

JAN R. WESSEL, Ph.D. (October 2020)

Associate Professor

Dept. of Psychological and Brain Sciences & Dept. of Neurology, University of Iowa

Born June 14th, 1984 in Heinsberg, Germany

US permanent resident

Current Office: UIHC, 444 Medical Research Center, Iowa City, IA 52242
Phone: (+1) 319-335-7745 Email: jan-wessel@uiowa.edu Web: www.wessellab.org

PROFESSIONAL CAREER

July 2020 - Associate Professor (tenured), joint dual-appointment
Department of Psychological & Brain Sciences, University of Iowa
Department of Neurology, University of Iowa Hospitals & Clinics
Secondary Appt.: Department of Biomedical Engineering, University of Iowa

Oct. 2015 - June 2020 Assistant Professor, joint dual-appointment
Department of Psychological & Brain Sciences, University of Iowa
Department of Neurology, University of Iowa Hospitals & Clinics

Oct. 2011 - Sept. 2015 Postdoctoral Research Employee, Assistant Project Scientist
Psychology Department, University of California, San Diego

May 2011 - Aug. 2011 Postdoctoral Research Scholar
Max Planck Institute for Neurological Research, Cologne

Oct. 2010 - Dec. 2010 Visiting Scholar
Swartz Center for Computational Neuroscience, UC San Diego

Oct. 2008 - Sept. 2010 Adjunct Lecturer
Psychology Department, University of Cologne

Oct. 2008 - May 2011 Doctoral Student
Max Planck Institute for Neurological Research, Cologne

July 2007 - Sept. 2008 Undergraduate Research Assistant
Max Planck Institute for Neurological Research, Cologne

Feb. 2007 - April 2007 Undergraduate Research Assistant
Institute for Systems Neuroscience, UMC Hamburg-Eppendorf

Oct. 2006 - Sept. 2007 Supplementary Lecturer & Undergraduate Research Assistant
Psychology Department, University of Cologne

OTHER PROFESSIONAL AFFILIATIONS

2017 - Principal Investigator, Iowa Neuroscience Institute, University of Iowa
2016 - Faculty, Interdisciplinary Graduate Program in Neuroscience, University of Iowa

UNIVERSITY EDUCATION

Oct. 2008 - May 2011 Ph.D. (Dr. phil.), Cognitive Neurology, summa cum laude
Max Planck Institute for Neurological Research

Oct. 2004 - Sept. 2008 B.Sc. & M.Sc. (Diplom), Psychology, with distinction
University of Cologne

CIVILIAN SERVICE

July 2003 - April 2004 Emergency Medical Technician, German Red Cross

GRANT SUPPORT

ONGOING (PI/Co-I)

NIH/NINDS, R01 NS102201Role: *PI*, 2018-2023, \$1,612,853 (direct)

The Role of a Neural Mechanism for Inhibitory Control in Cognitive Flexibility

NSF CAREER 1752355Role: *PI*, 2018-2023, \$508,196 (direct)

Human motor inhibition: a neural race between motor emission and cognitive control

NIH/NINDS, R01 NS117753Role: *PI*, 2020-2025, \$1,517,786 (direct)The role of cortical and subcortical β -bursts in the cognitive control of human movement**NIH/NINDS, R01 NS100849**Role: *Co-I* (PI: Narayanan), 2017-2022, \$1,830,116 (direct)

Mid-frontal delta/theta rhythms and cognitive control in Parkinson's Disease

Roy J. Carver Trust, Research Program of ExcellenceRole: *Co-PI* (with 5 others), 2017-2022, \$750,000 (direct)

Neuromodulation of fronto-basal ganglia circuits in Parkinson's disease

OTHER

NIH/NIMH, R01 MH122613Role: *Consultant* (PI: Hwang), 2019-2024

Cognitive control functions of the human thalamus

COMPLETED

Aging Mind & Brain Initiative, Pilot GrantRole: *PI*, 2018-2019, \$15,000 (direct)

The role of (nor)adrenergic neurotransmission in age-related error detection deficits

Roy J. Carver Trust, Junior Research Program of Excellence 17-4885Role: *PI*, 2017-2019, \$300,000 (direct)

Cognitive control in healthy and abnormal aging

Aging Mind & Brain Initiative, Pilot GrantRole: *PI*, 2016-2017, \$25,000 (direct)

The influence of conscious error detection on impaired cognitive control in older age

NIH/NIDA, R03 DA035874Role: *PI*, 2014-2016, \$75,000 (direct)

Motoric stopping as an intervention to reduce the value of rewarding stimuli

NIH/NINDS, R21 NS085543

Role: *Co-I* (PI: Aron), 2013-2015, \$352,940 (total)

How stopping movement affects working memory

Kavli Institute for Mind and Brain, Innovative Research Grant 2012-022

Role: *PI*, 2012-2013, \$30,000 (direct)

