Volume 19, Number 7
August 2013
ISSN 1355-6177

# JOURNAL OF THE INTERNATIONAL NEUROPSYCHOLOGICAL SOCIETY



# **EDITOR-IN-CHIEF**

Kathleen Y. Haaland

## **FOUNDING EDITOR**

Igor Grant

## **ASSOCIATE EDITORS**

Mark W. Bondi

Jennifer J. Manly

Skye McDonald

Stephen E. Nadeau

Yaakov Stern

Yana Suchy

Keith Owen Yeates

## **DEPARTMENTS**

**Reviews and Dialogues** 

Sterling Johnson

**Symposia** 

Mary Pat Mc Andrews

**Book Reviews** 

Ida Sue Baron

Official Publication



CAMBRIDGE

# Journal of the International Neuropsychological Society

#### **EDITOR-IN-CHIEF**

Kathleen Y. Haaland NM VA Healthcare System University of New Mexico, USA

#### FOUNDING EDITOR

University of California, San Diego

#### ASSOCIATE EDITORS

Mark W. Bondi

VA San Diego Healthcare System Univ. of Calif., San Diego

Jennifer J. Manly

Cognitive Neuroscience Division Department of Neurology Columbia University, USA

Skye McDonald

University of New South Wales Sydney, Austrailia

Stephen E. Nadeau

Ĝainesville VA Medical Center University of Florida

Yaakov Stern

Cognitive Neuroscience Division Dept. of Neurology, Columbia Univ.

Yana Suchy

University of Utah

Keith Owen Yeates Nationwide Children's Hospital The Ohio State University, USA

#### DEPARTMENT EDITORS

#### **Reviews and Dialogues**

Sterling Johnson Wm. S. Middleton Memorial Veterans Hospital University of Wisconsin-Madison

Mary Pat McAndrews University Health Network University of Toronto, Toronto, Canada

#### **Book Reviews**

Ida Sue Baron

Independent Practice Potomac, Maryland

**Editorial Assistant** 

Donna Epler NM VÂ Healthcare System

#### EDITORIAL BOARD

Peter Anderson

Murdoch Childrens Research Institute University of Melbourne

Vicki Anderson

Royal Children's Hospital

Peter A. Arnett

Pennsylvania State University

Marcia Barnes

University of Texas-Houston

Heather G. Belanger Tampa VA Hospital University of South Florida

Robert A. Bornstein The Ohio State University

Adam M. Brickman Taub Institute for Research

Columbia University Desiree A. Byrd

Mount Sinai School of Medicine Michelle C. Carlson

Johns Hopkins Bloomberg School of Public Health

Cathy Catroppa Murdoch Childrens Research Institute Royal Children's Hospital University of Melbourne

Agnes S. Chan

The Chinese University of Hong Kong

Anjan Chatterjee

University of Pennsylvania

Cynthia R. Cimino University of South Florida

H. Branch Coslett University of Pennsylvania Hospital of the University of

Sureyya Dikmen

University of Washington Jacobus Donders

Mary Free Bed Hospital

Leslie K. Fellows McGill University

Christopher Filley

University of Colorado School of Medicine

Raul Gonzalez

University of Illinois

Benjamin M. Hampstead Atlanta VA Medical Center Emory University

Erik Hessen

Akershus University Hospital Oslo, Norway

Amy Jak

VA San Diego Healthcare System University of California San Diego

Mary H. Kosmidis

Aristotle University of Thessaloniki,

Joel Kramer

University of California,

San Francisco

Roy P.C. Kessels Radboud University Nijmegen,

the Netherlands Glenn I Larrabee

Independent Practice Sarasota, Florida David J. Libon

Drexel University College of Medicine

John A. Lucas

Mayo Clinic, College of Medicine

E. Mark Mahone

Kennedy Krieger Institute Johns Hopkins University School of Medicine

Andrew Mayer

University of New Mexico

Shawn M. McClintock

Duke University School of Medicine

William Milberg

VA Boston Healthcare System Harvard Medical School Feggy Ostrosky-Solis

National University of Mexico

Jennie Ponsford

Monash University, Australia

Catherine C. Price University of Florida

Christopher Randolph

Loyola University Medical Center

Marianne Regard Private Practice

University of Zurich, Switzerland

Jamie Reilly University of Florida

Monica Rivera Mindt Fordham University

Mount Sinai School of Medicine

Joseph R. Sadek

NM VA Healthcare System University of New Mexico

David P. Salmon

University of California, San Diego

Paula K. Shear

University of Cincinnati

Elisabeth M.S. Sherman Alberta Children's Hospital University of Calgary

Julie S. Snowden

University of Manchester, United Kingdom

Nikki Horne Stricker

VA Boston Healthcare System Boston University School of Medicine

Robyn Tate

University of Sydney Sydney Medical School

Nancy R. Temkin

University of Washington Alexander I. Tröster

University of North Carolina Jennifer J. Vasterling

VA Boston Healthcare System Boston University School of Medicine

Harvard Medical School John L. Woodard Wayne State University

This publication is printed on acid-free paper.

