the *Society for Research in Child Language Disorders*, Madison, WI
- 2024 Gur, E., Klein-Packard, J., Fergus, A., and McMurray, B. (2024, June) The Development of Lateral Inhibition in Spoken Word Recognition. Poster presented at the *Society for Research in Child Language Disorders*, Madison, WI
- 2023 Colby, S., Smith, F.X., Huffman, M., Jeppsen, C., Muegge, J., Kutlu, E., and McMurray, B. (2023, November) The Dimensions of Real-Time Spoken Word Recognition in Cochlear Implant Users. Poster presented at the Meeting of the Psychonomic Society, San Francisco, CA.
- 2023 Kutlu, E., Chiu, S., Sorensen, E., Oleson, J., and McMurray, B. (2023, November) Bilingual Speech Categorization Is Not Noisy; It Is Gradient. Talk presented at the Meeting of the Psychonomic Society, San Francisco, CA.
- 2023 McMurray, B., Klein-Packard, J., Jeppsen, C., Kutlu, E., and Tomblin, J.B. (2023, November) The Impact of Language and Reading Development on Real-Time Spoken- and Written-Word Recognition in School-Age Children. Talk presented at the Meeting of the Psychonomic Society, San Francisco, CA.
- 2023 Chiu, S., Toscano, C., Toscano, J., and McMurray, B. (2023, November) Perceptual Learning in Speech Reflects Rapid Adjustment of Global Mappings from Acoustic Cues to Phonological Categories. Poster presented at the Meeting of the Psychonomic Society, San Francisco, CA.
- 2023 Jeppsen, C., Franke, H., and McMurray, B. (2023, November) New Method for Investigating the

- Facilitative Effects of Discourse Priming on Real-Time Word Recognition. Poster presented at the Meeting of the Psychonomic Society, San Francisco, CA.
- 2023 Muegge, J., and McMurray, B. (2023, November) The Underlying Dimensionality of the Mechanisms of Word Recognition in Challenging Listening Conditions. Poster presented at the Meeting of the Psychonomic Society, San Francisco, CA.
- 2023 Protopapas, A., Zelihic, D., Ziaka, L., Simonsen, K., Baxelbaum, K., and McMurray, B. (2023, November) Word Reading Efficiency Is Associated with Resistance to Interference from Adjacent Words. Poster presented at the Meeting of the Psychonomic Society, San Francisco, CA
- 2023 Kyriakidou, S., Ziaka, L., McMurray, B., Zelihic, D., Simonsen, K., and Protopapas, A. (2023) The Effects of Interword Spacing on Visual Word Recognition: An Eye-Tracking Study Using a Flanked-Word Visual World Paradigm. Poster presented at the Meeting of the Psychonomic Society, San Francisco, CA
- 2023 Sorenson, E., Oleson, J., Kutlu, E., and McMurray, B. (August, 2023) A Bayesian Hierarchical Model for the Analysis of Visual Analogue Scaling Tasks. Poster presented at Joint Statistical Meetings. Toronto, Ontario
- 2023 Zimmermann, L., and McMurray, B. (July, 2023) What is the role of automaticity and morphological processing in middle school students' reading? Paper presented at the Meeting of the Society for the Scientific Studies of Reading. Port Douglas, Queensland, Australia
- 2023 McMurray, B., Baxelbaum, K., and Klein-Packard, J. (July, 2023) The Slow Development of Real-Time Written Word Recognition. Paper presented at the Meeting of the Society for the Scientific Studies of Reading. Port Douglas, Queensland, Australia
- 2023 Jeppsen, C., Baxelbaum, K., Klein-Packard, J., and McMurray, B. (July, 2023) Linking on-line written word recognition processes with reading outcomes in early readers. Paper presented at the Meeting of the Society for the Scientific Studies of Reading. Port Douglas, Queensland, Australia
- 2023 Wang, X., and McMurray, B. (2023, April) X.Wang: Lexical tone in bilingual spoken word recognition. Australasian Society for Experimental Psychology Conference, Canberra, Australia.
- 2023 Wang X., and McMurray, B. (2023, May) Bilingualism conference in Sweden.
- 2023 Smith, F., Gander, P., Berger, J., Hong, J., McMurray, B., Griffiths, T., and Choi, I. (February, 2023) Plasticity in Recent Cochlear Implantee's Response to Speech and to Noise. Poster presented at the *2023 Mid-Winter Meeting of the Association for Research in Otolaryngology*, Orlando, FL.
- 2023 Alsabbagh, N., Griffiths, T., McMurray, B., Choi, I., and Gander, P. (February, 2023) Neural Signatures of Predictive Coding During Auditory Temporal Coherence Detection in Cochlear Implant Users. Poster presented at the *2023 Mid-Winter Meeting of the Association for Research in Otolaryngology*, Orlando, FL.
- 2022 Sarrett, M., Rhone, A., Shea, C., Hendrickson, C., Muegge, J., Kovach, C., Dlouhy, B., and McMurray, B. (2022, December) Decoding the neural dynamics of within- and between-language lexical competition: A pediatric neurosurgical case report of a Spanish-English bilingual. Poster presented at the *2022 Meeting of the Acoustical Society*, Nashville, TN.
- 2022 Kutlu, E., Fell, A., Apfelbaum, K., and McMurray, B. (2022, December). Effects of multilingual and monolingual social networks on speech perception. Oral presentation at the *2022 Meeting of the Acoustical Society*, Nashville, TN.
- 2022 Chiu, S., McMurray, B., Toscano, J., and Toscano, C. (2022, December) Adapting to talkers in speech perception: Balancing generalization and individuation. Poster presented at the *2022 Meeting of the Acoustical Society*, Nashville, TN.
- 2022 Muegge, J., and McMurray, B. (2022, December) Cochlear implant users show unexpected flexibility when recognizing words in challenging conditions. Poster presented at the *2022 Meeting of the Acoustical Society*, Nashville, TN.

- 2022 Colby, S., Huffman, M., and McMurray, B. (2022, December) Engaging effort improves efficiency during word recognition in cochlear implant users. Poster presented at the *2022 Meeting of the Acoustical Society*, Nashville, TN.
- 2022 Smith, N., Batten, R., Holterman, B., Boley, K., Kelley, E., McMurray, B. (2022, November) The Timing and Language of Mother-Child Dialogue in a Longitudinal Early Head Start Sample. Poster presented at the *2022 Meeting of the American Speech-Language-Hearing Association*, New Orleans, LA
- 2022 Woolsey, E., Jeppsen, C., and McMurray, B. (2022, November) Learning to Read Despite Auditory Challenge: Real-time Word Recognition in Cochlear Implant Users. Poster presented at the *2022 Meeting of the American Speech-Language-Hearing Association*, New Orleans, LA
- 2022 Kocsis, Z., Berger, J., Calmus, R., McMurray, B., Sarrett, M., Gander, P., Kovach, C., Greenlee, J., Boes, A., Nickl-Jockschat, Kawasaki, H., Choi, I., Griffiths, T., Howard, M., and Petkov, C. (2022, February) Long-term neurophysiological impact and compensation after disconnection of the anterior temporal lobe. Poster presented at the *2022 Meeting of Advances and Perspectives in Auditory Neuroscience*, Philadelphia, PA.
- 2022 Phalen, E., Apfelbaum, K., Klein-Packard, J., and McMurray, B. (2022, April) The development of lexical inhibition in written word recognition: Insight from a new superimposed words paradigm. Poster presentation at the Cognitive Development Society, Madison, WI.
- 2022 Fergus, A., Apfelbaum, K., Klein-Packard, J., and McMurray, B. (2022, April) Did you say bottleship? The development of lexical inhibition. Poster presentation at the Cognitive Development Society, Madison, WI.
- 2022 Kutlu, E., Fell, A., Apfelbaum, K., and McMurray, B. (2022, April) Development of speech perception in multilingual and monolingual social networks. Poster presentation at the Cognitive Development Society, Madison, WI.
- 2022 Fell, A., Kutlu, E., Apfelbaum, K., and McMurray, B. (2022, April) Development of gradience in phoneme categorization: Implications from the first year of the Growing Words Project. Poster presentation at the Cognitive Development Society, Madison, WI.
- 2022 Jeppsen, C., Apfelbaum, K., Tomblin, J.B., Klein-Packard, J., Fell, A., Jhaveri, S., and McMurray, B. (2022, April) The development of real-time phonological competition and semantic activation in adolescence. Poster presentation at the Cognitive Development Society, Madison, WI.
- 2022 Apfelbaum, K., Klein-Packard, J., and McMurray, B. (2022, April) The development of spoken- and written-word recognition during the school-age years: The Growing Words Project. Spoken presentation at the Cognitive Development Society, Madison, WI.
- 2022 Berger, J., Gander, P., Ponto, L., Lee, J-H., Hong, J., Dunn, C., Gantz, B., McMurray, B., Choi, I., and Griffiths, T. (2022, February) Speech-In-Noise Ability is Predicted by Neural Responses in Auditory Cortex of Cochlear Implantees. Poster presented at the *2022 Mid-Winter Meeting of the Association for Research in Otolaryngology*, Virtual Conference
- 2022 Colby, S., Smith, F., Rooff, K., and McMurray, B. (2022, February) The Effects of Language Experience and Inhibitory Control on Spoken Word Recognition for Cochlear Implant Users. Poster presented at the *2022 Mid-Winter Meeting of the Association for Research in Otolaryngology*, Virtual Conference
- 2022 Kocsis, Z., Jenison, R., Cope, T., Taylor, P., McMurray, B., Rhone A., Sarrett, M., Kikuchi, Y., Gander, P., Kovach, C., Calmus, R., Choi, I., Greenlee, J., Kawasaki, H., Griffiths, T., Howard, M., and Petkov, C. (2022, February) Acute Impact of Anterior Temporal Lobe Disconnection on Speech Prediction and Frontal-Auditory Neural Signals. Poster presented at the *2022 Mid-Winter Meeting of the Association for Research in Otolaryngology*, Virtual Conference
- 2022 Jeppsen, C., Apfelbaum, K., Ellis, T., and McMurray, B. (2022, February) How Pre-Lingually Deafened Cochlear Implant Users Deal With Unreliable Speech. Poster presented at the *2022 Mid-*

Winter Meeting of the Association for Research in Otolaryngology, Virtual Conference