Parsing brain networks for self-control using simultaneous EEG-fMRI

Gertrud Reemtsma Foundation, Scholarship

Role: *PI*, 2008-2011, €57,000 (~\$80,000, direct)

Cognitive and Somatic Components of Conscious Error Perception

Gustav Lienert Foundation, Award Fellowship

Role: *PI*, 2010, €3,200 (~\$4,400, direct)

Automatic identification of independent components underlying event-related brain potentials

JOURNAL PUBLICATIONS (* Senior-authored trainee project), h-index (google): 25

- * 44. Soh C, **Wessel JR** (in press). Unexpected sounds non-selectively inhibit active visual stimulus representations. *Cerebral Cortex*
- * 43. Iacullo C, Diesburg DA, **Wessel JR** (in press). Non-selective inhibition of the motor system following unexpected and expected infrequent events. *Experimental Brain Research*
- 42. Narayanan NS, **Wessel JR**, Greenlee JDW (2020). The Fastest Way to Stop: Inhibitory Control and IFG-STN Hyperdirect Connectivity. *Neuron* 106(4): 549-551
- 41. **Wessel JR** (2020). β -bursts reveal the trial-to-trial dynamics of movement initiation and cancellation. *The Journal of Neuroscience* 40(2):411-423
- * 40. Dykstra T, Waller DA, Hazeltine E, **Wessel JR** (2020). Leveling the field for a fairer race between going and stopping: Neural evidence for the race model of motor inhibition from a new version of the stop-signal task. *Journal of Cognitive Neuroscience*, 32(4):590-602
- 39. **Wessel JR**, Huber DE (2019). Frontal cortex tracks surprise separately for different sensory modalities but engages a common inhibitory control mechanism. *PLoS Computational Biology* 15(7): e1006927
- 38. **Wessel JR**, Waller DA, Greenlee JDW (2019). Non-selective suppression of inappropriate motor-tendencies during response-conflict by a fronto-subthalamic mechanism for inhibitory control. *eLife* 8:e42959
- 37. Verbruggen F, Aron AR, Band GP, Beste C, Bissett PG, Brockett AT, Brown J, Chamberlain SR, Chambers C, Colonius H, Colzato L, Corneil BD, Coxon JP, Dupuis A, Eagle D, Garavan H, Greenhouse I, Heathcote A, Huster R, Jahfari S, Kenemans JL, Leunissen I, Logan G, Matzke D, Morein-Zamir S, Murthy A, Li CR, Paré M, Poldrack R, Ridderinkhof KR, Robbins TW, Roesch M, Rubia K, Schachar R, Schall JD, Stock AK, Swann NC, Thakkar K, van der Molen M, Vermeylen L, Vink M, **Wessel JR**, Whelan R, Zandbelt B, Boehler CN (2019). Capturing the ability to inhibit actions and impulsive behaviors: A consensus guide to the stop-signal task. *eLife* 8:e46323
- 36. **Wessel JR**, Gorgolewski KJ, Bellec P (2019). Switching software in science: motivations, challenges and solutions. *Trends in Cognitive Sciences* 23(4):265-267

- * 35. Waller DA, Hazeltine E, **Wessel JR** (2019). Common and independent neural processes during action-stopping and infrequent stimulus detection: the P3a as an index of generic motor inhibition. *International Journal of Psychophysiology* (18)30347-7.
34. **Wessel JR** (2018). Surprise: A more realistic framework for studying action-stopping? *Trends in Cognitive Sciences* 22(9):741-744
33. **Wessel JR**, Dolan KA, Hollingworth A (2018). A blunted phasic autonomic response to errors indexes age-related deficits in error awareness. *Neurobiology of Aging* 71:13-20
- * 32. Dutra IC, Waller DA, **Wessel JR** (2018). Perceptual surprise improves action stopping by non-selectively suppressing motor activity via a neural mechanism for motor inhibition. *The Journal of Neuroscience* 38 (6) 1482-1492
31. **Wessel JR** (2018). Prepotent motor activity and inhibitory control demands in different variants of the Go/Nogo paradigm. *Psychophysiology* 55(3) doi: 10.1111/psyp.12871
30. Ghahremani A, **Wessel JR**, Udupa K, Neagu B, Zhuang P, Saha U, Kalia SK, Hodaie M, Lozano AM, Aron AR, Chen R (2018). Stopping and slowing manual and spoken responses: Similar oscillatory signatures recorded from the subthalamic nucleus. *Brain and Language* 176:1-10
29. **Wessel JR** (2018). An adaptive orienting theory of error processing. *Psychophysiology* 55(3) doi: 10.1111/psyp.13041
28. Kelley R, Flouty O, Emmons EB, Kim Youngcho, Kingyon J, **Wessel JR**, Oya H, Greenlee JD, Narayanan NS (2018). A human prefrontal-subthalamic circuit for cognitive control. *Brain* 141(1):205-216
27. Wagner J, **Wessel JR**, Ghahremani A, Aron AR (2018). Establishing a right frontal beta signature for stopping action in scalp EEG: implications for testing inhibitory control in other task contexts. *Journal of Cognitive Neuroscience* 30(1):107-118
26. **Wessel JR** (2018). A neural mechanism for surprise-related interruptions of visuospatial working memory. *Cerebral Cortex* 28(1):199-212
25. **Wessel JR** (2018). Testing multiple psychological processes for common neural mechanisms using EEG and independent component analysis. *Brain Topography* 31(1):90-100.
24. **Wessel JR** (2017). Perceptual surprise aides inhibitory motor control. *Journal of Experimental Psychology: Human Perception and Performance* 43(9):1585-1593
23. **Wessel JR**, Aron AR (2017). On the globality of motor suppression: unexpected events and their influence on behavior and cognition. *Neuron* 93(2): 259–280
22. **Wessel JR**, Ghahremani A, Udupa K, Saha U, Kalia SK, Hodaie M, Lozano AM, Aron AR, Chen R (2016). Stop-related subthalamic beta activity indexes global motor suppression in Parkinson's Disease. *Movement Disorders* 31(12):1846-1853
21. **Wessel JR**, Jenkinson N, Brittain JS, Voets SE, Aziz T, Aron AR (2016). Surprise disrupts cognition via a fronto-basal ganglia suppressive mechanism. *Nature Communications* 7:11195
20. **Wessel JR**, Ullsperger M, Obrig H, Villringer A, Quinque E, Schroeter ML, Bretschneider KL, Arelin K, Roggenhofer E, Frisch S, Klein TA (2016). Neural synchrony indexes impaired motor slowing after errors and novelty following white-matter damage. *Neurobiology of Aging* 38:205-13
19. **Wessel JR**, Tonnesen A, Aron AR (2015). Stimulus devaluation induced by action-stopping is greater for explicit value representations. *Frontiers in Psychology* 6:1640

