Volume 22, Number 10 November 2016 ISSN 1355-6177

# 

# Journal of the International Neuropsychological Society

# **EDITOR-IN-CHIEF**

Stephen M. Rao

### **ASSOCIATE EDITORS**

E. Mark Mahone

Larry J. Seidman

Julie C. Stout

Mieke Verfaellie

Guy Vingerhoets

John L. Woodard



## SPECIAL ISSUE

PRECLINICAL PREDICTION





# Journal of the International Neuropsychological Society

### EDITOR-IN-CHIEF

Stephen M. Rao Cleveland Clinic

### ASSOCIATE EDITORS

F. Mark Mahone

Kennedy Krieger Institute

Larry J. Seidman

Harvard Medical School at Beth Israel Deaconess

Julie C. Stout

Monash University, Australia

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

University of Florida & Malcolm Randall Veterans' Affairs Medical Center

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

Surevva 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

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 Malloy-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

Wayne State University

Andrew J. Saykin

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

Columbia University Medical Center

William S. Stone Harvard Medical School &

Beth Israel Deaconess Medical Center

Yana Suchy

University of Utah

Daniel Tranel

University of Iowa

Alexander I. Tröster Barrow Neurological Institute

Elizabeth W. Twamley University of California, San Diego & VA San Diego Healthcare System

Frederick W. Unverzagt

Indiana University School of Medicine

Bar Ilan University, Israel

Sandra Vanotti

University of Buenos Aires & INEBA-Neurosciences Institute of Buenos Aires, Argentina

Ann D. Watts

Entabeni Hospital, South Africa

Kathleen A. Welsh-Bohmer Duke University

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.

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.