

Bulletin of the Iranian Mathematical Society

The Bulletin of the Iranian Mathematical Society is published six times a year. It publishes original research papers and invited survey articles in all areas of mathematical sciences, preferably accessible to a broad public.

Submissions: Manuscripts must be submitted via the online submission of BIMS. Upon acceptance, all papers should be prepared in L^AT_EX (in the style of BIMS). Manuscripts under consideration for the bulletin, should not be published or submitted for publication elsewhere.

Preparation of manuscripts: An abstract of 150 words or less, AMS *Mathematical Subject Classification* and *Keywords* clarifying the subject of the manuscript are required. The papers should bear the full names and addresses of all authors and their e-mails. References should be given in alphabetical order with the following format: a) to books - author, title, publisher, location, year of publication; b) to articles in periodicals or collections - author, title of the article, title of the periodical (collection), volume, year, pagination. Abbreviations of titles of periodicals and collections should be given following *Mathematical Reviews*.

Indexing/Abstracting The Bulletin of the Iranian Mathematical Society is indexed/abstracted in the following:

- Science Citation Index Expanded (also known as SciSearch)
- Journal Citation Reports/Science Edition
- Mathematical Reviews
- Zentralblatt MATH
- Directory of Open Access Journals (DOAJ)
- Islamic World Science Citation (ISC)
- SCOPUS
- EBSCO

Subscription: Please contact the Editorial Office for subscription information.

Exchange: Inquires for journal exchanges are requested to contact the Editorial Office.

Editorial Board

- A. Abdollahi, Shiraz Univ., Shiraz, abdollahi@shirazu.ac.ir
A. Abkar, Imam Khomeini International Univ., Qazvin, abkar@sci.iiku.ac.ir
A. Aghajani, Iran Univ. of Science and Tech., Tehran, aghajani@iust.ac.ir
M. Amini, Tarbiat Modares Univ., Tehran, mamini@modares.ac.ir
A. Armandnejad, Vali-e-Asr Univ. of Rafsanjan, Rafsanjan, armandnejad@vru.ac.ir
S. Azam, Univ. of Isfahan, Isfahan, azam@sci.ui.ac.ir, saeidazam@yahoo.com
H. R. Ebrahimi Vishki, Ferdowsi Univ. of Mashhad, Mashhad, vishki@um.ac.ir
S. Effati, Ferdowsi Univ. of Mashhad, Mashhad, s-effati@um.ac.ir
E. Eftekhar, IPM, Tehran, eaman@ipm.ir
A. Ghaffari, Semnan Univ., Semnan, aghaffari@semnan.ac.ir
F. H. Ghane, Ferdowsi Univ. of Mashhad, Mashhad, ghane@math.um.ac.ir
M. Hadizadeh Yazdi, K. N. Toosi Univ. of Tech., Tehran, hadizadeh@kntu.ac.ir
H. Hajibolhassan, Shahid Beheshti Univ., Tehran, hhaji@sbu.ac.ir
S. Hejazian, Ferdowsi Univ. of Mashhad, Mashhad, hejazian@um.ac.ir
D. Khojasteh Salkuyeh, Univ. of Guilan, Rasht, khojasteh@guiilan.ac.ir
M. R. Koushesh, Isfahan Univ. of Tech., Isfahan, koushesh@cc.iut.ac.ir
H. Mohebi, Shahid Bahonar Univ. of Kerman, Kerman, hmohebi@mail.uk.ac.ir
H. Mousavi, Univ. of Tabriz, Tabriz, hmousavi@tabrizu.ac.ir
T. Nikazad, Iran Univ. of Science and Tech., Tehran, tnikazad@iust.ac.ir
S. Saeidi, University of Kurdistan, Sanandaj, sh.saeidi@ uok.ac.ir
M. Soleimani-damaneh, Univ. of Tehran, Tehran, soleimani@khayam.ut.ac.ir
B. Yahaghi, Golestan Univ., Gorgan, bamdad5@hotmail.com
R. Zaare-Nahandi, Univ. of Tehran, Tehran, rahimzn@ut.ac.ir

Editor-in-Chief	Managing Editor	Style-Language Editors (Coordinators)	
Hamid Reza Ebrahimi Vishki Ferdowsi Univ. of Mashhad P.O. Box 91775-1159 Mashhad, Iran	Shirin Hejazian Ferdowsi Univ. of Mashhad P.O. Box 91775-1159 Mashhad, Iran	Hamid Mousavi Univ. of Tabriz P.O. Box 51666-17766 Tabriz, Iran	Eaman Eftekhar IPM P.O. Box 19395-5746 Tehran, Iran

Advisory Editorial Board

Mehdi Behzad

Department of Mathematics, Shahid Beheshti Univ., Tehran, Iran,
mbehzad@sharif.ac.ir

Mehdi Radjabalipour

Department of Mathematics, Shahid Bahonar Univ. of Kerman, Kerman, Iran,
radjab45@mail.uk.ac.ir

Heydar Radjavi

Department of pure Mathematics, Univ. of Waterloo, Waterloo, Ontario, Canada N2L 3G1,
hradjavi@math.uwaterloo.ca

Freydoon Shahidi

Department of Mathematics, Purdue Univ., West Lafayette, IN 47907, USA,
shahidi@math.purdue.edu

Cumrun Vafa

Lyman Lab of Physics, Harvard Univ., Cambridge, MA 02138, USA,
vafa@string.harvard.edu

Associate Editors

Mohammad Asadzadeh: Numerical Analysis, Partial Differential Equations

Department of Mathematics, Chalmers University of Technology, SE-412 96 Gothenburg,
Sweden, mohammad@math.chalmers.se

