

## VNU JOURNAL OF SCIENCE: MATHEMATICS - PHYSICS

### Editorial Board Chairman

Truong Vu Bang Giang  
Vietnam National University, Hanoi, Vietnam

### Editorial Board on Mathematics - Physics

#### Managing Editors

Nguyen Dinh Duc - Vietnam National University, Hanoi, Vietnam  
Nguyen Nang Dinh - VNU University of Engineering and Technology, Hanoi, Vietnam

#### Associate Editors

Holm Altenbach - Otto-von-Guericke University Magdeburg, Magdeburg, Germany  
Bach Thanh Cong - VNU University of Science, Hanoi, Vietnam  
Nguyen Huu Du - Vietnam Institute for Advanced Study in Mathematics, Hanoi, Vietnam  
Nguyen Manh Duc - Oxford University, Oxford, United of Kingdom  
Dinh Dung - VNU Information Technology Institute, Hanoi, Vietnam  
David Hui - University of New Orleans, USA  
Nguyen Hoang Luong - VNU University of Science, Hanoi, Vietnam  
Manh-Huong Phan - University of South Florida, Florida, USA  
Hui Shen Shen - Shanghai Jiao Tong University, Shanghai, China  
Nguyen Duy Tam - Nanyang Technical University, Singapore  
Ngo Viet Trung - Vietnam Academy of Science and Technology, Hanoi, Vietnam  
Pham Chi Vinh - VNU University of Science, Hanoi, Vietnam  
Shen Zexiang - Nanyang Technical University, Singapore

#### Secretary

Dao Thi Lan	Nguyen Ngoc Anh
VNU Journal of Science, Hanoi, Vietnam	Vietnam National University, Hanoi, Vietnam
Tel.: (84) 975896543;	Tel.: (84) 942139699;
E-mail: lantckh@vnu.edu.vn	E-mail: anhngocnguyen@vnu.edu.vn

---

### Aims and Scope

*VNU Journal of Science: Mathematics - Physics* publishes *double-blinded* peer-review research papers, communications and reviews dealing with: Advanced engineering, Advanced structures, Computational sciences, Material sciences, Mathematics, Mechanics, Nano sciences, Physics.

### Publication Information

The journal publishes *quarterly in March, June, September, December* by the Vietnam National University, Hanoi. As a fully open access publication, the journal will provide maximum exposure for published articles, making the research available to all to read and share. A corresponding print version is also available.

Any manuscript followed the journal's scope and author guideline will be assigned to managing editors. All manuscripts undergo an editorial screening and a double-blinded peer review by at least one independent expert in the field. The managing editors make an editorial decision, which is subject to endorsement by the Editor-in-Chief.

Further Information is available through the journal website: <http://js.vnu.edu.vn>

---

Publication Permit No 223/GP-BTTTT, issued on Jul. 22<sup>nd</sup> 2014 and Permit (Revised) No 62/GP-BTTTT, issued on Jan. 29<sup>th</sup> 2021. Printed at Su That Printing House, No 201 Cau Dien Street, Bac Tu Liem District, Hanoi, Vietnam. Legal Deposit: Quarter III/2023.