18. **Wessel JR**, Aron AR (2015). It's not too late: The onset of the fronto-central P3 indexes successful response inhibition in the stop-signal paradigm. *Psychophysiology* 52(4):472-80
17. **Wessel JR**, O'Doherty JP, Berkebile M, Linderman D, Aron AR (2014). Stimulus devaluation caused by stopping action. *Journal of Experimental Psychology: General* 143(6):2316-29
16. **Wessel JR**, Aron AR (2014). Inhibitory motor control based on complex stopping goals relies on the same brain network as simple stopping. *NeuroImage* 103C:225-234
15. **Wessel JR** (2014). Performance-monitoring in realistic environments: can translating neuroscientific insights augment real-world behavioral adaptation? *The Journal of Neuroscience* 34(27):8934-6
14. **Wessel JR**, Klein TA, Ott DV, Ullsperger M (2014). Lesions to the prefrontal performance-monitoring network disrupt neuronal processing and adaptive behaviors after both errors and novelty. *Cortex* 50, 45-54
13. **Wessel JR**, Conner CR, Aron AR, Tandon N (2013). Chronometric electrical stimulation of right inferior frontal cortex increases motor braking. *The Journal of Neuroscience* 33(50):19611-19619
12. **Wessel JR**, Aron AR (2013). Unexpected events induce motor slowing via a brain mechanism for action-stopping with global suppressive effects. *The Journal of Neuroscience* 33(47): 18481-18491
11. Greenhouse I, **Wessel JR** (2013). EEG signatures associated with stopping are sensitive to preparation. *Psychophysiology* 50(9):900-8
10. **Wessel JR**, Reynoso HS, Aron AR (2013). Saccade suppression exerts global effects on the motor system. *Journal of Neurophysiology* 110(4):883-90
9. Itthipuripat S, **Wessel JR**, Aron AR (2013). Frontal theta is a signature of successful working memory manipulation. *Experimental Brain Research* 224(2): 255-62
8. **Wessel JR**, Danielmeier C, Morton JB, Ullsperger M (2012). Surprise and error: Common neuronal architecture for processing errors and novelty. *The Journal of Neuroscience* 32(22):7528-7537 [*Featured Article in "This Week in the Journal"*]
7. **Wessel JR** (2012). From "Neural correlates of consciousness" to "Neural causes of consciousness": A commentary on "Consciousness, biology and quantum hypotheses", by Bernard J. Baars and David E. Edelman. *Phys Life Rev.* (3):299-300
6. **Wessel JR** (2012). Error awareness and the error-related negativity: Evaluating the first decade of evidence. *Front. Hum. Neurosci.* 6: 88
5. **Wessel JR**, Haider H, Rose M (2012). The transition from implicit to explicit rule representations in incidental learning situations: More evidence from high-frequency EEG coupling. *Experimental Brain Reseach* 217 (1): 153 - 162
4. **Wessel JR**, Danielmeier C, Ullsperger M (2011). Error Awareness revisited: Accumulation of multi-modal evidence from central and autonomic nervous systems. *Journal of Cognitive Neuroscience* 23(10):3021-36
3. **Wessel JR**, Ullsperger M (2011). Selection of independent components representing event-related brain potentials: A data-driven approach for greater objectivity. *NeuroImage* 54(3):2105-15
2. Ullsperger M, Harsay H, **Wessel JR**, Ridderinkhof KR (2010). Conscious perception of errors and its relation to the anterior insula. *Brain Structure and Function.* 214 (5-6): 623-643