- 2022 Gander, P. Berger, J., Kim, S., Schwalje, A., Woo, J., Na, Y-M., Holmes, A., Hong, J., Dunn, C., Hansen, M., Gantz, B., McMurray, B., Griffiths, T., and Choi, I. (2022, February) Behavioural Evidence for a Relationship Between Auditory Object Formation and Speech-In-Noise Processing in a Cochlear Implant Population. Poster presented at the *2022 Mid-Winter Meeting of the Association for Research in Otolaryngology, Virtual Conference*
- 2022 Smith, F., Colby, S., Geller, J., Choi, I., and McMurray, B. (2022, February) Neural Correlates of Effortful Listening With Vcoded Speech. Poster presented at the *2022 Mid-Winter Meeting of the Association for Research in Otolaryngology, Virtual Conference*
- 2022 Colby, S., Seedorff, M., and McMurray, B. (2022, February) Audiological and Demographic Factors That Impact Phonetic Categorization by Cochlear Implant Users. Poster presented at the *2022 Mid-Winter Meeting of the Association for Research in Otolaryngology, Virtual Conference*
- 2021 Fell, A., Klein-Packard, J., Jhaveri, S., Tomblin, J.B., McMurray, B., and Apfelbaum, K.S. (2021, June) The slow development of fine-grained speech perception skills: Implications for language and reading. Poster presented at the *Society for Research on Child Language Disorders*, Madison, WI.
- 2021 Jeppsen, C., Apfelbaum, K., Klein, K., Fell, A., Klein-Packard, J., Jhaveri, S., Tomblin, J. B., and McMurray, B. (2021, June) The development of real-time lexical processing: phonological competition and semantic activation. Poster presented at the *Society for Research on Child Language Disorders*, Madison, WI.
- 2021 Berger, J. Gander, P. Kim, S., Schwalje, A., Woo, J., Na, Y., Holmes, A., Hong, J., Dunn, C., Hansen, M., Gantz, B., McMurray, B., Griffiths, T., and Choi, I. (2021, January) Neural Correlates of Speech-In-Noise Variance in Cochlear Implant Users. Poster presented at the Association for Research in Otolaryngology.
- 2021 Gander, P., Berger, J., Kim, S., Schwalje, A., Woo, J., Na, Y., Holmes, A., Hong, J., Dunn, C., Hansen, M., Gantz, B., McMurray, B., Griffiths, T., Choi, I. (2021, January) Evidence for Neuroplasticity in EEG Responses to Speech-In-Noise Within the First Year After Cochlear Implant Activation
- 2020 McMurray, B., Chiu, S., Sarrett, M., Black, A., and Aslin, R.N. (2020, November) Evidence for Neuroplasticity in EEG Responses to Speech-In-Noise Within the First Year After Cochlear Implant Activation. Paper presented at the *Meeting of the Psychonomic Society*.
- 2020 Colby, S., Smith, F., Rooff, K., and McMurray, B. (2020, October) Evidence for Neuroplasticity in EEG Responses to Speech-In-Noise Within the First Year After Cochlear Implant Activation. Poster presented at the *Meeting of the Psychonomic Society*.
- 2020 Apfelbaum, K.S., Goodwin, C., and McMurray, B. (2020, October) The Development of Lexical Competition in Spoken and Written Word Recognition. Poster presented at the *Meeting of the Psychonomic Society*
- 2020 Ziaka, L., Zelihic, D., Nordli, C., McMurray, B., and Protopapas, A. (2020, October) Interference in Automatic Word Recognition: An Eye Tracking Study. Poster presented at the *Meeting of the Psychonomic Society*
- 2020 Chiu, S., Freeman, J., and McMurray, B. (2020, October) It takes two [mechanisms]: Unsupervised and supervised learning of auditory categories. Poster presented at the *Meeting of the Psychonomic Society*.
- 2020 Klein, K., Walker, E., and McMurray, B. (2020, March) Real-Time Lexical and Semantic Processing in Children with Hearing Loss. Poster presented at the American Academy of Audiology. New Orleans, LA.
- 2020 Holmes, A., Geller, J., Schwalje, A., Choi, I., and McMurray, B. (2020, January) Assessing the Reliability and Validity of the Iowa Test of Consonant Confusion. Poster presented at the Association for Research in Otolaryngology.

- 2019 Sarrett, M.E., Schreiber, K., Kawasaki, H., Howard, M.A., and McMurray, B. (2019, October) The effect of lexical status on acoustic encoding in human auditory and perisylvian language cortices: Preliminary results from intracranial recordings. Poster presented at the Society for Neuroscience, Chicago, IL.
- 2019 Kocsis, Z., Jenison, R.L., McMurray, B., Rhone, A.E., Sarrett, M.E., Gander, P.E., Nourski, K.V., Steinschneider, M., Calmus, R.M., Kawasaki, H., Greenlee, J.D., Kovach, C.K., Griffiths, T.D., Howard, M. A., and Petkov, C.I. (2019, October) Anterior temporal lobe disconnection disrupts cortical oscillatory neural responses to speech in the human brain. Poster presented at Society for Neuroscience, Chicago, IL.
- 2019 Sarrett, M.E., Schreiber, K., Kawasaki, H., Howard, M.A., and McMurray, B. (2019, October) The effect of lexical status on acoustic encoding in human auditory cortex: preliminary results from intracranial recordings. Poster presented at Advances and Perspectives in Auditory Neuroscience, Chicago, IL.
- 2019 Kim, S., Geller, J., Holmes, A., McMurray, B., and Choi, I. (2019, October) Cortical dynamics of word-in-noise recognition in cochlear implant users. Poster presented at Advances and Perspectives in Auditory Neuroscience, Chicago, IL
- 2019 Simon⁺, A., and McMurray, B., (2019, October) Sensitivity to fine-grained phonetic variation in children who use cochlear implants. Poster presented at the Iowa Speech and Hearing Association. Des Moines, IA.
- 2019 Plock⁺, S., and McMurray, B. (2019, October) The Role of Cognitive Control in Understanding Speech in Noise. Poster presented at the Iowa Speech and Hearing Association. Des Moines, IA.
- 2019 Colby, S., and McMurray, B., (2019, December) The role of listening effort during degraded speech recognition: A comparison of the dual-task and pupillometry paradigms. Poster presented at the Meeting of the Acoustical Society of America. San Diego, CA.
- 2019 Smith, N., Hammans, C., Vallier, T., and McMurray, B. (2019, March). Child-directed speech in noise: Listener- and environment-related changes in speech acoustics. Paper presented at the 177th Meeting of the Acoustical Society of America. Louisville, KY
- 2019 Smith, N., Hammans, C., Vallier, T., and McMurray, B. (2019, March). Child-directed speech enhances preschoolers' speech perception in noise. Poster presented at the 177th Meeting of the Acoustical Society of America. Louisville, KY
- 2019 McMurray, B. (2019, February) Integration of Speech Information (or not) across Multiple Cochlear Implants and/or Acoustic Modes of Hearing. Poster presented at the *Midwinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD
- 2019 Smith, F., and McMurray, B. (2019, February) Lexical Access in the Face of Degraded Speech: Dealing with Uncertainty Through Cognitive Adaptation. Poster presented at the *Midwinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD
- 2019 Isaac, H., Liu, A.S., Dunn, C., Gantz, B., McMurray, B., and Hansen, M. (2019, February) Patient Specific Factors that Influence Hearing Preservation Following Cochlear Implantation. Poster presented at the *Midwinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD
- 2019 Choi, I., Holmes, A., Kim, S., Schwalje, A., Liu, A.S., Gander, P., Na, Y., Woo, J., McMurray, B., and Griffiths, T. (2019, February) Neural Correlates of Speech-in-Noise Variance in Cochlear Implant Users. Poster presented at the *Midwinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD
- 2019 Gander, P., Ponto, L., Choi, I., McMurray, B., and Griffiths, T. (2019, February) O-15 Water PET Study of Speech in Noise Processing in Cochlear Implant Patients. Poster presented at the *Midwinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD

- 2019 Smith, F., and McMurray, B. (2019, February) The Dynamics of Lexical Access Change Depending on Listener Needs in Cochlear Implant Users: The Effect of Sentence Context. Talk presented at the *Midwinter Meeting of the Association for Research in Otolaryngology*, Baltimore, MD
- 2019 McMurray, B., Freeman, J., Curtu, R., Sarrett, M., Klein-Packard, J., and Chiu, S. (2019, January) Reinforced Statistical Learning (half baked results). Talk presented at the *13th Meeting of the Auditory Cognitive Neuroscience Society*. Gainesville, FL.
- 2018 Hendrickson⁺⁺⁺, K., and McMurray, B. (2018, November) The dynamics of spoken and visual word recognition in school-aged children. Paper presented at the *Boston University Conference on Language Development*. Boston, MA
- 2018 Blomquist⁺, C., and McMurray, B. (2018, November) The development of inter-lexical inhibition from 1st grade to adulthood. Paper presented at the *Boston University Conference on Language Development*. Boston, MA.
- 2018 Hendrickson⁺⁺⁺, K., and McMurray, B. (2018, November) Long-term maintenance of activation for phonological competitors by CI users. Paper presented at the *2018 Convention of the American Speech-Language-Hearing Association*. Boston, MA.
- 2018 Sarrett⁺⁺, M., Kapnoula⁺⁺, E. & McMurray, B. (2018, November) Realtime integration of acoustic input and semantic expectations in speech processing: evidence from electro-encephalography. Poster presented at the *176th Meeting of the Acoustical Society of America*. Victoria, BC, Canada.
- 2018 Sereno, J., Jongman, A., Wang, Y., Hamarneh, G., Tang, L., Garg, Saurabh, Tupper, P., McMurray, B., Redmon, C., Zeng, Y., Hannah, B., Leung, K., and Cho, S. (2018, November) Linking production and perception of clear speech. Poster presented at the *176th Meeting of the Acoustical Society of America*. Victoria, BC, Canada.
- 2018 Smith⁺⁺, F., and McMurray, B. (2018, November) Lexical access in the face of degraded speech: The effects of cognitive adaptation. Poster presented at the *176th Meeting of the Acoustical Society of America*. Victoria, BC, Canada.
- 2018 Seedorff⁺⁺, M., and McMurray, B. (2018, November) Integration of speech information (or not) across electric and acoustic modes in hearing impaired listeners. Poster presented at the *176th Meeting of the Acoustical Society of America*. Victoria, BC, Canada.
- 2018 Sarrett⁺⁺, M., Kapnoula⁺⁺, E. & McMurray, B. (2018, August) Realtime integration of acoustic cues and semantic expectations in speech processing: Evidence from EEG. Poster presented at the *2018 Meeting of the Cognitive Science Society*. Madison, Wisconsin
- 2018 McMurray, B., Roembke⁺⁺, T., and Hazeltine, E., (2018, August) Irrelevant variability and interleaved/blocked training in an artificial orthography task and connectionist models. Poster presented at the *2018 Meeting of the Cognitive Science Society*. Madison, Wisconsin
- 2018 Roembke⁺⁺, T., and McMurray, B. (2018, August) Pruning incorrect associations in word learning. Poster presented at the *2018 Meeting of the Cognitive Science Society*. Madison, Wisconsin
- 2018 Smith⁺⁺, F., and McMurray, B. (2018, August) Lexical access in the face of degraded speech: The effects of cognitive adaptation. Poster presented at the *2018 Meeting of the Cognitive Science Society*. Madison, Wisconsin
- 2018 Klein, K.E., Farris-Trimble, A., & McMurray, B. (2018, March). Real-time spoken word recognition in sentences by cochlear implant users. Poster session presented at the *45th Annual Scientific and Technology Conference of the American Auditory Society*, Scottsdale, Arizona.
- 2018 Liu, A. S., Kovach, C., Kawasaki, H., Howard, M. A., McMurray, B. (2018, February) Predictive coding in auditory cortex for degraded speech recognition. Poster presented at the *Meeting of the Association for Research in Otolaryngology*, San Diego, CA.
- 2017 Goodwin, C., Blomquist⁺, C., and McMurray, B. (2017, March) The development of real-time lexical processing for spoken and written inputs: Implications for reading outcomes. Poster presented at the