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: Kathleen Y. Haaland, Ph.D., Editor-in-Chief, *Journal of the International Neuropsychological Society*, Veterans Administration Research Scientist, New Mexico VA Healthcare System, University of New Mexico, 1501 San Pedro Drive SE (151), Albuquerque, NM 87108. E-mail: jins@unm.edu; Telephone: (505) 256-2898;

Fax: (505) 256-5498. Publishing, Advertising, Subscription Offices, and Indexing: Cambridge University Press, 32 Avenue of the Americas, New York, NY 10013-2473. Telephone: (212) 337-5909; Fax (212) 337-5959. Outside the USA, Canada, and Mexico: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, England (Telephone: 144(0) 1223 312-393; Fax: 144(0)1223 315-052. For advertising rates and data, contact the Journals Advertising Coordinator at the appropriate Cambridge University Press office. The Journal of the International Neuropsychological Society is covered by the major abstracting and indexing services, including Index Medicus, ISI Current Contents/Clinical Medicine, PubMed, Science Citation Index, SciSearch (also known as the Science Citation Index-expanded), Research Alert, the Neuroscience

Citation Index, and PsycInfo.

Books for Review: Ida Sue Baron, Ph.D. ABPP, 10116 Weatherwood Ct., Potomac, MD 20854. Subscription Information: Published ten times a year: January, February, March, April, May, July, August, September, October and November. Annual institutional print and electronic subscription rates: US \$910.00 in the USA, Canada, and Mexico; UK £520.00 + VAT elsewhere. Institutional electronic rates only: US \$670.00 in the USA, Canada, and Mexico; UK £383.00 + VAT elsewhere. Print Only subscription no longer available in 2013 for Institutions. Please order bundle if print is required. Individual print rates only: US \$261.00 in the USA, Canada, and Mexico; UK £145.00 + VAT elsewhere. Single part rates: US \$138.00 in the USA, Canada, and Mexico; UK £78.00 + VAT elsewhere. Prices

include surface postage and insurance Member Subscription: The Journal of the International Neuropsychological Society is an official publication of The International Neuropsychological Society. Members of the Society automatically receive the *Journal of the International Neuropsychological Society* as part of their annual membership dues. For further information on membership, please visit the **INS** website http://www.the-ins.org. INS office contact: Robert A. Bornstein, Ph.D., Executive Secretary, International Neuropsychological Society, Suite 625, 700 Ackerman Road, Columbus, OH 43202. E-mail: ins@osu.edu; Telephone: (614) 263-4200; Fax: (614) 263-4366.

Information on Journal of the International Neuropsychological Society and all other Cambridge journals is available via http://www.cambridge.org/ in North America and in the UK. Full text for this journal can be found at http://journals.cambridge.org/

# Copyright $\ensuremath{\mathbb{C}}$ 2013 The International Neuropsychological Society

All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopying or otherwise, without permission in writing from Cambridge University Press, except when permission is obtained through a bona fide copyright clearinghouse, such as the Copyright Clearance Center (USA) or the Copyright Licensing Agency (UK). For further information please visit http://us.cambridge.org/information/rights/ or http://www.cambridge.org/uk/information/rights/. The CCC Item-Fee Code for this publication is 1355-6177/13 \$25.00. Specific written permission must be obtained for all other copying. **Photocopying for Classroom Use:** Permission to reproduce parts of this publication for course anthologies may be obtained directly from Cambridge University Press or through duly authorized services such as the Academic Permissions Service of the CCC, 222 Rosewood Drive, Danvers, MA 01923 and the Copyright Permissions Service of the National Association of College Stores, or through any photoduplication service that properly secures permission from Cambridge or the CCC.

Periodicals postage paid at New York, NY, and additional mailing offices. Return Postage Guaranteed. Postmaster: Send address changes in the USA and Canada to: Journal of the International Neuropsychological Society, Cambridge University Press, Journals Fulfillment Dept., 100 Brook Hill Drive, West Nyack, NY 10994-2133.

Printed in the United States of America.