1. Danielmeier C, Wessel JR, Steinhauser M & Ullsperger M (2009). Modulation of the error-related negativity by response conflict. *Psychophysiology*. 46: 1288-1298

HONORS AND AWARDS

2018	CAREER Award National Science Foundation
2016	Distinguished Early Career Contributions to Psychophysiology Award Society for Psychophysiological Research
2012	Trainee Abstract Travel Award Organization for Human Brain Mapping
2010	Young Researcher Award Gustav A. Lienert Foundation for Biopsychological Methods
2008	Diploma Thesis of the Year Faculty of Life Sciences, University of Cologne, Dept. Psychology
2008 & 2009	Travel Grant German Society for Computer Science

COVERAGE IN POPULAR PRESS (selection)

- Science News:** Hamers, Laurel (2017, March 14). Making a mistake can put your brain on 'pause'. *Science News*. Retrieved March 14, 2017, from www.sciencenews.org
- The Dana Foundation:** Sukel, Kayt (2016, Sept. 12). A biophysical theory of beta waves. *Dana Foundation Top Stories*. Retrieved Sept. 12, 2016, from www.dana.org
- CBS Radio:** The Osgood File (2016, June 9). Losing our train of thoughts. *Radio interview*. Retrieved June 9, 2016, from www.theosgoodfile.com
- NBC News:** Fox, Maggie (2016, April 18). Study Finds Where You Lost Your Train of Thought. *NBC News*. Retrieved April 19, 2016, from www.nbcnews.com
- Forbes:** DiSalvo, David (2013, December 15). Study shows that electrical stimulation can boost the brain's brakes. *Forbes*. Retrieved January 7, 2014, from www.forbes.com
- Yahoo News:** IANS (2013, December 16). Apply brain brakes to earn social respect. *Yahoo News*. Retrieved January 7, 2014, from <http://in.news.yahoo.com>
- Forbes:** DiSalvo, David (2013, December 29). The top ten brain science and psychology studies of 2013. *Forbes*. Retrieved January 7, 2014, from www.forbes.com

INVITED TALKS (selection)

July 2021	Medical University of South Carolina, Charleston (SC)
October 2020	<i>Symposium</i> , Society for Psychophysiological Research, Vancouver (Canada, cancelled due to COVID-19 pandemic)
September 2020	<i>Symposium</i> , German Society for Psychology Annual Meeting, Vienna (Austria, cancelled due to COVID-19 pandemic)
May 2020	University of Oslo (Norway, cancelled due to COVID-19 pandemic)
October 2019	<i>Nanosymposium</i> , Society for Neuroscience, Chicago (IL)
September 2019	Motivation and Cognitive Control (MCC) meeting, Berlin (Germany)
May 2019	Control Processes Meeting, Brown University, Providence (RI)
December 2018	University of Tuebingen, Tuebingen (Germany)

October 2018	<i>Symposium</i> , Society for Psychophysiological Research, Quebec City (Canada)
November 2017	<i>Keynote</i> , Tri-State Psychology Research Conference, Cedar Rapids (IA)
October 2017	<i>Symposium</i> , Society for Psychophysiological Research, Vienna (Austria)
August 2017	<i>Symposium</i> , International Conference for Cognitive Neuroscience (ICON), Amsterdam (Netherlands)
November 2016	<i>Nanosymposium</i> , Society for Neuroscience, San Diego (CA)
September 2016	<i>Symposium</i> (also chair), Society for Psychophysiological Research, Minneapolis (MN)
September 2016	<i>Award Address</i> , Society for Psychophys. Research, Minneapolis (MN)
June 2016	<i>Symposium</i> , European Society for Cognitive and Affective Neuroscience (ESCAN), Porto (Portugal)
February 2016	<i>Symposium</i> , Computational and Systems Neuroscience (CoSyNe) Workshops, Snowbird (Utah)
October 2015	<i>Nanosymposium</i> , Society for Neuroscience, Chicago (IL)
March 2015	Scripps Neuroconference, La Jolla (CA)
September 2014	<i>Symposium</i> , Society for Psychophysiological Research, Atlanta (GA)
June 2014	Institute for Neural Computation, La Jolla (CA)
March 2014	University of California Medical School, La Jolla (CA)
May 2013	Kavli Institute for Mind and Brain, La Jolla (CA)
January 2013	San Diego Neurological Society, San Diego (CA)
June 2012	<i>iTalk</i> , Human Brain Mapping Conference, Beijing (China)
July 2011	Teacher Training College, Kleve (Germany)
September 2010	University of Western Ontario, London (Canada)
October 2009	Opinions and Discussions in Cognitive Neuroscience, Amsterdam (Netherlands)
September 2008	<i>Symposium</i> , International Organization for Psychophysiology, St. Petersburg (Russia)