2017 Meeting of the Society for Research on Child Development, Austin, TX.

- 2017 Roembke⁺⁺, T., McMurray, B., Freedberg, M., and Hazeltine, E. (2017, March) Basic learning mechanisms for acquiring reading skills: effects of irrelevant variability, vowel overlap and blocking. Poster presented at the *2017 Meeting of the Society for Research on Child Development, Austin, TX.*
- 2017 Roembke⁺⁺, T., Hazeltine, E., Reed, D., and Hazeltine, E. (2017, March) The importance of automaticity for fluent reading in middle-school students. Poster presented at the *2017 Meeting of the Society for Research on Child Development, Austin, TX.*
- 2017 McMurray, B., Seedorff⁺⁺, M., Danelz⁺, A., and Rigler, H. (2017, March) Speech categorization develops slowly through adolescence... but you have to look fast to see it. Poster presented at the *2017 Meeting of the Society for Research on Child Development, Austin, TX.*
- 2016 Toscano, J., McMurray, B., Myers, E., and Goldrick, M. (2016, November) Unifying principles and individual differences: What should we focus on to understand speech? Panel discussion at *Auditory Perception, Action and Cognition Meeting, Boston, MA*
- 2016 Schreiber⁺⁺, K., and McMurray, B. (2016, November) Unstuck in time: Listeners anticipate future segments before they identify the current one. Poster presented at *Auditory Perception, Action and Cognition Meeting, Boston, MA*
- 2016 Dial⁺⁺, H., McMurray, B., and Martin, R. (2016, November) Evaluating the Relationship Between Sublexical and Lexical Processing: Evidence From the Visual World Paradigm. Poster presented at the *Meeting of the Psychonomic Society, Boston, MA.*
- 2016 Saltzman, D., Rhone, A., McMurray, B., and Toscano, J. (2016, November) Listeners Use Sentential Rate, but not Envelope Information, to Compensate for Speaking Rate During Spoken Word Recognition. Poster presented at the *Meeting of the Psychonomic Society, Boston, MA.*
- 2016 Schreiber, K., and McMurray, B. (2016, November) Gender Affects Early Perceptual Processes During Speech Perception: Evidence From ERPs and Eye-Movements. Poster presented at the *Meeting of the Psychonomic Society, Boston, MA.*
- 2016 Roembke, T., and McMurray, B. (2016, November) The Role of In-the-Moment Processing in Cross-Situational Word Learning. Poster presented at the *Meeting of the Psychonomic Society, Boston, MA.*
- 2016 McMurray, B., Roembke, T., Freedberg, M., and Hazeltine, E. (2016, November) Applying Principles of Learning to Reading: How Principles of Variability, Blocking and Overlap Influence Children's Acquisition of Sound/Spelling Correspondence. Paper presented at the *Meeting of the Psychonomic Society, Boston, MA.*
- 2016 Dial, H., McMurray, B., and Martin, R. (2016, October) Lexical processing depends on sublexical processing: Evidence from the visual world paradigm. Poster presented at the *Academy of Aphasia, Llandudno, Wales, UK.*
- 2016 Navarro, V., Wasserman, E., McMurray, B., and Roembke, T. (2016, September) The role of negative associations in learning rich associative networks. Poster presented at the Annual Meeting of the Pavlovian Society, Jersey City, NJ.
- 2016 McMurray, B., and Jongman, A. (2016, July) Layers of variance in the speech onion: Why cry over the problem of variability? Evidence from perceptually motivated analyses of fricatives. Paper presented at *Higher-order structure in speech variability: phonetic/phonological covariation and talker adaptation.* Ithaca, NY.
- 2016 Castelluccio, B., Kapnoula, E., Edwards, J., McMurray, B., and Eigsti, I. (2016, May) Are there phonological consequences of auditory processing differences in autism spectrum disorder? Evidence from phonological categorization tasks. Poster presented at the *2016 International Meeting for Autism Research.* Baltimore, MD.
- 2016 Garrick, J. A., Hammans, C. A., Vallier, T. J. McMurray, B. & Smith, N. A. (2016, March). Prosodic contrast for target words in child-directed speech in noise. Poster presented at the *Meeting of the*

American Auditory Society, Scottsdale, AZ.

- 2016 McMurray, B. (2016, January) Why are those @#&%!! kids so slow? [at speech perception]. Oral presentation at the Auditory Cognitive Neuroscience Society, Tucson, AZ.
- 2015 Brown, C., Zimmermann, J., Hazeltine, J., Reed, D., and McMurray, B. (2015, December) Assessing automaticity of word level reading skills in struggling middle school readers. Poster presented at *NCER/NCSE 2015 Principal investigators meeting: Collaborations to bridge high quality education research and practice*. Washington, DC.
- 2015 Ellis, T. Apfelbaum, K.S., Rigler, H., Seedorff, M., and McMurray, B. (2015, November) Effects of Mispronunciation on Spoken Word Recognition in Cochlear Implant Users & Typically Hearing Listeners. Poster presented at the 2015 Meeting of the American Speech-Language-Hearing Association, Denver, CO.
- 2015 Rigler, H., Farris-Timble, A., and McMurray, B. (2015, November) Spoken word recognition in pediatric cochlear implant users. Poster presented at the 2015 Meeting of the American Speech-Language-Hearing Association, Denver, CO.
- 2015 Saltzman, D., Rhone, A., McMurray, B., and Toscano, J. (2015, November) Artificially natural: Creating carefully-controlled acoustic cue continua from natural speech. Poster presented at the *14th Annual Auditory Perception, Cognition and Action Meeting*, Chicago, IL.
- 2015 Kapnoula, E., Edwards, J. & McMurray, B. (2015, November) Gradient categorization of speech sounds helps listeners recover from lexical garden paths. Poster presented at the *14th Annual Auditory Perception, Cognition and Action Meeting*, Chicago, IL.
- 2015 Smith, J., Treat, T., McMurray, B., and Farmer, T. (2015, October) Generalization of Dynamic Models of Basic Decision Making to Complex Judgments of Women's Sexual Interest. Poster presented at the *2015 Annual Meeting of the Psychonomic Society*, Chicago, IL
- 2015 Smith, N. A., Vallier, T. J., McMurray, B., Hammans, C. A., & Garrick, J. A. (2015, June). Environmental, linguistic and developmental influences on mothers' speech to children: An examination of audible and visible properties. Poster presented at the Joint Conference on Facial Analysis, Animation and Audio-Visual Speech Processing, Vienna, Austria.
- 2015 Kucker, S.C., McMurray, B., & Samuelson, L.K. (2015, June). Optimizing ambiguity: Word learning from uncertainty in vocabulary knowledge. Poster session to be presented at the *45th Annual Meeting of the Jean Piaget Society*, Toronto, Ontario, Canada.
- 2015 Marino, A., Apfelbaum, K., and McMurray, B. (2015, March) Take it From the Top: Top-Down Speech Learning in Children Using Lexical Information. Poster presented at the *Society for Research in Child Development*, Philadelphia, PA.
- 2015 Roembke, T., Wiggs, K., and McMurray, B. (2015, March) Special role of words may emerge over time – no evidence for advantage of linguistic stimuli over non-linguistic ones in children. Poster presented at the *Society for Research in Child Development*, Philadelphia, PA.
- 2015 Smith, N., and McMurray, B. (2015, March) Temporal Responsiveness in Mother-Child Dialogue: A Longitudinal Study of Normal-Hearing and Hearing-Impaired Children. Poster presented at the *Society for Research in Child Development*, Philadelphia, PA.
- 2014 McMurray, B., and Galle, M. (2014, November) Delayed Integration of Acoustic Cues in Spoken Word Recognition. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.
- 2014 Kapnoula, E., and McMurray, B., (2014, November) Evidence for Experience-Based Changes in Inter-Lexical Inhibition. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.
- 2014 Apfelbaum, K.S. and McMurray, B., (2014, November) When Will You Learn? Evidence of Continuous Associative Learning During Lexical Processing. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.

