

ISSN: 2150-850X

Volume 8, Number 3, August 2017



# Positioning



ISSN: 2150-850X



[www.scirp.org/journal/pos](http://www.scirp.org/journal/pos)

# Journal Editorial Board

ISSN: 2150-850X (Print), 2150-8526 (Online)

<http://www.scirp.org/journal/pos>

---

## Editor-in-Chief

Prof. Hikmat Hamid Asadov

National Aerospace Agency, Azerbaijan

## Honorary Editor-in-Chief

Prof. Jingnan Liu

Wuhan University, China

## Editorial Board

Dr. Arkady Efimovich Avramenko

Russian Academy of Sciences, Russia

Dr. Francisco Barcelo-Arroy

Universitat Politecnica de Catalunya, Spain

Dr. Miloš Borenović

Serbian Ministry of Education and Science, Serbia

Prof. Sutapa Chaudhuri

University of Calcutta, India

Prof. Lev Eppelbaum

Tel Aviv University, Israel

Dr. Nikos Komninos

Athens Information Technology, Greece

Prof. Tribikram Kundu

University of Arizona, USA

Prof. Alain Lambert

Paris-Sud University, France

Prof. Chunxiang Li

Shanghai University, China

Prof. Yuji Murayama

University of Tsukuba, Japan

Prof. Gottapu Sasibhushana Rao

Andhra University, India

Dr. Paolo Tortora

University of Bologna, Italy

Dr. Guoquan Wang

University of Houston, USA

Prof. Guochang Xu

GFZ German Research Centre for Geosciences, Germany

Dr. Shaocai Yu

US Environmental Protection Agency, USA

# Table of Contents

**Volume 8    Number 3****August 2017****Efficient Harmonic Analysis Technique for Prediction of IGS Real-Time Satellite Clock  
Corrections**

M. E. Elsobeiey.....37

## **Positioning (POS)**

### **Journal Information**

#### **SUBSCRIPTIONS**

The *Positioning* (Online at Scientific Research Publishing, [www.SciRP.org](http://www.SciRP.org)) is published quarterly by Scientific Research Publishing, Inc., USA.

##### **Subscription rates:**

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

#### **SERVICES**

##### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

##### **Reprints (minimum quantity 100 copies)**

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

#### **COPYRIGHT**

##### **Copyright and reuse rights for the front matter of the journal:**

Copyright © 2017 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

##### **Copyright for individual papers of the journal:**

Copyright © 2017 by author(s) and Scientific Research Publishing Inc.

##### **Reuse rights for individual papers:**

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

##### **Disclaimer of liability**

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

#### **PRODUCTION INFORMATION**

For manuscripts that have been accepted for publication, please contact:

E-mail: [pos@scirp.org](mailto:pos@scirp.org)

# POSITIONING

A Journal Published by Scientific Research Publishing, USA  
[www.scirp.org/journal/pos](http://www.scirp.org/journal/pos)



## ★ Editor-in-Chief

**Prof. Hikmat Hamid Asadov** National Aerospace Agency, Azerbaijan

## ★ Honorary Editor-in-Chief

**Prof. Jingnan Liu** Wuhan University, China

## ★ Editorial Board

**Dr. Arkady Efimovich Avramenko**  
**Dr. Francisco Barcelo-Arroy**  
**Dr. Miloš Borenović**  
**Prof. Sutapa Chaudhuri**  
**Prof. Lev Eppelbaum**  
**Dr. Nikos Komninos**  
**Prof. Tribikram Kundu**  
**Prof. Alain Lambert**  
**Prof. Chunxiang Li**  
**Prof. Yuji Murayama**  
**Prof. Gottapu Sasibhushana Rao**  
**Dr. Paolo Tortora**  
**Dr. Guoquan Wang**  
**Prof. Guochang Xu**  
**Dr. Shaocai Yu**

Russian Academy of Sciences, Russia  
Universitat Politècnica de Catalunya, Spain  
Serbian Ministry of Education and Science, Serbia  
University of Calcutta, India  
Tel Aviv University, Israel  
Athens Information Technology, Greece  
University of Arizona, USA  
Paris-Sud University, France  
Shanghai University, China  
University of Tsukuba, Japan  
Andhra University, India  
University of Bologna, Italy  
University of Houston, USA  
GFZ German Research Centre for Geosciences, Germany  
US Environmental Protection Agency, USA

**POSITIONING** is an international journal dedicated to the latest advancement of positioning. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of navigation and positioning. All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following fields:

- Air Navigation/Positioning
- All-Weather Navigation/Positioning
- Approach Navigation/Positioning
- Arc Navigation/Positioning
- Astronomical Navigation/Positioning
- Blind Navigation/Positioning
- Celestial Navigation/Positioning
- Constant Navigation/Positioning
- Doppler Navigation/Positioning
- Electronic Navigation/Positioning
- Fixed Lead Navigation/Positioning
- Geodetic System
- Geographic Information System
- Global Positioning System
- Inertial Navigation/Positioning
- Interplanetary Navigation/Positioning
- Land Navigation/Positioning
- Long-distance Navigation/Positioning
- Omni Bearing-Distance Navigation/Positioning
- Orbital Navigation/Positioning
- Radar Navigation/Positioning
- Radio Navigation/Positioning
- Satellite Navigation/Positioning
- Ship Navigation/Positioning
- Short-range Navigation/Positioning
- Sonar Navigation/Positioning
- Space Navigation/Positioning

We are also interested in: 1) Short Reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book Reviews—Comments and critiques.

## ★ Notes for Intending Authors

Submitted papers should not be previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. For more details, please access the website.

## ★ Website and E-Mail

<http://www.scirp.org/journal/pos>

Email: [pos@scirp.org](mailto:pos@scirp.org)