POSTER PRESENTATIONS (* Senior-authored trainee project)

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- * Waller DA, Singh A, Espinoza A, Narayanan NS, Greenlee JDW, **Wessel JR** - "Motor inhibition and motor-based response conflict share a common neural mechanism involving the subthalamic nucleus". Society for Neuroscience 2019, Chicago, IL (USA)
 - * Guan Y, **Wessel JR** - "Surprise Modulates Orienting-Related but not Strategic Post-Error Processing", Society for Neuroscience 2019, Chicago, IL (USA)
 - * Choo Y, Matzke D, Bowren MD, Tranel D, **Wessel JR** - "Disentangling motor inhibition and attentional detection in rIFC lesion patients with Bayesian hierarchical approach", Society for Neuroscience 2019, Chicago, IL (USA)
 - * Dykstra TR, Hazeltine E, **Wessel JR** - "Electrophysiological Evidence for Overlap Between Novelty Processing and Feedback-Driven Task Switching", Society for Neuroscience 2018, San Diego, CA (USA)
 - * Waller DA, Dykstra T, Hazeltine E, **Wessel JR** - "A fairer race between going and stopping: neural signatures of motor inhibition in a redesigned stop-signal task." Society for Neuroscience 2018, San Diego, CA (USA)

- * Rangel BO, Janczyk M, **Wessel JR** - „Effects of incompatible action outcomes on cortico-spinal excitability" Society for Neuroscience 2018, San Diego, CA (USA)
- * Soh C, **Wessel JR** - “Unexpected sounds globally interrupt active perceptual representations: Evidence for a global inhibitory surprise response?”, Society for Neuroscience 2018, San Diego, CA (USA)
- * Waller DA, **Wessel JR** - “Separating Inhibitory and Attentional Neural Signals in the Stop-Signal Paradigm”, Annual Meeting of the Cognitive Neuroscience Society 2018, Boston, MA (USA)
- Wagner J, **Wessel JR**, Ghahremani A, Aron AR - “Frontal beta power increase in scalp EEG as a signature of outright stopping of action”, Human Brain Mapping 2017, Vancouver, BC (Canada)
- * Lewis CM, Aron AR, **Wessel JR** - “Global motor suppression following action errors is related to post-error slowing and also to error-related interference”, Society for Neuroscience 2016, San Diego, CA (USA)
- Udupa K, Ghahremani A, **Wessel JR**, Saha U, Hoque T, Aron AR, Chen R - “Subthalamic nucleus oscillations as predictor of motor cortical excitability measured by transcranial magnetic stimulation”, Society for Neuroscience 2016, San Diego, CA (USA)
- Ghahremani A, Udupa K, **Wessel JR**, Saha U, Hoque T, Lozano AM, Hodaei M, Kalia SK, Aron AR, Chen R - “Distinct roles of subthalamic nucleus alpha and beta oscillations in stopping and delaying manual and verbal actions.”, Society for Neuroscience 2016, San Diego, CA (USA)
- Ghahremani A, **Wessel JR**, Udupa K, Saha U, Hodaei M, Lozano AM, Kalia SK, Aron AR, Chen R - “Is increased beta band power in the subthalamic nucleus related to global suppression of corticospinal excitability during behavioral response inhibition?”, Society for Neuroscience 2015, Chicago, IL (USA)
- Wessel JR**, Aron AR - “Distraction induced by unexpected events may be explained by global suppression”, Psychonomics 2014, Long Beach, CA (USA)
- Wessel JR**, Baboyan VG, Tandon N, Aron AR - “Motor slowing following unexpected events: individual roles and functional connectivity of the pre-supplementary motor area and the right inferior frontal cortex”, Society for Neuroscience 2014, Washington, DC (USA)
- Wessel JR**, Aron AR - “Unexpected events induce motor slowing via a brain mechanism for action-stopping with global suppressive effects”, Society for Neuroscience 2013, San Diego (USA)
- Conner CR, **Wessel JR**, Aron AR, Tandon N - “Direct-electrical stimulation of the right inferior frontal cortex induces motor braking”, Society for Neuroscience 2013, San Diego (USA)
- Wessel JR**, Conner CR, Aron AR, Tandon N - “Direct-electrical stimulation of the right inferior frontal cortex induces motor braking”, Human Brain Mapping 2013, Seattle (USA)
- Wessel JR**, Huber DE, Aron AR - “Rapidly stopping action decreases working memory capacity”, Society for Neuroscience 2012, New Orleans (USA)
- Wessel JR**, Danielmeier C, Morton JB, Ullsperger M - “Surprise and error: Common neuronal architecture for processing errors and novelty. “ Human Brain Mapping 2012, Beijing (China)
- Marx C, **Wessel JR**, Endepols H, Graf R, Ullsperger M - “A Cross-Species Simon-task: Comparing conflict and error processing in rats and humans”, ICON XI 2011, Mallorca (Spain)