- 2014 Kapnoula, E., Winn, M., Kong, E., Edwards, J., and McMurray, B. (2014, November) Listeners Differ in Whether They Perceive Speech Gradiently or Categorically: Consequences for Cue Integration. Poster presented at the 55th Meeting of the Psychonomics Society, Long Beach, CA
- 2014 Roembke, T., Freedberg, M., McMurray, B., and Hazeltine, E. (2014, November) Variability in Irrelevant Elements Helps Learning in Motor Analog for Reading. Poster presented at the 55th Meeting of the Psychonomics Society, Long Beach, CA.
- 2014 Wasserman, E., Roembke, T., Casler, D., and McMurray, B. (2014, November) Many to Many Category Learning: Building or Pruning? Implications for Human Word Learning. Poster presented at the 55th Meeting of the Psychonomics Society, Long Beach, CA.
- 2014 Kucker, S.C., McMurray, B. and Samuelson, L.K. (2014, November) Optimizing ambiguity: Word learning from uncertainty in vocabulary knowledge. Poster presented at *The Science of Learning* pre-conference for the 2014 International Mind Brain and Education Society Conference, Fort Worth, TX
- 2014 Kapnoula, E., and McMurray, B. (2014, September) Individual differences in phoneme categorization. Paper presented at the *Mid-Continental Workshop on Phonetics and Phonology*, Madison, WI
- 2014 Hannaway, K., and McMurray, B. (2014, September) Lexical effects on early sensory processing reveals the role of top-down feedback on speech perception: Evidence from event-related potentials. Poster presented at the *Mid-Continental Workshop on Phonetics and Phonology*, Madison, WI.
- 2014 McMurray, B. (2014, January) *Spoken word recognition in the brain and the problem of time: Speculating out loud*. Paper presented at the Auditory Cognitive Neuroscience Society. Tucson, AZ.
- 2013 Blumberg, M.S., Coleman, C.M, McMurray, B., Gerth, A.I., Weiner, J., and Fritzsche, B. (2013, November) Spatiotemporal patterning of limb twitching during active sleep in newborn rats and ErbB2 knockout mice lacking muscle spindles. Poster presented at the *Meeting of the Society of Neuroscience*. San Diego, CA
- 2013 Rhone, A., McMurray, B., Oya, H., Nourski, K., Kawasaki, H., and Howard, M. (2013, November) Intracranial recordings reveal spatial and temporal differences in the processing and categorization of speech. Poster presented at *Meeting of the Tucker-Davis Symposium on Advances and Perspectives in Auditory Neurophysiology*. San Diego, CA
- 2013 Rhone, A., McMurray, B., Oya, H., Nourski, K., Kawasaki, H., and Howard, M. (2013, November) Intracranial recordings reveal spatial and temporal differences in the processing and categorization of speech. Poster presented at *Meeting of the Society of Neuroscience*. San Diego, CA
- 2013 Rhone, A., McMurray, B., Oya, H., Nourski, K., Kawaski, H., and Howard, M. (2013, November) Temporally dynamic cortical processing of spoken words: evidence from intracranial recordings. Poster presented at the *Meeting of the Society for the Neurobiology of Language*. San Diego, CA
- 2013 Warren, D., Duff, M., and McMurray, B. (2013, November) A computational model of distinct hippocampal and cortical contributions to word learning under referential ambiguity. Poster presented at the *Meeting of the Society for the Neurobiology of Language*. San Diego, CA.
- 2013 Kucker, S., Samuelson, L., and McMurray, B. (2013, November) When attending is not learning: The role of novelty in word learning in both 18-month-old children and computational models. Poster Presented at *Learning to Attend, Attending to Learn workshop*, San Diego, CA
- 2013 Belfi, A., McMurray, B., Rhone, A., Oya, H., Kawasaki, H. and Howard, M. (2013, May) Context Effects of Musical Chord Perception: Intracranial Responses. Paper presented *The Midwestern Music Cognition Symposium*, Columbus, OH
- 2013 McMurray, B. (2013, May) The Varied Practice Model (Counter-intuitive to Traditional Approaches) Incorporates “Desirable Difficulties” to Improve Automaticity for Struggling Readers. Paper presented at *The International Reading Association*, San Antonio, TX

- 2013 Ryan, D., and McMurray, B. (2013, May) Marietta City Schools' New Approaches to Intervention Students with Special Needs. Paper presented at *The International Reading Association*, San Antonio, TX
- 2013 Munson, C., and McMurray, B. (2013, April) Evidence for talker-specificity and generalization in perceptual learning. Poster presented at *The Workshop on Current Issues and Methods in Speaker Adaptation (CIMSAs)*, Columbus, OH.
- 2012 Apfelbaum, K., and McMurray, B. (2012, November) When Will You Learn? Interactions of Real-Time Lexical Processing and Word Learning. Poster presented at *The 53rd Meeting of the Psychonomic Society*, Minneapolis, MN.
- 2012 Galle, M., and McMurray, B. (2012, November) Real-Time Integration of Asynchronous Cues to Fricative Voicing and Place of Articulation. Poster presented at *The 53rd Meeting of the Psychonomic Society*, Minneapolis, MN.
- 2012 Kapnoula, E., Packard, S., Apfelbaum, K., McMurray, B. and Gupta, P. (2012, November) Lexical Integration Without Meaning or Sleep. Poster presented at *The 53rd Meeting of the Psychonomic Society*, Minneapolis, MN.
- 2012 Toscano, J., and McMurray, B. (2012, November) Combining Cues to Recognize Speech: Acoustic Measurements of Phonetic Cues to Word-Medial Voicing. Poster presented at *The 53rd Meeting of the Psychonomic Society*, Minneapolis, MN.
- 2012 Rhone, A., Apfelbaum, K and McMurray, B. (2012, October) Understanding speech acoustics in an era of extreme cue-integration: Multi-dimensional phonetics reveals individual differences in fricative production. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- 2012 Galle, M. and McMurray, B. (2012, October) The waiting is the hardest part: How asynchronous acoustic cues are integrated for fricative voicing and place of articulation. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- 2012 Apfelbaum, K., and McMurray, B. (2012, October) Context matters: Analyzing the necessity of context-dependent speech perception in complex models. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- 2012 Toscano, J., and McMurray, B. (2012, October) Voicing in English revisited: Measurement of acoustic features signaling word-medial voicing in trochees. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- 2012 Farris-Trimble, A. and McMurray, B. (2012, October) The contribution of high-frequency information to fine-grained speech perception in cochlear-implant-simulated speech. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- 2012 Kapnoula, E., and McMurray, B. (2012, October) The young and the meaningless: Novel-word learning without meaning or sleep. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- 2012 Rhone, A., Oya, H., McMurray, B., Reale, R., Nourski, K., Kawasaki, H., and Howard, M. (2012, October) Auditory, visual, and audiovisual responses to speech and non-speech recorded directly from the temporal lobe. Paper presented at the *Meeting of the Society for Neuroscience*, New Orleans, LA.
- 2012 Belfi, A., Rhone, A., McMurray, B., Oya, H., Kawasaki, H., and Howard, M. (2012, October) The effect of expectancy on musical chord perception: Behavioral and intracranial responses. Paper presented at the *Meeting of the Society for Neuroscience*, New Orleans, LA.
- 2012 Kucker, S., Samuelson, L.S., and McMurray, B. (2012, June) Word Knowledge and Vocabulary Experience: Referent Selection and Retention in Fast-Mapping. Paper presented at the *International Conference on Infant Studies*, Minneapolis, MN.
- 2011 McMurray, B. (2011, January) Learning, it's not just for kids any more: Implications for cochlear implants and neural architectures for speech perception. Paper presented at the *Meeting of the Auditory*

Cognitive Neuroscience Society. Tucson, AZ.

- 2011 Toscano, J. and McMurray (2011, January) Measuring perceptual encoding and categorization of speech sounds using an ERP approach. Poster presented at the *Meeting of the Auditory Cognitive Neuroscience Society*. Tucson, AZ.
- 2011 Toscano, J. and McMurray, B. (2011, November) Measuring acoustic cue encoding and categorization during speech processing using the auditory N1 and P3 ERP components. Paper presented at the *Auditory Perception, Cognition and Action Meeting*. Seattle WA.
- 2011 Toscano, J., Anderson, N. and McMurray, D. (2011, November) The role of time in spoken word recognition: Evidence against temporal order in lexical representations. Poster presented at the *52nd Meeting of the Psychonomics Society*. Seattle, WA.
- 2011 Apfelbaum, K. and McMurray, B. (2011, November) Flipping the word upside down: Top-down effects during word learning. Poster presented at the *52nd Meeting of the Psychonomics Society*. Seattle, WA.
- 2011 McMurray, B., Apfelbaum, K., and Hazeltine, R.E. (2011, November) Statistical learning and phonics in a laboratory/classroom paradigm: Variability helps. Paper presented at the *52nd Meeting of the Psychonomics Society*. Seattle, WA.
- 2011 Trimble, A.F. and McMurray, B. (2011, November) Online spoken word recognition is sensitive to phonological rules. Poster presented at the *52nd Meeting of the Psychonomics Society*. Seattle, WA.
- 2011 Trimble, A.F., and McMurray, B. (2011, October) Phonological alternations in spoken word recognition. Paper presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- 2011 Galle, M. and McMurray, B. (2011, October) Real-time integration of asynchronous cues to fricative voicing: Evidence for continuous cascades of information. Paper presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- 2011 Rhone, A., Apfelbaum, K., and McMurray, B. (2011, October) Dynamic articulatory control during fricative production: Implications for perception. Poster presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- 2011 Apfelbaum, K., and McMurray, B. (2011, October) On the necessity of perceptual normalization in speech perception. Poster presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- 2011 Toscano, J., Anderson, N. & McMurray, B. (2011, October) The role of phoneme order and phonetic detail in spoken word recognition. Paper presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- 2011 Trimble, A.F. (2011, July) Online spoken word recognition in pediatric cochlear implant users. *13th Symposium on Cochlear Implants in Children*. Chicago, IL.
- 2011 Apfelbaum, K., Fassett, M., and McMurray, B. (2011, April) The Chicken Helps Build the Egg: Learning Words Facilitates the Acquisition of Speech Categories. Poster presented at the *Society for Research on Child Development*, Montreal, QC, Canada.
- 2011 Apfelbaum, K., Galle, M., and McMurray, B. (2011, April) The Role of Single Speaker Acoustic Variation in Early Word Learning. Poster presented at the *Society for Research on Child Development*, Montreal, QC, Canada.
- 2011 Wu, Q., Panneton, R. & McMurray, B. (2011, April) Hyperarticulation is Beneficial to but Not Perceptible by Older Infants. Poster presented at the *Society for Research on Child Development*, Montreal, QC, Canada.
- 2010 Galle, M., and McMurray, B. (2010, March) A Meta-Analysis of 40 Years of Speech Perception Research in Infancy. Poster presented at the *International Conference on Infant Studies*, Baltimore, MD.
- 2010 Wu, J., Panneton, R., and McMurray, B. (2010, March) Hyperarticulation is Beneficial but Not Perceptible by Older Infants. Poster presented at the *International Conference on Infant Studies*, Baltimore, MD.