Fariborz Azarpanah: Topology, Rings of Continuous Functions

Department of Mathematics, Shahid Chamran Univ. of Ahvaz, Ahvaz, Iran, azarpanah@ipm.ir

Rama Cont: Probability, Stochastic Analysis, Stochastic Processes, Numerical Analysis of Partial Differential Equations, Simulation

Laboratoire de Probabilités et Modèles Aleatoires CNRS - Université Paris VI 175 rue du
Chevaleret F 75013 Paris, France, rama.con@upmc.fr

Mohammad Reza Darafsheh: Group Theory, Combinatorics, Representation Theory of Finite Groups

Department of Mathematics, University of Tehran, P. O. Box 14155-6455 Tehran, Iran, daraf-
sheh@ut.ac.ir

Mohammad-Taghi Dibaei: Complexes, Dualizing Complex, Local Cohomology Mathematical Sciences and computer, Kharazmi University, Tehran, Iran, dibaeimt@ipm.ir

Behzad Djafari-Rouhani: Nonlinear Functional Analysis University of Texas at El Paso, USA, behzad@utep.edu

Abbas Edalat: Mathematical Aspects of Computer Science, O.D.E. via Computer Science Department of Computing, Imperial College, London SW7 2BZ, UK, ae@doc.ic.ac.uk

Ali Enayat: Mathematical Logic, Set Theory

Department of Mathematics and Statistics, American Univ., 4400 Massachusetts Ave, NW,
Washington, DC 20016-8050, USA, enayat@american.edu

Paul Ernest: Mathematical Education

School of Education & LL, Univ. of Exeter, Heavitree Road, Exeter EX1 2LU, UK,
p.ernest@ex.ac.uk

Jost-Hinrich Eschenburg: Differential Geometry

Institut für Mathematik, Universität Augsburg, D-86135 Augsburg, Germany,
eschenburg@math.uni-augsburg.de

Samad Hedayat: Statistics, Block Designs and Coding Theory

Department of Mathematics, Statistics & Computer Science (M/C 249), Univ. of Illinois at Chicago, 851 South Morgan Street, Chicago, Illinois 60607-7045, USA, hedayat@uic.edu

Omid-Ali Karamzadeh: Associative Rings and Algebras

Department of Mathematics, Shahid Chamran Univ. of Ahvaz, Ahvaz, Iran, karamzadeh@ipm.ir

Bernhard Keller: Representation Theory, Homological Algebra, Cluster Algebra

Université Paris Diderot, Paris 7, Paris, France, keller@math.jussieu.fr

Masoud Khalkhali: Noncommutative Geometry, Cyclic Cohomology, Operator Algebras, Mathematical Physics

Department of Mathematics, University of Western Ontario, London, Ontario N6A 5B7, Canada, masoud@uwo.ca

Anthony To-Ming Lau: Harmonic Analysis

Department of Mathematical & Statistical Sciences, University of Alberta, Canada, tlau@math.ualberta.ca

Javad Mashreghi: Functions of a Complex Variable, Two Dimensional Potential Theory, Operator Theory

Université Laval, Québec, Canada, javad.mashreghi@mat.ulaval.ca

Maryam Mirzakhani: Teichmüller Theory, Ergodic Theory

Stanford University, USA, mmirzakh@math.stanford.edu

Jamshid Moori: Finite Group, Representation Theory, Combinatorics, Graphs and Codes

School of Mathematical Sciences, University of KwaZulu-Natal, P Bag X01 Scottsville 3209, Pietermaritzburg, South Africa, mouri@ukzn.ac.za

Jean-Eric Pin: Theoretical Computer Science, Automata Theory

LIAFA, Université Paris VII, Case 7014, 2, place Jussieu, 75251 Paris Cedex 05, France, Jean-Eric.Pin@liafa.jussieu.fr

Bruno Poizat: Mathematical Logic, Model Theory, Complexity of Algorithms

Institut Girard Desargues, Université Claude Bernard (Lyon-1), Mathématiques, Batiment 101, 43, Boulevard du 11 Novembre 1918, 69622 Villeurbanne-cedex, France, poizat@desargues.univ-lyon1.fr

Cheryl E. Praeger: Combinatorics, Finite Group

School of Mathematics and Statistics, Univ. of Western Australia, 35 Stirling Highway, Crawley WA 6009, Australia, praege@maths.uwa.edu.au

Fraydoun Rezakhanlou: Probability Theory

Department of Mathematics, University of California, Berkeley, CA 94720, USA, rezakhan@math.berkeley.edu

Henrik Shahgholian: Ordinary and Partial Differential Equations

Department of Mathematics, Royal Institute of Technology, SE-100 44 Stockholm, Sweden, henriksh@math.kth.se

Ali Taheri: Partial Differential Equations, Geometric and Harmonic Analysis

Department of Mathematics, University of Sussex, Brighton, BN1 9RF, England, UK, a.taheri@sussex.ac.uk

Bernard Teissier: Algebraic Geometry

Institut Mathématique de Jussieu, UMR7586 Bureau 702, Bâtiment Sophie Germain, Case 7012, 75205 Paris, Cedex 13, teissier@math.jussieu.fr

Siamak Yassemi: Commutative Algebra

Department of Mathematics, University of Tehran, P.O. Box 14155-6455 Tehran, Iran, yassemi@khayam.ut.ac.ir

Editorial Office

Molood Bayat
BIMS, P.O. Box 13145-418,
Tehran, Iran
E-mail: bims@ims.ir
Tel and fax +982188807775