Volume 25, Number 6 July 2019 ISSN 1355-6177



Journal of the International Neuropsychological Society

EDITOR-IN-CHIEF

Stephen M. Rao

ASSOCIATE EDITORS

Robert M. Bilder E. Mark Mahone Alexander I. Tröster Mieke Verfaellie Guy Vingerhoets John L. Woodard





CAMBRIDGE UNIVERSITY PRESS

Journal of the International Neuropsychological Society

EDITOR-IN-CHIEF Stephen M. Rao *Cleveland Clinic* ASSOCIATE EDITORS

Robert M. Bilder University of California, Los Angeles
E. Mark Mahone Kennedy Krieger Institute
Alexander I. Tröster Barrow Neurological Institute
Mieke Verfaellie VA Boston Healthcare System & Boston University School of Medicine
Guy Vingerhoets Ghent University, Belgium
John L. Woodard Wayne State University

Editorial Assistant

Charlene Belsole Cleveland Clinic

PAST EDITORS Igor Grant Founding Editor, 1994–2004 Kathleen Y. Haaland 2004–2014

CONSULTING EDITORS

Peter A. Arnett Pennsylvania State University Ida Sue Baron Independent Private Practice, Potomac, MD & Fairfax, VA Russell M. Bauer University of Florida & Malcolm Randall Veterans' Affairs Medical Center Miriam H. Beauchamp University of Montreal Ralph H.B. Benedict State University of New York at Buffalo School of Medicine and Biomedical Sciences Linas A. Bieliauskas Ann Arbor VA Healthcare System & University of Michigan Health System Erin D. Bigler Brigham Young University Mark W. Bondi VA San Diego Healthcare System & University of California San Diego Aaron Bonner-Jackson Cleveland Clinic Adam M. Brickman Taub Institute for Research, Columbia University Randy L. Buckner Harvard University Roberto Cabeza Duke University Giovanni A. Carlesimo University of Rome Tor Vergata & IRCCS S. Lucia Foundation, Italy Cathy Catroppa Murdoch Childrens Research Institute Royal Children's Hospital University of Melbourne Maud Champagne-Lavau CNRS UMR 7309, Aix-Marseille University, France Gordon Chelune University of Utah Heather M. Conklin St. Jude Children's Research Hospital

Michael C. Corballis University of Auckland, New Zealand Fergus I.M. Craik Rotman Research Institute at Baycrest, Canada Bruce A. Crosson Emory University & Atlanta VA Medical Center Jeffrey L. Cummings Cleveland Clinic Natalia Ojeda Del Pozo University of Deusto, Spain John DeLuca Kessler Foundation Alysa E. Doyle Massachusetts General Hospital, Harvard Medical School Sureyya Dikmen University of Washington Deborah A. Fein University of Connecticut Christopher M. Filley University of Colorado School of Medicine Stella G. Giakoumaki University of Crete, Greece Igor Grant University of California, San Diego John Gunstad Kent State University Kathleen Y. Haaland New Mexico VA Healthcare System & University of New Mexico Thomas A. Hammeke Milwaukee VA Medical Center & Medical College of Wisconsin Benjamin M. Hampstead University of Michigan and VA Ann Arbor Healthcare System Deborah L. Harrington VA San Diego Healthcare System & University of California, San Diego Bruce P. Hermann University of Wisconsin School of Medicine and Public Health Lisa A. Jacobson Kennedy Krieger Institute, Johns Hopkins University School of Medicine Sterling C. Johnson University of Wisconsin-Madison & Wm. S. Middleton Memorial VA Hospital Roy P.C. Kessels Radboud University Nijmegen, The Netherlands Jae-Jin Kim Gangnam Severance Hospital & Yonsei University, South Korea Michael D. Kopelman King's College London, England Scott A. Langenecker The University of Illinois at Chicago Bonnie E. Levin University of Miami Miller School of Medicine Harvey Levin Baylor College of Medicine & Michael E. DeBakey VA Medical Center Kathryn E. Lewandowski McLean Hospital, Harvard Medical School Leandro Fernandes Mallov-Diniz Universidade Federal de Minas Gerais, Brazil Jennifer J. Manly Columbia University Medical Center

Andrew R. Mayer University of New Mexico & The Mind Research Network Michael McCrea Medical College of Wisconsin Skye McDonald The University of New South Wales, Australia Raquelle I. Mesholam-Gately Harvard Medical School & Beth Israel Deaconess Medical Center Steffen Moritz University Medical Centre Hamburg-Eppendorf, Germany Kristy A. Nielson Marquette University & Medical College of Wisconsin Michael W. Parsons Cleveland Clinic Jennie Ponsford Monash University & Epworth Hospital, Australia Naftali Raz Wavne State University Andrew J. Savkin Indiana University School of Medicine Ben Schmand Academic Medical Center & University of Amsterdam, The Netherlands Maureen Schmitter-Edgecombe Washington State University Michael Seidenberg Rosalind Franklin University of Medicine and Science Carlo Semenza University of Padova, Italy Maria Semkovska University of Limerick, Ireland J. Carson Smith University of Maryland Lin Sørensen University of Bergen, Norway Yaakov Stern Columbia University Medical Center Julie C. Stout Monash University, Australia William S. Stone Harvard Medical School & Beth Israel Deaconess Medical Center Yana Suchy University of Utah Daniel Tranel University of Iowa Elizabeth W. Twamley University of California, San Diego & VA San Diego Healthcare System Frederick W. Unverzagt Indiana University School of Medicine Eli Vakil Bar Ilan University, Israel Sandra Vanotti University of Buenos Aires & INEBA-Neurosciences Institute of Buenos Aires, Argentina Seth Warschausky University of Michigan Ann D. Watts Entabeni Hospital, South Africa Kathleen A. Welsh-Bohmer Duke University T. Andrew Zabel Kennedy Krieger Institute

Aims and Scope: The Journal of the International Neuropsychological Society welcomes original, creative, high quality research papers covering all areas of neuropsychology. The focus of articles may be primarily experimental, more applied or clinical. Contributions will broadly reflect the interest of all areas of neuropsychology, including but not limited to: development of cognitive processes, brain-behavior relationships, adult neuropsychology, child neuropsychology, developmental neuropsychology, disorders of speech and language, and the interfaces of neuropsychology with related areas such as behavioral neurology, neuropsychiatry, neuroimaging, and electrophysiology. Book Reviews will also be published.

Instructions for Contributors can be found at https://www.cambridge.org/core/journals/journal-of-the-international-neuropsychological-society/information/instructions-contributors. Editorial Office: Stephen M. Rao, Ph.D., Editor-in-Chief, *Journal of the International Neuropsychological Society*, Cleveland Clinic, Neurological Institute, 9500 Euclid Avenue / U10, Cleveland, OH 44195. E-mail: jins@cambridge.org; Telephone: (216) 444-2330; Fax: (216) 445-0331.