- 2010 Apfelbaum, K., and McMurray, B. (2010, February) When discrimination is not enough: An associative model of the development of phonological cue weighting. Poster presented at *Computational Modeling of Sound Pattern Acquisition Workshop*. Edmonton, AB.
- 2010 McMurray, B., and Jongman, A. (2010, February) Statistical and exemplar approaches to speech perception: What abilities must also develop? Poster presented at *Computational Modelling of Sound Pattern Acquisition Workshop*. Edmonton, AB.
- 2009 Toscano, J., McMurray, B., Dennhardt, J., and Luck, S. (2009, April) Listeners' sensitivity to acoustic detail in speech at the level of both early encoding and categorization. Poster presented at the *15th International Conference on Event-Related Potentials of the Brain*, Bloomington, IN.
- 2009 McMurray, B. and Samuelson, L. (2009, April) Understanding Word Learning in the Context of Processing: A Computational Approach. Poster presented at the *Meeting of the Society for Research in Child Development*, Denver, CO.
- 2009 Kovack-Lesh & McMurray, (2009, April) Separating Phonetic Categories in Infant Directed Speech: Intentional Enhancement or Hyperarticulation? Poster presented at the *Meeting of the Society for Research in Child Development*, Denver, CO.
- 2009 Galle, M., McMurray, B., Walker, B., Barker, B., and Tomblin, J.B. (2009, April) Preference for Modified Adult Directed and Infant Directed Speech. Poster presented at the *Meeting of the Society for Research in Child Development*, Denver, CO.
- 2008 Munson, C., McEchron, W.D., McMurray, B. & Tomblin, J.B. (2008, November) Perceptual sensitivity to within-category acoustic variation by language impaired and typically developing adolescents. Poster presented at the *156th Meeting of the Acoustical Society of America*, Miami, FL.
- 2008 Toscano, J. & McMurray, B. (2008, November) Online processing of acoustic cues used in speech perception: Comparing statistical and neural network models. Poster presented at the *156th Meeting of the Acoustical Society of America*, Miami, FL.
- 2008 Toscano, J. & McMurray, B. (2008) Perception of voicing is graded all the way down: evidence from electrophysiology. Paper presented at the *14th Mid-Continental Workshop on Phonology*, University of Minnesota.
- 2008 Beckman, J. Helgason, P., McMurray, B & Ringen, C. (2008) Phonological overspecification: Evidence from rate effects on Swedish VOT. Paper presented at *14th Mid-Continental Workshop on Phonology*, University of Minnesota.
- 2008 Apfelbaum, K., McMurray, B. & Blumstein, S. (2008) The interaction of phonological and semantic activation: where does phonology end and semantics begin? Paper presented at *14th Mid-Continental Workshop on Phonology*, University of Minnesota.
- 2008 McMurray & Jongman, (2008, November) From production to acoustics to perception: The case of fricatives. Poster presented at the *156th Meeting of the Acoustical Society of America*, Miami, FL.
- 2008 Toscano, J., and McMurray, B. (2008, July) Using the distributional statistics of speech sounds for learning and combining multiple acoustic cues. Poster presented at the *Meeting of the Cognitive Science Society*, Washington, DC.
- 2008 Mitchell, C., and McMurray, B. (2008, July) A stochastic model of the vocabulary explosion. Poster presented at the *Meeting of the Cognitive Science Society*, Washington, DC
- 2008 Beckman, J. Helgason, P., McMurray, B. & Ringen, C. (2008, June) Effects of speaking rate on voice-onset time in Swedish: Phonological implications. Paper presented at the *16th Manchester Phonology Meeting*, Manchester, UK.
- 2008 McMurray, B., McEchron, D., and Tomblin, J.B (2008, May) The timecourse of frequency effects on word recognition in language impairment: Evidence for impaired inhibition. Poster presented at the *Society for Research in Language Disorders*, Madison, WI

- 2008 Munson, C., McEchron, D., McMurray, B., and Tomblin, J.B. (2008, May) Gradient perception of within-category acoustic detail by normal and language impaired listeners. Poster presented at the *Society for Research in Child Language Disorders*, Madison, WI.
- 2008 Horst, J. S., Samuelson, L.K. & McMurray, B. (2008, April) The Dynamics of Referent Selection. Poster presented at *New Directions in Word Learning*. York, UK
- 2008 Kovack-Lesh, K., Oakes, L., and McMurray, B. (2008, March) Multiple Influences on Infants Category Learning. Poster presented at the *International Conference on Infant Studies*, Vancouver, BC.
- 2008 Kovack-Lesh, K., McMurray, B., and Oakes, L. (2008, March) Comparing Cats and Dogs: Infants' and Adults' Eye-Movements During Online Comparison. Poster presented at the *International Conference on Infant Studies*, Vancouver, BC
- 2007 McMurray, B., Tanenhaus, M., and Aslin, R. (2007, November) Gradient sensitivity to continuous acoustic detail: avoiding the lexical garden-path. Poster presented at the *48th Meeting of the Psychonomic Society*, Long Beach, CA.
- 2007 Robinson, M. and McMurray, B. (2007, November) The timecourse and nature of listeners' sensitivity to indexical information during word recognition. Poster presented at the *48th Meeting of the Psychonomic Society*, Long Beach, CA
- 2007 Munson, C., Cole, J., McMurray, B., and Linebaugh, G. (2007, October) Vowel-to-vowel coarticulation across words in English: Acoustic evidence. Paper presented at the *13th Mid-Continental Workshop on Phonology*, Columbus, OH.
- 2007 Toscano, J., Galle, M., and McMurray, B. (2007, October) Learning positional variation and place of articulation in stop consonants from the distributional statistics of acoustic cues. Poster presented at the *13th Mid-Continental Workshop on Phonology*, Columbus, OH.
- 2007 Cole, J., McMurray, B., Munson, C., and Linebaugh, G. (2007, October) Parsing acoustic variability as a mechanism for feature abstraction. Paper presented at *Where do Features Come From? Phonological Primitives in the Brain, the Mouth, and the Ear*, Paris.
- 2007 Munson, C., and McMurray, B. (2007, October) Perceptual features of place assimilation are continuous and contextually. Poster presented at *Where do Features Come From? Phonological Primitives in the Brain, the Mouth, and the Ear*, Paris.
- 2007 Galle, M., and McMurray, B. (2007, October) Infant representations of positional variants of stop consonants. Poster presented at *Where do Features Come From? Phonological Primitives in the Brain, the Mouth, and the Ear*, Paris
- 2007 Toscano, J., and McMurray, B. (2007, October) Integrating acoustic cues to phonetic features: a computational approach to cue weighting. Poster presented at *Where do Features Come From? Phonological Primitives in the Brain, the Mouth, and the Ear*, Paris.
- 2007 Samuelson, V., McMurray, B., Lee, S., and Tomblin, J.B. (2007, April) Eye Movement During Spoken Word Recognition in Normal and Language-Impaired Adolescents: Activation and Inhibition Effects. Poster presented at the *Biennial Meeting of the Society for Research in Child Development*, Boston, MA.
- 2007 Toscano, J., and McMurray, B. (2007, April) Taking Statistical Learning to the Next Level: A Computational Approach to the Acquisition of Multi-Dimensional Categories. Poster presented at the *Biennial Meeting of the Society for Research in Child Development*, Boston, MA.
- 2006 Horst, J.S., McMurray, B., and Samuelson, L.K. (2006, July) Online processing is essential for learning: Understanding fast mapping and word learning in a dynamic connectionist architecture. Paper presented at the *28th meeting of the Cognitive Science Society*. Vancouver, British Columbia.

- 2006 McMurray, B., Tanenhaus, M., and Aslin, R.N. (2006, June) Garden-path phenomena in spoken word recognition: Gradient sensitivity to continuous acoustic detail facilitates ambiguity resolution. Paper presented at the *151st meeting of the Acoustical Society of America*. Providence, RI.
- 2006 Munson, C., McMurray, B., and Gow, D.W. (2006, June) Lexical influences on the progressive facilitation during perception of assimilated speech. Paper presented at the *151st meeting of the Acoustical Society of America*. Providence, RI.
- 2006 Toscano, J., and McMurray, B. (2006, June) A lexical locus for the integration of asynchronous cues to voicing: An investigation with natural stimuli. Poster presented at the *151st meeting of the Acoustical Society of America*. Providence, RI.
- 2006 Dennhardt, J., McMurray, B., Luck, S., and Toscano, J. (2006, June) Gradient effects of continuous acoustic detail revealed by event-related potentials. Poster presented at the *151st meeting of the Acoustical Society of America*. Providence, RI.
- 2006 McMurray, B., Samelson, V., Lee, S.H., and Tomblin, J.B. (2006, June) Eye-movements reveal the timecourse of spoken word recognition in normal and language-impaired adolescents. Poster presented at the *Meeting of the Society for Research on Child Language Disorders*, Madison, WI.
- 2005 Horst, J.S., Samuelson, L.K., and McMurray, B. (2005, October) Real-Time Dynamics of Language Acquisition in Two-Year-Old Children and Connectionist Models. Poster presented at the *3rd Meeting of the Cognitive Development Society*. San Diego, CA.
- 2005 McMurray, B. (2005, June) Connectionism from Connectionists, Dynamical Systems Theory from Connectionists, and some other stuff... (from Connectionists). Invited commentary and workgroup facilitation presented at *Connectionist and Dynamic Systems Approaches to Development: On the Cusp of a New Grand Theory or Still Too Distributed?* Iowa City, IA.
- 2005 Horst, J. S., McMurray, B., and Samuelson, L.K., (2005, June) Connectionist Time and Dynamic Systems Time in One Architecture? Modeling Word Learning at Two Time Scales. Poster presented at *Connectionist and Dynamic Systems Approaches to Development: On the Cusp of a New Grand Theory or Still Too Distributed?* Iowa City, IA.
- 2005 Toscano, J., and McMurray, B. (2005, November) Statistical learning cross-constraints and the acquisition of speech categories: a computational approach. Paper presented at the *11th Meeting of the Midcontinental Workshop on Phonology*. Ann Arbor Michigan
- 2005 Clayards, M. and McMurray, B. (2005, November) Can the temporal unfolding of gradient lexical activation reveal the grain of phonological units? Paper presented at the *11th Meeting of the Midcontinental Workshop on Phonology*. Ann Arbor Michigan.
- 2004 McMurray, B, Gow, D.W., and Tanenhaus, M.K (2004, June) Tracking the timecourse of multiple context effects in assimilated speech. Paper presented at the *Ninth Conference on Laboratory Phonology*, Urbana-Champaign, IL.
- 2004 McMurray, B., Clayards, M.A., Aslin, R.N., and Tanenhaus, M.K. (2004, May) Gradient sensitivity to acoustic detail and temporal integration of phonetic cues. Poster presented at the *147th meeting of the Acoustical Society of America*, New York.
- 2003 McMurray, B., Maye, J., Lathrop, A., and Aslin, R.N. (2003, November) Categorical Perception of Speech: Task Variations in Infants and Adults. Paper presented at *Auditory Perception, Cognition, and Action Meeting*, Vancouver, Canada.
- 2003 Gow, D., McMurray, B., and Tanenhaus (2003, November) Eye Movements Reveal the Time Course of Multiple Context Effects in the Perception of Assimilated Speech. Poster presented at the *44th Annual Meeting of the Psychonomics Society*, Vancouver, Canada.
- 2003 McMurray, B., and Aslin, R. (2003, July) Anticipatory eye movements reveal infants' auditory and visual categories. Poster presented at *UQAM Summer Institute in Cognitive Sciences*, Montreal, Canada.