- Bretschneider J, Klein TA, Obrig H, Schroeter M, Villringer A, **Wessel JR**, Frisch S - "Handlungsbewachung bei frontalen Strukturveränderungen" [Performance Monitoring in patients with fronto-cortical structural changes], DGPPN 2011, Berlin (Germany)
- Wessel JR**, Danielmeier C, Ullsperger M - "Error Awareness revisited: Event-related brain potentials and the autonomic nervous system", Human Brain Mapping 2010, Barcelona (Spain)
- Wessel JR**, Ullsperger M - "COMPASS: Automatic Independent Component selection for EEG-fMRI integration", Human Brain Mapping 2010, Barcelona (Spain)
- Wessel JR**, Danielmeier C, Ullsperger M - "Error Awareness revisited: Event-related brain potentials and the autonomic nervous system", Motivational and Cognitive Control, Oxford (UK)
- Wessel JR**, Ullsperger M - "COMPASS: Automatic Independent Component selection for EEG-fMRI integration", Motivational and Cognitive Control 2010, Oxford (UK)
- Danielmeier C, **Wessel JR**, Ullsperger M - "The structural basis of error awareness", Human Brain Mapping 2010, Barcelona (Spain)
- Wessel JR**, Danielmeier C, Ullsperger M - „Conscious Error Detection: Differential autonomic responses and event-related brain potentials“, Annual Meeting of the Society for Psychophysiological Research 2009, Berlin (Germany)
- Danielmeier C, Fischer A, **Wessel JR**, Ullsperger M - „Modulation of the ERN by age and response conflict“, ICON X 2008, Bodrum (Turkey)
- Wessel JR**, Rose M, Haider H - „Electrophysiological Correlates of explicit rule representation in serial reaction time tasks“, IK2008, Günne (Germany)
- Wessel JR**, Rose M, Haider H - „Electrophysiological Correlates of explicit rule representation in serial reaction time tasks“, IOP 2008, St. Petersburg (Germany)

PROFESSIONAL SERVICE

Ad-hoc Journal Reviewing

Multidisciplinary

Trends in Cognitive Sciences; Proceedings of the National Academy of Sciences; Nature Communications; eLife; Philosophical Transactions of the Royal Society B; Scientific Reports; iScience; PLoS One

Neuroscience & Neurobiology

Journal of Neuroscience; Communications Biology; Progress in Neurobiology; Neuroscience and Biobehavioral Reviews; Cerebral Cortex; NeuroImage; Human Brain Mapping; Neurobiology of Aging; Journal of Cognitive Neuroscience; PLoS Computational Biology; eNeuro; Cortex; Psychophysiology; Social Cognitive and Affective Neuroscience; Frontiers in Neuroscience; Journal of Neurophysiology; Biological Psychology; Brain Topography; Neuropharmacology; Brain Structure and Function; Cognitive, Affective & Behavioral Neuroscience; European Journal of Neuroscience; Neuroscience; Experimental Brain Research; Neurobiology of Learning and Memory; Journal of Psychophysiology; Brain and Cognition; Frontiers in Behavioral Neuroscience; Frontiers in Human Neuroscience; Neuroscience Letters

Cognitive Psychology

Psychological Science; Journal of Experimental Psychology: General; Nature Human Behavior; Cognition; Journal of Experimental Psychology: Human Perception and Performance;

Cognitive Psychology; Attention, Perception & Psychophysics; Psychonomic Bulletin and Review; Psychological Research; Quarterly Journal of Experimental Psychology; Acta Psychologica; Journal of Cognitive Psychology; Advances in Cognitive Psychology; Scandinavian Journal of Psychology

Neurology, Psychiatry & Neuropsychology

Brain; Biological Psychiatry; NeuroImage: Clinical; Neuropsychologia; Parkinsonism & Related Disorders; Journal of Neuropsychology; Gait & Posture; Aging, Neuropsychology & Cognition

Others

Developmental Science; IEEE Transactions on Multimedia

Journal Editing

eLife (Guest Editor, 2020 -)

Grant Reviewing

National Institutes of Health, Cognition and Perception Study Section (*ad-hoc*)

National Science Foundation, Neural and Cognitive Systems program (*panel*)

National Science Foundation, Cognitive Neuroscience program (*ad-hoc & panel*)

Wellcome Trust (United Kingdom, *ad-hoc*)

Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek, FWO, Belgium, *ad-hoc*)

Netherlands Organisation for Scientific Research (NWO, Netherlands, *ad-hoc*)

Deutsche Forschungsgemeinschaft (DFG, Germany, *ad-hoc*)

Fund for Scientific Research (FNRS, Belgium, *ad-hoc*)

