ASSOCIATE EDITORS

Allison Bent, Geological Survey of Canada, Ontario, Canada
Fabian Bonilla, Université Paris Est Marne la Vallée, France
Tom Brocher, U.S. Geological Survey Earthquake Science Center, Menlo Park, California
Eric P. Chael, Sandia National Laboratories, Albuquerque, New Mexico
Martin C. Chapman, Virginia Polytechnic and State University, Blacksburg, Virginia
Fabrice Cotton, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences and Potsdam University, Potsdam, Germany
Luis A. Dalguer, Swissnuclear, Olten, Switzerland
John Douglas, University of Strathclyde, Glasgow, United Kingdom
Delphine D. Fitzenz, Risk Management Solutions, Inc., Newark, California
Matthew Gerstenberger, GNS Science, New Zealand
Ronni Grapenthin, New Mexico Tech, Socorro, NM
Hirosi Kawase, DPRI Kyoto University, Kyoto, Japan
YoungHee Kim, School of Earth and Environmental Sciences, Seoul National University, South Korea
Yann Klinger, Institut de Physique du Globe - CNRS, Paris, France
Nicola Litchfield, GNS Science, New Zealand
Sheri Molnar, University of Western Ontario, Dept. Earth Sciences, London, Ontario, Canada
Kim B. Olsen (supplemental content editor), San Diego State University, San Diego, California
Adrien Oth, European Center for Geodynamics and Seismology (ECGS), Walferdange, Luxembourg
Stefano Parolai, National Institute of Oceanography and Applied Geophysics (OGS), Trieste, Italy
Arben Pitarka, Lawrence Livermore National Laboratory, Livermore, California
Adrian Rodriguez-Marek, Virginia Polytechnic and State University, Blacksburg, Virginia
Danijel Schorlemmer, Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences, Potsdam, Germany
Mark Stirling, University of Otago, Dunedin, New Zealand
Cezar I. Trifu, Queen’s University, Ontario, Canada
Nicholas van der Elst, U.S. Geological Survey Earthquake Science Center, Pasadena, California
Ivan G. Wong, Letts Consultants International, Inc., Walnut Creek, California
Cleat P. Zeiler, Air Force Technical Application Center, Patrick AFB, Florida

Submissions
Submissions to BSSA can be uploaded online at www.bssa.edmgr.com. Guidelines for submissions can be found at: http://www.seismosoc.org/publications/bssa/.

Authorization to photocopy items for internal or personal use, or for the internal or personal use of specific clients, is granted by the Seismological Society of America provided that the appropriate fee of $3 per copy is paid directly to the Copyright Clearance Center, ISSN 0037-1106, 222 Rosewood Drive, Danvers, MA 01923, USA; +1-978-750-8400. Prior to photocopying items for educational classroom use, please contact Copyright Clearance Center at the above address. Consent for reproduction as described above does not extend to other types of copying, such as copying for general distribution, for advertising or promotional purpose, for creating new collective works, or for resale. For permission to reprint material please contact Seismological Society of America, 400 Evelyn Avenue, Suite 201, Albany, CA 94706-1375, USA. Email: info@seismosoc.org or contact Copyright Clearance Center at www.copyright.com.

SSA recommends that the credit line for any reuse of material from BSSA read “authors, article title, journal title, volume number, page number(s), year © Seismological Society of America.”

SSA requires that the article be published by SSA before any material may be reproduced therefrom.
The Seismological Society of America (SSA) is an international scientific society devoted to the advancement of seismology and the understanding of earthquakes for the benefit of society.

OFFICERS

Susan E. Hough, President
William R. Walter, President Elect
Peter Shearer, Past President
Peggy Hellweg, Secretary
Mitch Withers, Treasurer

BOARD OF DIRECTORS

Sergio Barrientos (2020)
Margaret Boettcher (2021)
Douglas S. Dreger (2021)
Heather DeShon (2022)
Christine Goulet (2020)
Kuo-Fong Ma (2022)
Meghan S. Miller (2022)
Xyoli Pérez-Campos (2021)
Kate Scharer (2020)
John Townend (2022)
William R. Walter (2021)

CORPORATE MEMBERS, SEISMOLOGICAL SOCIETY OF AMERICA

Bechtel Corporation
P.O. Box 193965
San Francisco, California 94119
www.bechtel.com

ExxonMobil Upstream Research Company
Andrea Cato
Technical Information Center
22777 Springwoods Village Parkway
Spring, Texas 77389
www.exxonmobil.com

GeoSIG Ltd
Reza Ghadim
Wiesenstrasse 39
8952 Schlieren
Switzerland
www.geosig.com

Geotech Instruments, LLC
Gilbert Santana
2418 Executive Drive
Garland, Texas 75041
www.geoinstr.com

Guralp Systems Ltd
Stuart Allardice
3 Midas House
Reading RG7 8EA
United Kingdom
www.guralp.com

ISTI
77 Van Dam Street,
Suite 9
Saratoga Springs, New York 12866
www.isti.com

Kinematics, Inc.
Ogie Kuraica
222 Vista Avenue
Pasadena, California 91107
www.kinematics.com

Letts Consultants International, Inc.
Robin McGuire
1981 N Broadway
Suite 330
Walnut Creek, California 94596
www.lettisci.com

Nanometrics
250 Herzberg Road
Kanata, Ontario K2K 2A1
Canada
www.nanometrics.ca

Puerto Rico Strong Motion Program
P.O. Box 9041
Mayaguez, Puerto Rico 00681
www.prsmp.uprm.edu

REF TEK®, a Trimble Brand
Leonid Zimakov
5217 Tennyson Parkway,
Suite 400
Plano, Texas 75024
www.reftek.com

RMS
Nilesh Shome
7575 Gateway Boulevard
Newark, California 94560
www.rms.com

Seismology Research Centre
Adam Pascale
141 Palmer Street
Richmond, Victoria 3121
Australia
www.src.com.au

Weir-Jones Engineering Consultants Ltd.
Iain Weir-Jones
598 East Kent Avenue South
Vancouver, British Columbia V5X 4V6
Canada
www.weir-jones.com