- 2002 McMurray, B. (2002, October) Object Comprehension: it's more than it looks. Commentary given at the *University of Rochester Graduate Conference in Epistemology*, Rochester, NY
- 2002 McMurray, B., and Aslin, R. (2002, April) Anticipatory eye movements (AntiEM): A new method for assessing multi-dimensional categorization in 6-month-olds. Poster presented at *International Conference on Infant Studies*. Toronto, Canada.
- 2002 McMurray, B., Tanenhaus, M.K., Aslin, R.N., and Spivey, M.J. (2002, April) Gradient effects of within-category VOT differences on lexical activation as measured by eye fixations. Poster presented at *Temporal Integration in the Perception of Speech*, Aix-en-Provence, France.
- 2002 McMurray, B., Tanenhaus, M.K., and Aslin, R.N. (2002, March) The lexical/phonetic interface: Evidence for gradient effects of within-category VOT on lexical access. Paper presented at the *CUNY Sentence Processing Conference*, New York, NY.
- 2001 McMurray, B., Magnuson, J.S., Tanenhaus, M.K. and Aslin, R.N. (2001, March) Transitional Probabilities and Lexical Status in Spoken Word Recognition. Poster presented at *CUNY Sentence Processing Conference*, Philadelphia, PA.
- 2000 McMurray, B., and Aslin, R.N. (2000, July) Anticipatory eye movements: a technique for assessing auditory categorization in 5-month-old infants. Poster presented at the *International Conference on Infant Studies*, Brighton, England.
- 2000 Tanenhaus, M.K., Magnuson, J.S., McMurray, B., and Aslin, R.N. (2000, May) Does lexical knowledge mediate perceptual effects of compensatory coarticulation? Evidence from research with an artificial lexicon. Paper presented at the *Workshop on Spoken Word Access Processes*, Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands.
- 1999 McMurray, B. and Spivey, M.J. (1999, July) The categorical perception of consonants: the interaction of learning and processing. Paper presented at the *Empire State Speech Research Conference*, Binghamton, NY.
- 1999 McMurray, B. and Spivey, M.J. (1999, May) The categorical perception of consonants: the interaction of learning and processing. Paper presented at the *34th Meeting of the Chicago Linguistics Society*, Chicago, IL.
- 1999 McMurray, B., and Spivey M.J. (1999, April) The categorical perception of consonants: the interaction of learning and processing. Paper presented at the *Second Meeting of the Northeast Cognitive Science Society*, Philadelphia, PA

SERVICE

Profession

Committees

- | | |
|-------------|-----------------------------------------------------------------------------------------------------------------------|
| 2023- | Member, Advisory Board, Center for the Interdisciplinary Study of Language and Literacy, Northern Illinois University |
| 2023 | Chair, Selection Committee, Early Career Award, APA. |
| 2021 | Member, Selection Committee, Early Career Award, APA |
| 2021 | Member, Selection Committee, Grawemeyer Award |
| 2019 | Member, Selection Committee, Boyd McCandless Award. APA Division 7. |
| 2015 | Member, Selection Committee, Early Career Award. APA |
| 2013 | Member, Selection Committee, Early Career Outstanding Paper Award. APA Division 7 |
| 2011 – 2012 | Chair, Selection Committee, Boyd McCandless Award. APA Division 7. |

Associate Editor

- | | |
|-------------|----------------------------------------------------|
| 2014 – 2015 | <i>Language, Cognition and Neuroscience</i> |
| 2014 – 2015 | <i>Journal of Experimental Psychology: General</i> |
| 2011 – 2013 | <i>Psychonomic Bulletin and Review</i> |

Other Editorial

- 2014 *Psychonomic Bulletin and Review* (Guest Editor: 3 papers)
 2013 *Journal of Speech, Language, Hearing Research* (Guest Editor: 1 paper)
 2013 – 2016 *Infancy*, Editorial Board
 2008 – 2011 *Child Development*, Editorial Board
 2009 *Developmental Science* (Special Section Editor, 4 papers)

Ad-Hoc Reviews

- 2025 3 total
Journal of Memory and Language (2), *Proceedings of the National Academy of Sciences* (1),
 2024 10 total
Brain Research (1), *Cognition* (1), *Ear and Hearing* (1), *Journal of Experimental Psychology: General* (2), *Journal of Experimental Psychology: Learning, Memory and Cognition* (1), *Journal of Speech, Language, Hearing Research* (2), *Journal of the Acoustical Society of America* (1), *Psychonomic Bulletin & Review* (1)
 2023 11 total
Child Development (1), *Cognitive Science* (2), *Human Brain Mapping* (1), *Journal of the Acoustical Society of America* (1), *Journal of Experimental Child Psychology* (1), *Journal of Memory and Language* (1), *Psychonomic Bulletin & Review* (3), *Scientific Reports* (1).
 2022 9 total
Child Development (1), *Cognition* (2), *Cognitive Science* (1), *Developmental Science* (1), *eLife* (1), *Journal of Memory and Language* (2), *Psychological Review* (1)
 2021 11 total
Cognition (2), *Cognitive Science* (1), *Current Directions in Psychological Science* (1), *Ear and Hearing* (1), *Journal of the Acoustical Society of America* (1), *Journal of Experimental Psychology: General* (1), *Journal of Experimental Psychology: Learning, Memory and Cognition* (1), *Language & Speech* (1), *Open Mind: Discoveries in Cognitive Science* (1), *Quarterly Journal of Experimental Psychology* (1).
 2020 18 total
Cognition (1), *Current Directions in Psychological Science* (1), *Journal of the Acoustical Society of America* (3), *Journal of Experimental Psychology: General* (1), *Journal of Experimental Psychology: Human Perception and Performance* (1), *Journal of General Psychology* (1), *Journal of Memory and Language* (2), *Journal of Speech Language Hearing Research* (2), *Neuropsychologia* (1), *Open Mind: Discoveries in Cognitive Science* (1), *Psychological Science* (2)
 2019 8 total
Cognition (1), *Cognitive Science* (1), *Developmental Science* (1), *eLife* (1), *Journal of Experimental Child Psychology* (2), *Journal of Experimental Psychology: Human Perception and Performance* (1), *Nature Communications* (1), *TopiCS* (1)
 2018 18 total
Journal of the Acoustical Society of America (1), *Cognition* (2), *Cognitive Science* (2), *eLife* (1), *Journal of Experimental Child Psychology* (1), *Journal of Speech, Language, Hearing Research* (3), *Language, Learning and Development* (1), *Neuroimage* (1), *Open Mind: Discoveries in Cognitive Science* (3), *Quarterly Journal of Experimental Psychology* (1), *Trends in Hearing* (2)
 2017 12 total
Cognition (1), *Cognitive Science* (1), *Ear and Hearing* (2), *Journal of Experimental Psychology: Learning, Memory and Cognition* (1), *Journal of Memory and Language* (1), *Journal of Speech, Language, Hearing Research* (2), *Laboratory Phonology* (1), *Language Learning & Development* (1), *Open Mind: Discoveries in Cognitive Science* (1), *Proceedings of the National Academy of Sciences* (1), *Quarterly Journal of Experimental Psychology* (1)
 2016 9 total
Cognition (1), *Cognitive Psychology* (1), *Cognitive Science* (1), *Ear and Hearing* (1), *Language, Cognition and Neuroscience* (1), *Memory and Cognition* (1), *Psychological Review* (1), *Psychological Science* (2)