National Science Centre (Narodowe Centrum Nauki, NCN, Poland, *ad-hoc*)

Service to Scientific Societies

Program Committee Member, Society for Psychophysiological Research Meeting, Vienna 2017

Nanosymposium Chair, Society for Neuroscience Annual Meeting, Chicago 2019

Program Committee Member, Society for Psychophysiological Research, Vancouver 2020

Program Chair, Society for Psychophysiological Research Annual Meeting, Prague 2021

COLLEGIATE, DEPARTMENTAL, AND OTHER SERVICE

Research Supervision & Training

Graduate students

Darcy A. Waller (Psychological & Brain Sciences, 2016 – current, *passed comps*)

Tobin Dykstra (Psych. & Brain Sciences, 2016 – current, *passed comps*), Co-Advisor

Cheol Soh (Psychological & Brain Sciences, 2017 – current, *passed comps*)

Yoojeong Choo (Psychological & Brain Sciences, 2018 – current)

Benjamin O. Rangel (Neuroscience, 2018 – current, *passed comps*)

Ossama Abu-Halawa (Biomedical Engineering, MSTP, 2020 – current)

Postdoctoral Scholars

Yao Guan (August 2018 – current)

Qiyang Nie (July 2018 – February 2019)

Joshua Tatz (August 2020 – current)

Rotating graduate students

Julian A. Scheffer (Behavioral-Biomedical Interface Program, Summer 2016)
 Jenna Kelly (Neuroscience Graduate Program, Fall 2017)
 Benjamin O. Rangel (Neuroscience Graduate Program, Spring 2018)
 Ossama Abu-Halawa (Medical Scientist Training Program, Summer 2020)

Iowa Center for Research by Undergraduates (ICRU) scholars (competitive award)

Kylie Dolan (Junior, Summer 2016)
 Isabella Dutra (Sophomore, Summer 2017)
 Alec Mather (Junior, Summer 2018)
 Carly Iacullo (Senior, Summer 2019)
 Megan Hynd (Senior, Fall 2019)

Iowa Neuroscience Institute Undergraduate Summer scholars (competitive award)

Megan Hynd (Senior, Summer 2019)

Undergraduate Research Practicum

Kylie Dolan, Hailey Billings, Cailey Parker, Isabella Dutra, Carly Rider, Conor Bryant, Brynne Dochterman, Alec Mather, Carly Iacullo, Megan Hynd, Amy Castonguay, Aarushi Dervesh, Meg Kester, Anna Kalan, Sarah Eliason, Steve Grugan

Collegiate, Intercollegiate, and Interdepartmental Service*Collegiate, Intercollegiate, and Interdepartmental Committees*

Awards Committee, Neuroscience Graduate Program (2016 – current; Chair in 2019)

- Chair: Young Investigator Award (2016, 2017)
- Chair: Publication Award (2017)
- Chair: Service Award (2018)

20/20 Committee Charrette, College of Liberal Arts and Sciences (2017)

Steering Committee, Undergraduate Major in Neuroscience (2017 – current)

Curriculum & Evaluation Committee, Behavioral-Biomedical Interface Program (2017 – current)

Admissions Committee, Neuroscience Graduate Program (2018 – current)

Recruitment & Admissions Committee, Behavioral-Biomedical Interface Program (2019 – current)

Other significant activities

Originator & Organizer, First-generation Undergraduate Brain Research Workshop
 Annual NSF-sponsored intensive four-day workshop aimed at involving first-generation undergraduate students in Cognitive Neuroscience (2019 -)
 Workshop website: <https://brainworkshop.sites.uiowa.edu/>

Departmental Service*Departmental Committees*

Technical Support Services Committee (Psychological & Brain Sciences, 2016 – current)
 Clinical Science Faculty Search Committee (Psychological & Brain Sciences, 2019 - 2020)

Ph.D. Thesis Committees

Kayleen Schreiber (Neuroscience; Advisor: McMurray, 2016 – 2017, graduated)
 Rachel Cole (née Clark) (Neuroscience; Advisor: Voss, 2016 – 2018, graduated)
 Carlos del Rio Bermudez (P&BS; Advisor: Blumberg, 2016 – 2018, graduated)
 Justin Reber (Psychological and Brain Sciences; Advisor: Tranel, 2016 – 2019, graduated)
 Ryan Kelley (Neuroscience; Advisor: Greenlee, 2016 – 2019, graduated)
 Jonathan Schacherer (Psychological and Brain Sciences; Advisor: Hazeltine, 2017 -)
 Carolina Deifelt Streese (Neuroscience; Advisor: Tranel, 2018 -)
 Matthew Broschard (Psychological and Brain Sciences, Advisor: Freeman, 2019 -)

