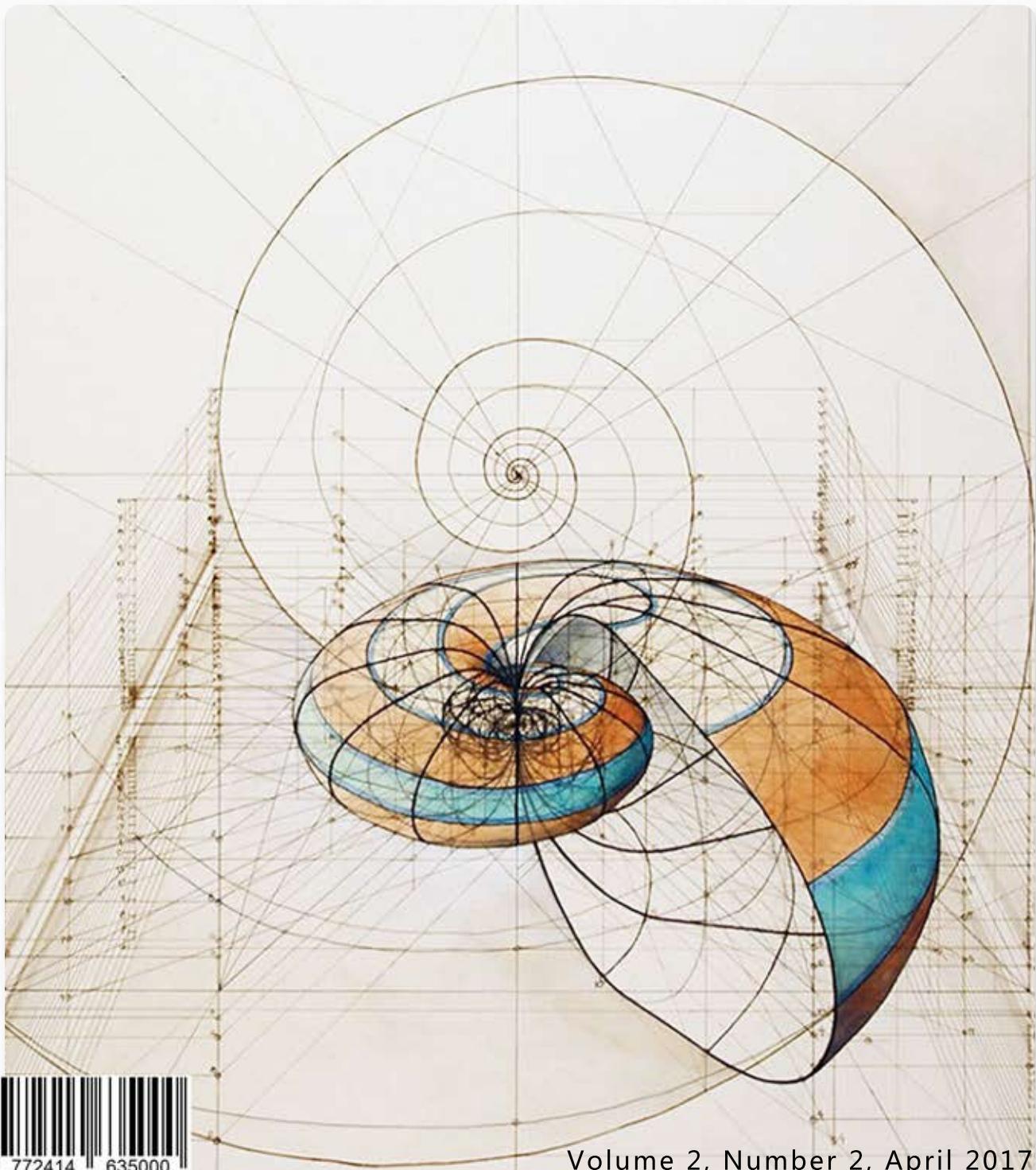




ISAAC SCIENTIFIC  
PUBLISHING

ISSN(Online): 2414-4754 ISSN(Print): 2414-6358

JOURNAL OF ADVANCES IN  
**APPLIED  
MATHEMATICS**



9 772414 635000

Volume 2, Number 2, April 2017

## TABLE OF CONTENTS

Volume 2 Number 2

April 2017

### Cohomological Vertex Operators

- Andrés Viña ..... 71

### Quasi-equilibrium Problems and Fixed Point Theorems of the Product Mapping of Lower and Upper Semicontinuous Mappings

- Nguyen Xuan Tan and Nguyen Quynh Hoa ..... 89

### Small Traveling Salesman Problems

- Richard H. Warren ..... 101

# **Journal of Advances in Applied Mathematics (JAAM)**

## **EDITOR-IN-CHIEF**

**Prof. Wanyang Dai**

Nanjing University, China

## **EDITORIAL BOARD**

**Dr. S. P. Yung**

The University of Hong Kong, Hong Kong  
(China)

**Prof. Themistocles M. Rassias**

National Technical University of Athens, Greece

**Prof. Tianxiao He**

Illinois Wesleyan University, USA

**Prof. José Luis López-Bonilla**

National Polytechnic Institute, Mexico

**Prof. Jun Hu**

Harbin University of Science and Technology,  
China

**Prof. H. M. Srivastava**

University of Victoria, Canada

**Prof. Wen-Xiu Ma**

University of South Florida, USA

**Prof. Kumar K. Tamma**

University of Minnesota, USA

**Prof. Allaberen Ashyralyev**

Fatih University, Turkey

**Prof. Tien-Chien Jen**

University of Johannesburg, South Africa

**Dr. Michael Th. Rassias**

Princeton University, USA

**Dr. Zeyad Al-Zhour**

University of Dammam, Saudi Arabia

**Prof. M. A. Abdou**

Alexandria University, Egypt

**Prof. Tingzhu Huang**

University of Electronic Science and Technology  
of China, China

**Dr. Safeer Hussain Khan**

Qatar University, Qatar

## **SUBSCRIPTIONS**

Journal of Advances in Applied Mathematics (JAAM) (Online at [www.isaacpub.org](http://www.isaacpub.org)) is published quarterly by Isaac Scientific Publishing. For printed journal subscription, please contact: [service@isaac-scientific.org](mailto:service@isaac-scientific.org)

Subscription rates: \$29 per issue (by air mail)

## **ADVERTISEMENTS & REPRINTS**

For advertisements and reprints affairs, please contact: [service@isaacpub.org](mailto:service@isaacpub.org)

The reprints require a minimum quantity of 50 copies.

## **PUBLISHER**

Isaac Scientific Publishing Co., Limited

Unit 04, 7/F Bright Way Tower, No. 33 Mong Kok Rd., KL, Hong Kong(China)