

CONTENTS

EDITORIAL

- 3D Displacement and Stress Fields of Compacting Reservoir: Alternative Solutions
Valeria Barbosa, Vanderlei Oliveira Jr, Andre Arelaro, and Filipe Borges 1
- Improving seismograms' resolution by using a phase-shrinkage filtering method
Milton Porsani 2
- Reference Gravity Frame in Latin America
Denizar Blitzkow, Iuri Björkström, Ana Matos, Valéria Silva, Gabriel Guimarães, and Edvaldo Fonseca Jr. 3
- Amplitude behavior in low-rank acoustic modeling
Jorg Schleicher, Jesse Costa, Maria Amélia Schleicher, and Andres Landeta Bejarano 4
- Groundwater by Means of Geophysics: Review and Examples
José Gouvêa Luiz 5
- Chronological Study of Sediments from Alambari River, São José dos Campos, São Paulo State, Brazil
Daniel Marcos Bonotto, and João Massari 6
- Shallow-Water Sub-Bottom Seismic Investigation: A Multi-Frequency Approach
Luiz Antonio Pereira de Souza 7
- Use of the Magnetotelluric Method in Brazil and Future Challenges
Antonio Padilha, Andrea Santos-Matos, and Marcos de Pádua 8
- Determination of Water Table Depth using Geophysical Methods: A Review
Otávio Coaracy Brasil Gandolfo 9
- Highlights of solar observations with two Brazilian radio telescopes
Adriana Valio 10
- Ionospheric scintillation characteristics and their effects over GNSS signal and position and navigation systems in the Brazilian region
Eurico de Paula, Alison Moraes, and João Francisco Monico 11



VOLUME 40, SPECIAL ISSUE
BrJG 40 Years

Publisher
**Brazilian Geophysical
Society - SBGf**

Av. Rio Branco 156, room 2509 •
Rio de Janeiro • RJ • Brazil
Zip Code: 20040-901

Email: sbgf@sbgf.org.br

CNPJ 14644934/0001-70

www.sbgf.org.br



BRAZILIAN JOURNAL OF
GEOPHYSICS - BrJG

Indexed by
Scopus (ELSEVIER)

Online Version:
www.rbgf.org.br

BRAZILIAN JOURNAL OF GEOPHYSICS
v. 1, n. 1 (September, 1982)
FOUR ISSUES PER
YEAR
ISSN 2764-8044
I. Brazilian Geophysical Society
1. Geophysics

Editorial Scope

The Brazilian Journal of Geophysics – BrJG (formerly Revista Brasileira de Geofísica) is a quarterly journal of the Brazilian Geophysical Society (SBGf), with arbitration and open access, devoted to the national and international dissemination of original scientific and technical articles related to research in geophysics and geophysical applications in the areas of Geological Sciences, Oceanography, Atmospheric Sciences, and Space Sciences.

In addition to original technical and scientific articles, the journal publishes review articles from guest authors and discussions. Thematic special issues may also be dedicated to a single topic, edited by invited experts. There is no fee for article submission and publication.

BRAZILIAN JOURNAL OF GEOPHYSICS - BrJG

Editor-in-Chief

George Sand Leão Araújo de França, UnB, Brasília - DF, Brazil

Adjoint Editors

Alanna Costa Dutra, UFBA, Salvador - BA, Brazil
Cícero Roberto Teixeira Régis, UFPA, Belém - PA, Brazil
Giuliano Sant'Anna Marotta, UnB, Brasília - DF, Brazil

Editorial Board

Cleverson Guizan Silva, UFF, Niterói - RJ, Brazil
Edson Emanuel Starteri Sampaio, UFBA, Salvador - BA, Brazil

Scientific Publication Editor

Adriana Reis Xavier, SBGf, RJ, Brazil

Desktop Publishing Contributors

Raissa Moraes Baldez, UFPA, PA, Brazil
Patricia Descovi, ON, RJ, Brazil

English Revisor

Helba Reismann, RJ, Brazil

DIVISIONAL ASSOCIATE EDITORS

Solid Earth Geophysics

Daniel Ribeiro Franco, ON, Rio de Janeiro - RJ, Brazil
Marcelo Sousa de Assumpção, USP, São Paulo - SP, Brazil
Márcia Maia, Université de Bretagne Occidentale, Plouzané, France
Walter D. Mooney, US Geological Survey - USGS, Menlo Park - CA, USA

Potential Methods and Geothermal Studies

Francisco José Fonseca Ferreira, UFPR, Curitiba - PR, Brazil

Remote Sensing

Bijesh Kozhikkodan Veetil, Duy Tan University, Danang, Vietnam
Matheus Pinheiro Ferreira, IME, Rio de Janeiro - RJ, Brazil

Electrical and Electromagnetic Methods

Cícero Roberto Teixeira Régis, UFPA, Belém - PA, Brazil

Machine Learning

Iago Sousa Lima Costa, CPRM, Brasília - DF, Brazil
Italo Gomes Gonçalves, Unipampa, Caçapava do Sul - RS, Brazil

Marine Geophysics and Physical Oceanography

Antonio Tadeu dos Reis, UERJ, Rio de Janeiro - RJ, Brazil
Christian Gorini, Université Pierre et Marie Curie, Paris, France
Eduardo Siegle, USP, São Paulo - SP, Brazil

Seismic Methods

Alexandre Rodrigo Maul, Petrobras, Rio de Janeiro - RJ, Brazil
Wagner Moreira Lupinacci, UFF, Niterói - RJ, Brazil

Space Geophysics and Aeronomy

Jean Pierre Raulin, Mackenzie, São Paulo - SP, Brazil
Manilo Soares Marques, UFRN, Natal - RN, Brazil

Near-Surface Geophys., Environ. and Forensic Geophys.

César Augusto Moreira, UNESP, Rio Claro - SP, Brazil

Petrophysics and Well Logging

Paulo Roberto de Carvalho, UFPA, Belém - PA, Brazil

BRAZILIAN GEOPHYSICAL SOCIETY - SBGf

Directory Board 2013-2015

President

Roberta Mary Vidotti (UnB)

Vice-President

Luiz Fernando Santana Braga (Invision)

General Secretary

Marco Antonio Pereira de Brito (Petrobras)

Finance Secretary

Rui Pinheiro Silva (SBGf)

Publications Secretary

Elaine Maria Lopes Loureiro (ANP)

Institutional Liaison Secretary

Diego Chagas Garcia (Petrobras)

Academic Liaison Secretary

Andréa Teixeira Ustra (USP)

COUNCIL MEMBERS

Alan de Souza Cunha (UFRJ)
Eder Cassola Molina (USP)
George Sand Leão Araújo de França (UnB)
Guilherme Sidou Canha (Petrobras)

Marco Antonio Cetale Santos (UFF)
Mário Sérgio Costa (Petrobras)
Jaqueline Krueger (CGG)
Patricia Descovi (ON)

Renato Lopes Silveira (ANP/BDEP)
Ricardo Augusto Rosa Fernandes (Petrobras)

REGIONAL DIVISIONS

South-Southeast Regional Secretary

Eliane da Costa Alves (UFF)

Midwest Regional Secretary

Elder Yokoyama (UnB)

North Regional Secretary

Adriany Tiffany Moura Reis Valente (UFOPA)

Northeast Regional Secretary

Marco Antônio Pereira de Brito (Petrobras)