Comprehensive Exam / Prospectus Committees

Kayleen Schreiber (Neuroscience; Advisor: McMurray, 2016 – 2017, graduated)
 Rachel Cole (née Clark) (Neuroscience; Advisor: Voss, 2016 – 2018, graduated)
 Carlos del Rio Bermudez (P&BS; Advisor: Blumberg, 2016 – 2018, graduated)
 Justin Reber (Psychological and Brain Sciences; Advisor: Tranel, 2016 – 2019, graduated)
 Ryan Kelley (Neuroscience; Advisor: Greenlee, 2016 – 2019, graduated)
 James D. Kent (Neuroscience; Advisor: Voss, 2016 – 2020, graduated)
 Jonathan Schacherer (Psychological and Brain Sciences; Advisor: Hazeltine, 2017 -)
 McCall Sarrett (Neuroscience; Advisor: McMurray, 2017 -)
 Brad Stilwell (Psychological and Brain Sciences; Advisor: Vecera, 2017 -)
 Carolina Deifelt Streese (Neuroscience; Advisor: Tranel, 2017 -)
 Tobin Dykstra (Psychological and Brain Sciences; Advisor: Hazeltine, 2018 -)
 Mark D. Bowren Jr. (Neuroscience, Advisor: Tranel, 2018 -)

Research Advisory Committees

Tobin Dykstra (Advisor: Hazeltine)
 Marcie King (Advisor: Tranel)
 Alyssa Sullivan (Advisor: Petersen)

Non-University service & Outreach

External Ph.D. thesis examiner

Danesh Shahnazian, University of Victoria (Advisor: Clay Holroyd, 2017, graduated)
 Jacki Janowich, University of New Mexico (Advisor: James Cavanagh, 2018, graduated)
 Nahian Chowdhury, University of Sydney (Advisor: Justin Harris, 2020, graduated)

Outreach

Poster judge, Eastern Iowa Science & Engineering Fair, Cedar Rapids, IA (2017, 2018)
 Iowa Neuroscience Institute TMS demo, CCOM Science Thursday, Iowa City, IA (2017)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Society for Neuroscience, Organization for Human Brain Mapping, Society for Psychophysiological Research, German Society for Cognitive Science, Psychonomic Society, Sigma Xi (Elected)

TEACHING

UNIVERSITY OF IOWA

Semester	Advisees		Courses taught		ACE scores*		
	<i>Unerg.</i>	<i>Grad.</i>	<i>Number/Title</i>	<i>#</i>	<i>IE</i>	<i>AE</i>	<i>SS</i>
Sp. 2016	3	0	PSY4020: Laboratory in Psychology	14	5.8	5.8	5.9
Fa. 2016	6	1	N/A (Course Release)				
Sp. 2017	5	1	PSY2701: Intro to Behavioral Neuroscience	230	5.6	5.6	5.8
Fa. 2017	3	3	PSY7150: Analyzing Neural Field Potentials	11	5.5	5.8	5.5
Sp. 2018	5	3	PSY4020: Laboratory in Psychology	20	4.5	4.3	4.3
Fa. 2018	5	5	N/A (Flex Load)				
Sp. 2019	9	5	PSY2701: Intro to Behavioral Neuroscience	230	5.7	5.7	5.8
Fa. 2019	7	5	PSY4025: Lab in Cognitive Neuroscience	15	5.9	5.9	5.9
Sp. 2020	6	5	N/A				
Fa. 2020	3	6	PSY4025: Lab in Cognitive Neuroscience				

*IE: Instructor efficiency; AE: Assignment efficiency; SS: Student support; Scale 1-6; Measure: Median

ADJUNCT LECTURER (University of Cologne)

SS 2010	Statistics using SPSS
WS 2009	Research Methods and Statistics for Diploma Students
SS 2009	Experimental Psychology Laboratory (2 courses)
WS 2008 / 2009	Methods of Cognitive Neuroscience
WS 2008 / 2009	Research Methods and Statistics for Diploma Students

UNDERGRADUATE SUPPLEMENTARY INSTRUCTOR (University of Cologne)

SS 2007	Inferential Statistics
WS 2006 / 2007	Experimental Methods and SPSS

OTHER PROFESSIONAL TEACHING

September 2019	Co-Organizer & Instructor, "Single-trial EEG analysis", One-day workshop, Freie Universität Berlin (Germany), with Adrian G. Fischer
October 2017	Co-Organizer & Instructor, "Advancements in EEG: How new analysis methods enable insights in cognitive neuroscience", Society for Psychophysiological Research Pre-Conference Workshop, Vienna (Austria), with Adrian G. Fischer
November 2013	Instructor, 17 th EEGLAB Workshop, San Diego (USA)
January 2011	Organizer & Instructor, 2-day workshop: "EEG analysis using MATLAB", Max Planck Institute for Human Cognitive & Brain Sciences, Leipzig (Germany)

November 2010 Instructor, 12th EEGLAB Workshop, San Diego (USA)
September 2010 Organizer & Instructor, 3-hour workshop: "Independent Component
Analysis: Theory and Practice", University of Western Ontario (Canada)