- 2015 8 total (not including associate editing at two journals)
Infancy (1), *Journal of Clinical and Experimental Neuropsychology* (1), *Journal of Speech Language, Hearing Research* (1), *Proceedings of the National Academy of Sciences* (2), *Psychological Review* (2), *TopiCS* (1)
- 2014 18 total (not including associate editing at two journals)
Behavioral Research Methods (1), *Child Development Perspectives* (1), *Child Development* (1), *Cognition* (2), *Cognitive Science* (1), *Infancy* (3), *Journal of Clinical and Experimental Neuropsychology* (1), *Proceedings of the National Academy of Sciences* (3), *Psychonomic Bulletin and Review* (1), *Psychological Review* (1), *TopiCS* (3)
- 2013 21 Total (not including editing at *Psychonomic Bulletin and Review*)
Behavioral Neuroscience (1), *Child Development* (3), *Cognition* (1), *Developmental Psychobiology* (2), *Developmental Science* (1), *Journal of the Acoustical Society of America* (1), *Journal of Memory and Language* (1), *Journal of Speech Language Hearing Research* (1), *Language Learning and Development* (4), *Philosophical Transactions B* (1), *Psychonomic Bulletin and Review* (2 ad-hoc), *Psychological Review* (2), *Psychological Science* (1)
- 2012 14 Total (not including editing at *Psychonomic Bulletin and Review*)
Child Development (1), *Cognition* (2), *Cognitive Science* (1), *Journal of Experimental Child Psychology* (2), *Journal of Experimental Psychology: General* (1), *Journal of Experimental Psychology: Learning Memory and Cognition* (1), *Journal of Memory and Language* (2), *Journal of Speech Language Hearing Research* (1), *Language and Speech* (1), *Language, Learning and Development* (1), *Psychological Review* (1)
- 2011 16 Total (not including editing at *Psychonomic Bulletin and Review*)
Attention, Perception and Psychophysics (1); *Child Development* (1); *Cognitive Science* (2); *Frontiers in Language Sciences* (2); *Infancy* (1); *Journal of Experimental Child Psychology* (3); *Journal of Experimental Psychology: Learning, Memory and Cognition* (1); *Journal of Memory and Language* (3); *Journal of Phonetics* (1); *Journal of Speech Language and Hearing Research* (1)
- 2010 36 Total
Animal Cognition (2), *Attention, Perception & Psychophysics* (1), *Behavioral and Brain Sciences* (1), *Behavior Research Methods* (1), *Child Development* (3), *Cognition* (3), *Cognitive Science* (1), *Infancy* (1), *Journal of the Acoustical Society of America* (3), *Journal of Cognition and Development* (1), *Journal of Experimental Child Psychology* (2), *Journal of Experimental Psychology: Learning, Memory and Cognition* (2), *Journal of the International Phonetic Association* (1), *Journal of Memory and Language* (3), *Journal of Phonetics* (2), *Journal of Speech Language and Hearing Research* (2), *Language and Speech* (1), *Language Learning and Development* (2), *Psychonomic Bulletin and Review* (3), *Psychological Science* (1)
- 2009 23 Total
Autonomous Mental Development (1), *Attention, Perception and Psychophysics* (3), *Child Development* (1), *Cognition* (1), *Cognitive Science* (3), *Cognitive Systems Research* (1), *Developmental Science* (1), *Infancy* (1), *Journal of the Acoustical Society of America* (5), *Journal of Experimental Child Psychology* (1), *Journal of Memory and Language* (1), *Language and Cognitive Processes* (1), *Language and Speech* (1), *Language Learning and Development* (1), *Psychological Science* (1)
- 2008 17 Total
Child Development (3), *Cognition* (2), *Cognitive Science* (2), *Infancy* (1), *Journal of the Acoustical Society of America* (1), *Journal of Experimental Child Psychology* (2), *Journal of Experimental Psychology: Learning, Memory and Cognition* (1), *Journal of Memory and Language* (1), *Language and Cognitive Processes* (1), *Psychonomic Bulletin and Review* (1), *Psychological Science* (2)
- 2007 8 Total
Cognition (1), *Developmental Science* (1), *Journal of the Acoustical Society of America* (1), *Journal of Experimental Child Psychology* (1), *Journal of Experimental Psychology: Learning, Memory and Cognition* (1), *Memory and Cognition* (1), *Psychonomic Bulletin and Review* (1), *University of Santa Cruz Working Papers in Linguistics* (1)

- 2006 4 Total
Infancy (1), *Journal of the Acoustical Society of America* (3)
- 2005 8 Total
Cognition (1), *Cognitive Science* (3), *Current Directions in Psychological Science* (1), *Infancy* (1),
Journal of Experimental Psychology: Learning, Memory and Cognition (1), *Perception and Psychophysics* (1)
- 2004 3 Total
Infancy (2), *Cognitive Science* (1)

Grant Review Panels

- 2025 National Institutes of Health, Language and Communication (LCOM)
- 2024 National Institutes of Health, Special Emphasis Panel (ZDC1 SRB-K11)
- 2024 National Institutes of Health, Special Emphasis Panel (ZDC1 SRB-K18)
- 2024 National Institutes of Health, Special Emphasis Panel (ZDC1 SRB-Y)
- 2023 National Institutes of Health, Ad-Hoc Member Panel Communication Disorders Sub-Committee (CDRC 2023-05) (Feb Meeting)
- 2023 National Institutes of Health, Ad-Hoc Member Panel Communication Disorders Sub-Committee (CDRC 2023-05) (Oct Meeting)
- 2023 National Institutes of Health, Special Emphasis Panel (ZDC1 SRB-Z)
- 2022 National Institutes of Health, Special Emphasis Panel (ZRG1 BP-N (0-2) M_
- 2021 National Institutes of Health, Biobehavioral and Behavioral Sciences Subcommittee (CHHD-H)
- 2021 National Science Foundation, Cognitive Neuroscience Panel
- 2021 National Institutes of Health, Special Emphasis Panel: P50
- 2020 National Institutes of Health, Special Emphasis Panel: K99s
- 2019 National Institutes of Health, Special Emphasis Panel
- 2018 National Institutes of Health, Special Emphasis Panel
- 2015 National Institutes of Health, LCOM Study Section, Temporary Member
- 2013 National Institutes of Health, BBBP-J (03) Special emphasis Panel
- 2007 National Science Foundation, Human and Social Dynamics Panel

Grant Review Boards

- 2016 - National Science Foundation, Developmental and Learning Sciences, College of Reviewers
- 2013 - 2015 National Science Foundation, Perception, Action and Cognition Program, College of Reviewers

Grant Reviews Ad-Hoc

- 2025 NSF Linguistics (1)
NSF Perception, Action, and Cognition (2)
- 2024 European Research Council (1)
- 2023 NSF, Perception, Action and Cognition (1)
NSF, Linguistics (1)
NSF, Post-Doctoral Fellows
University of Iowa, OVPR, DEI programs
- 2021 Leverhulme Trust (1)
NSF, Perception, Action and Cognition (1)h
- 2020 NSF, Developmental and Learning Sciences
- 2019 The Ohio State University, Presidential Fellowships, External Evaluator (1)
Swiss Science Foundation (1)
Leverhulme Trust (1)
NSF Developmental and Learning Sciences (2)
NSF Perception, Action and Cognition (1)
- 2018 NSF Linguistics (1)
NSF Perception, Action and Cognition (3)
Austrian Science Fund (1)

- 2017 Prince Sultan University, Saudi Arabia (1)
NSF Perception, Action & Cognition(1)
NSF Developmental and Learning Science (2)
NSF Linguistics (1)
Austrian Science Fund (1)
- 2016 Prince Sultan University, Saudi Arabia (1)
NSF Perception, Action & Cognition (2)
Israel Science Foundation (1)
- 2013 NSF Perception Action & Cognition (2)
- 2012 NSF Learning Sciences
- 2010 NSF Perception Action & Cognition
NSF Developmental and Learning Sciences
- 2009 NSF BCS/Linguistics
UK Biotechnology and Biological Sciences Research Council
- 2007 Dutch Science Ministry
Dutch Humanities Council
- 2006 UK Engineering and Physical Sciences Research Council (EPSRC)
- 2005 NSF BCS/Linguistics
- 2001 UK Biotechnology and Biological Sciences Research Council, Joint Equipment Initiative
Committee

Grant Site Visit

- 2013 National Science Foundation; University of California San Diego, Temporal Dynamics of Learning Center

Advisor to Funding Agency

- 2019 James S. McDonnell Foundation, Understanding Human Cognition, Ad-Hoc advisor

Reviews: Books and Book Proposals

- 2022 Interfaces in Phonetics (1 chapter)
- 2015 Essays in Speech Processes: Language Production and Perception. (1 chapter)
- 2013 APA book proposal review for series on language development (1 proposal)
- 2013 Taylor and Francis (five chapters of a psycholinguistics textbook)
- 2013 Board of advisors: *Theoretical and Computational Models of Word Learning* (G. Hollich & L. Gogate, Eds.), 2013
- 2006 Oxford University Press (1 Book, 1 Proposal)
Other Book Chapters (2)

Conference Organizing

- 2006 Mid-Continental Workshop on Phonology (sponsored by the University of Iowa, Dept. of Linguistics).

Other

- 2024 Turku University, Dept. of Psychology and Speech Pathology, external reviewer for professor search
- 2021 Turku University, Dept. of Psychology and Speech Pathology, external reviewer for associate professor search (7 candidates)
- 2021 Aachen Technical Institute, Dept. of Psychology, External Grant Evaluator for pre-proposal.

Conference Panels

- 2020 Cognitive Science Society
- 2020 Building Linguistic Systems Workshop, York, UK
- 2013 European Association of Computational Linguistics
- 2009 Meeting of the Cognitive Science Society
- 2008 Meeting of the Cognitive Science Society
- 2008 Experimental and Theoretical Advances in Prosody
- 2006 Meeting of the Cognitive Science Society
- 2004 Meeting of the Cognitive Science Society

Faculty Review

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| 2024 | University of Connecticut |
| 2024 | University of Chicago |
| 2023 | Macquarie University |
| 2023 | Purdue University |
| 2023 | Pennsylvania State University |
| 2023 | University of California, Berkeley |
| 2023 | University of Chicago |
| 2022 | Boston University |
| 2022 | Purdue University |
| 2022 | Washington University of St. Louis |
| 2022 | Northeastern University |
| 2021 | University of Connecticut |
| 2021 | Hamilton College |
| 2020 | University of Connecticut |
| 2020 | University of Minnesota |
| 2019 | University of Memphis |
| 2019 | Rice University |
| 2019 | The Ohio State University |
| 2018 | Trinity College |
| 2017 | University of Pittsburgh |
| 2015 | University of Tennessee |

Department

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|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| 2024 | Member, Promotion Committee (Michelle Voss), Dept. of Psychological and Brain Sciences |
| 2023-2024 | Member, Search Committee, Computational Faculty in Psychological and Brain Sciences |
| 2021-2022 | Member, Search Committee, Ronnie Ketchell Chair in Psychological and Brain Sciences |
| 2021-2022 | Member, Search Committee, Ronnie Ketchell Professorship of Psychological and Brain Sciences |
| 2019 | Member, Promotion Committee (Jan Wessel), Dept. of Psychological and Brain Sciences |
| 2019 | Member, Promotion Committee for Associate Professor of Instruction (Julie Gros-Louis), Dept. of Psychological and Brain Sciences |
| 2017 – present | Faculty Review Committee, Dept. of Psychological and Brain Sciences |
| 2017 - 2018 | Faculty Search Committee - Learning and Neuroplasticity Dept. of Psychological and Brain Sciences |
| 2016 - 2017 | Faculty Search Committee - Developmental Science, Dept. of Psychological and Brain Sciences |
| 2015 - 2018 | Committee on Graduate Studies, 2015-2018 |
| 2015 - 2017 | Area Coordinator, Developmental Science Area, Dept. of Psychology |
| 2011 - 2014 | Building Committee, Dept. of Psychology |
| 2010 - 2013 | Coordinator for Undergraduate Studies, Dept. of Psychology |
| 2011 | Faculty Search Committee – Cognition, Dept. of Psychology |
| 2010 | Acting Area Coordinator, Developmental Science, Dept. of Psychology |
| 2010 | Acting Director, CHILDS Facility, DeLTA Center |
| 2008 | Redesigned Developmental Science Website, Dept. of Psychology |
| 2007 - 2010 | Faculty Advisory Committee, Dept. of Psychology |
| 2007 - 2008 | Faculty Search Committee - Developmental Science, Dept. of Psychology |
| 2006 - 2007 | Committee for Facilities and Security, Dept. of Psychology |
| 2006 - 2007 | Faculty Search Committee - Clinical Psychology, Dept. of Psychology |
| 2005 - 2007 | Committee for Undergraduate Studies, Dept. of Psychology |
| 2005 | Redesigned Developmental Science Website |
| 2004 | Designed graduate student recruitment poster for Language Group |
| 2004 | Drafted Developmental Area mission statement |

College

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|--------------|---------------------------------------------------------------------------------------------------------------------------|
| 2023 | Member, Promotion Committee, Yu-Hsiang Wu, Dept. of Communication Sciences and Disorders |
| 2022 | Chair, 5-Year Post-Tenure Review Committee, Jerzy Rubach, Dept. Linguistics |
| 2022 | Chair, 5-Year Post-Tenure Review Committee, Richard Tyler, Dept. of Communication Sciences and Disorders |
| 2022 | Member, Promotion Committee, Jennifer Brown, Dept. of English as a Second Language |
| 2021-present | Member, Named Professorship Committee |
| 2020 | Member, Promotion Committee for Clinical Professor (Anu Subramanian), Dept. of Communication Sciences and Disorders |
| 2020 | Member, Search Committee, Associate Dean for Research. College of Liberal Arts and Sciences |
| 2019 | Member, Promotion Committee (Emilie Destruel Johnson), Dept. of French and Italian |
| 2018 | Faculty Search Committee, Experimental Approaches to Syntax, Dept. of Linguistics |
| 2018 | Chair, Promotion Committee for Instructional Track Faculty member (Alicia Ambler), Dept. of English as a Second Language |
| 2018 | Chair, Promotion Committee for Instructional Track Faculty member (Molly Kelley), Dept. of English as a Second Language |
| 2017 - 2018 | Faculty Search Committee, Cognitive and Neural Substrates of Communication, Dept. of Communication Sciences and Disorders |
| 2017-2018 | CLAS envisioning committee for Linguistics and Language sciences |
| 2017 | Promotion Committee (Christine Shea), Dept. of Spanish and Portuguese, |
| 2016 | Chair, Search Committee, Associate Dean for Graduate Education and Outreach, College of Liberal Arts and Sciences |
| 2015 – 2016 | Secretary, Executive Committee, College of Liberal Arts and Sciences |
| 2014 – 2015 | Process Streamlining Committee, College of Liberal Arts and Science |
| 2014 – 2017 | Executive Committee, College of Liberal Arts and Sciences |
| 2012 – 2015 | Committee on premedical training, College of Liberal Arts and Sciences |
| 2013 – 2017 | Faculty Assembly, College of Liberal Arts and Sciences |
| 2006 – 2007 | Faculty Assembly, College of Liberal Arts and Sciences |

University

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|----------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 2024 | Member, Committee to Select Regents Award for Faculty Excellence |
| 2022 – 2023 | Director and Founder, Discover, Engage, Innovate. Program to provide paid research experience for undergraduates from underrepresented groups. |
| 2017 – present | Director, DeLTA Center |
| 2013 – present | Director, Cognitive Science of Language Interdisciplinary Graduate Certificate |
| 2016 – 2017 | Associate Director, DeLTA Center, Spring |
| 2015 | UI Presidential Search: co-led AAUP group to query faculty opinion on candidates |
| 2015 | Acting Director, DeLTA Center |
| 2013 – 2015 | Comprehensive Examination Committee, Interdisciplinary Program in Neuroscience |
| 2011 – 2015 | Treasurer, DeLTA Center |
| 2012 – 2013 | Organizing Committee: the Cognitive Science of Language Interdisciplinary Graduate Certificate |
| 2011 | Selection Committee, Michael J. Brody Award for Faculty Excellence in Service to the University and the State of Iowa |
| 2011 – 2013 | Faculty Council |
| 2009 – 2013 | Faculty Senate |

Media and Outreach Contributions

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| Sept. 2022 | Granat, C., and McMurray, B. (2020) <i>Constructing a Language</i> . Public oriented talk on constructed languages and media landscape at the University of Iowa. |
| Fall, 2020 | <i>Growing Brains</i> project featured in local media (Fall, 2020), including articles in the Cedar Rapids Gazette, and television coverage on KCRG. |
| Fall, 2019 | <i>Growing Words</i> project featured in local media (Fall, 2019) including KCRG, KGAN, The Cedar Rapids Gazette, and the Little Village. |

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| August 26, 2019 | Presentation to Senator Joni Ernst's Regional Director (8/26/2019) on <i>Growing Words</i> project at laboratory in Cedar Rapids |
| March 22, 2019 | Featured article in Iowa City Press-Citizen (3/22/2019) <i>Down to the millisecond: University of Iowa study how long it takes kids to recognize a word</i> (by Aimee Breax). |
| February, 2019 | McMurray, B. (2019, February) Words (are very important). Presentation to the Old Capital Kiwanis Club, Iowa City, IA |
| May, 2018 | Organizer, Developmental Science Day for Clinton High School Psychology Students |
| April, 2018 | McMurray, B. (2018, April) Bridging cognitive science to real world issues in spoken language processing. Invited discussion to University of Iowa Psy Chi. |
| May, 2017 | Organizer, Developmental Science Day for Clinton High School Psychology Students |
| December, 2015 | Presentation in Psychology class at Clear Creek Amana High School (2015, December) |
| April, 2015 | McMurray, B. (2015, April) From the pristine lab to the noisy classroom and back again: How the cognitive science of learning can impact teaching, and how the classroom can impact cognitive science. Presentation at University of Iowa, Lunch and Learn Series. Des Moines, IA. |
| July, 2014 | Research on pigeon categorization as a model system for human word learning (Wasserman, Brooks & McMurray, 2014) was covered in <i>The Daily Mail</i> , and <i>Science Daily</i> . |
| April, 2014 | Presentation in Psychology class at Clear Creek Amana High School |
| December, 2013 | McMurray, B., Brown, C., Hazeltine, E., and Zimmermann, J. (2013, December) The Science of Learning, The Art of Teaching. Evening workshop for Teachers, Administrators and Community Members on incorporating the science of learning into teaching. Iowa City, IA. |
| April, 2013 | McMurray, B. (2013, April) The Varied Practice Model (Counter-intuitive to Traditional Approaches) Incorporates "Desirable Difficulties" to Improve Automaticity for Struggling Readers. Talk Given at the <i>International Reading Association</i> (professional development conference for reading teachers), Atlanta, GA. |
| April, 2013 | Ryan, D., and McMurray, B. (2013, April) Marietta City Schools' New Approaches to Intervention: Students with Special Needs. Talk Given at the <i>International Reading Association</i> (professional development conference for reading teachers), Atlanta, GA. |
| January, 2013 | Presentation on Speech Communication at Hoover Elementary Family Enrichment Night ~45 participants |
| January, 2013 | Participation as Panelist in Webinar: <i>Reading Intervention: When the traditional mastery model doesn't work for English Language Learners</i> . Sponsor: Foundations in Learning, Inc. 560 participants |
| December, 2012 | Participation as Panelist in Webinar: <i>Reading Intervention: When the traditional mastery model doesn't work for middle school students</i> . Sponsor: Foundations in Learning, Inc. |
| November, 2012 | Participation as Panelist in Webinar: <i>Reading Intervention: When the traditional mastery model doesn't work for middle school students</i> . Sponsor: Foundations in Learning, Inc. ~328 participants |
| November, 2012 | Work on variability in reading was publicized on livescience.com, patch.com |
| October, 2012 | Participation as Panelist in Webinar: <i>Reading Intervention: When the traditional mastery model doesn't work</i> . Sponsor: Foundations in Learning, Inc. ~88 participants (Oct., 2012) |
| September, 2012 | Participation as Panelist in Webinar: <i>Reading Intervention: When the traditional mastery model doesn't work</i> . Sponsor: Foundations in Learning, Inc. ~100 participants |
| January, 2012 | Quoted in Associated Press article "Babies try lip-reading in learning to talk" |
| March, 2009 | SaavyDaddy.com, expert panelist |
| December, 2008 | Quoted in <i>Parent Magazine</i> |
| May, 2008 | Quoted in Associated Press article "Baby birds babble just like human babies learning to talk" |
| October, 2007 | Presentation at Unitarian Universalist Community of Davenport |
| August, 2007 | Work on vocabulary explosion received significant attention including articles by Associated Press: "Toddler Word Spurts are Guaranteed" Scientific American: "What Explains Toddlers' Linguistic Leap? Math" (Aug 7, 2007) |

Daily Telegraph of London: "Toddler jabbering easy to explain" (Aug 8, 2007)

Science News: "Calculating the Word Spurt" (Aug 18, 2007)

New Scientist: "Computer model may explain toddlers' chattering" (Aug 2, 2007)

Interview on CBC Radio ("and sometimes Y")

Why Files: "Toddler's "vocabulary explosion," explained"

July 31, 2007 Quoted in NY Times article on infant eye-tracking: "A Baby-Proof Method Tracks Just Where Little Ones Look"