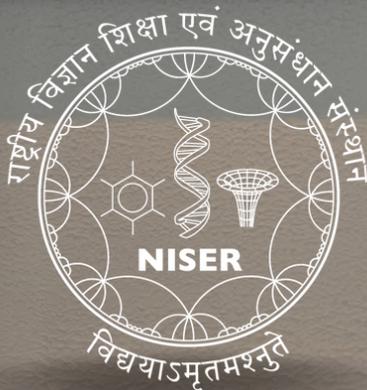


Table of Contents

January
2024



CENTRAL LIBRARY
— NISER BHUBANESWAR —

- 01 Where are these Periodicals?**
The Periodical section is located on the **1st Floor**.
- 02 What resources are included here?**
The Print journals & Magazines subscribed by the library are listed here.
- 03 How to suggest a Periodical?**
Send us an email to libniser@niser.ac.in/kkgupta@niser.ac.in through proper channel

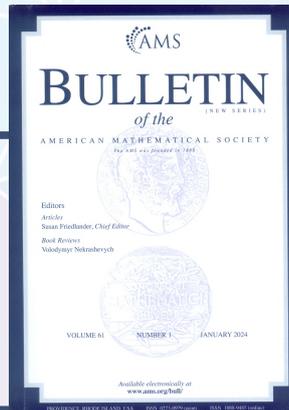


Library Website



TABLE OF PERIODICALS

01



Bulletin of the AMS

January-2024, Vol. 61, Number 1

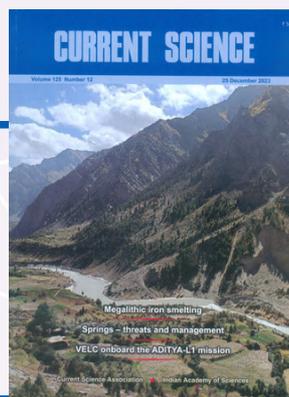
02



Current Science

December-2023, Vol. 125, Number 11

03



Current Science

December-2023, Vol. 125, Number 12

04



Notices of the AMS

January-2024, Vol. 71, Number 1



BULLETIN

(NEW SERIES)

of the

AMERICAN MATHEMATICAL SOCIETY

The AMS was founded in 1888

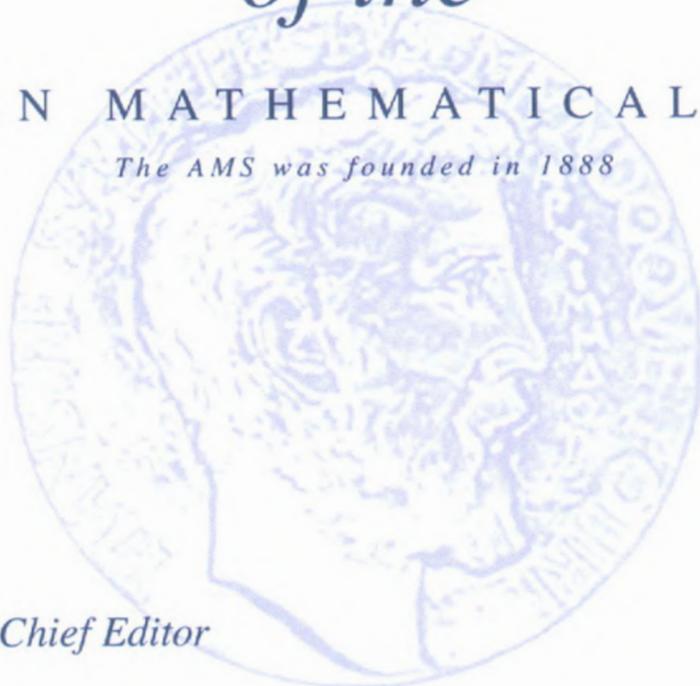
Editors

Articles

Susan Friedlander, *Chief Editor*

Book Reviews

Volodymyr Nekrashevych



VOLUME 61

NUMBER 1

JANUARY 2024

BULLETIN OF THE AMERICAN MATHEMATICAL SOCIETY

CONTENTS

Vol. 61, No. 1

January 2024

ARTICLES

| | |
|---|-----|
| Susan Friedlander , Commentary | 1 |
| Henry Cohn , From sphere packing to Fourier interpolation | 3 |
| Andrew Granville , Missing digits and good approximations | 23 |
| Martin Hairer , A stroll around the critical Potts model | 55 |
| Christopher Eur , Essence of independence: Hodge theory of matroids since June Huh | 73 |
| Jonathan M. Fraser and Liam Stuart , A new perspective on the Sullivan dictionary via Assouad type dimensions and spectra | 103 |
| Oğuz Şavk , A survey of the homology cobordism group | 119 |

MATHEMATICAL PERSPECTIVES

| | |
|--|-----|
| Susan Friedlander , Cathleen Morawetz | 159 |
| Gui-Qiang G. Chen , Morawetz's contributions to the mathematical theory of transonic flows, shock waves, and partial differential equations of mixed type | 159 |
| Selected Mathematical Reviews | 171 |

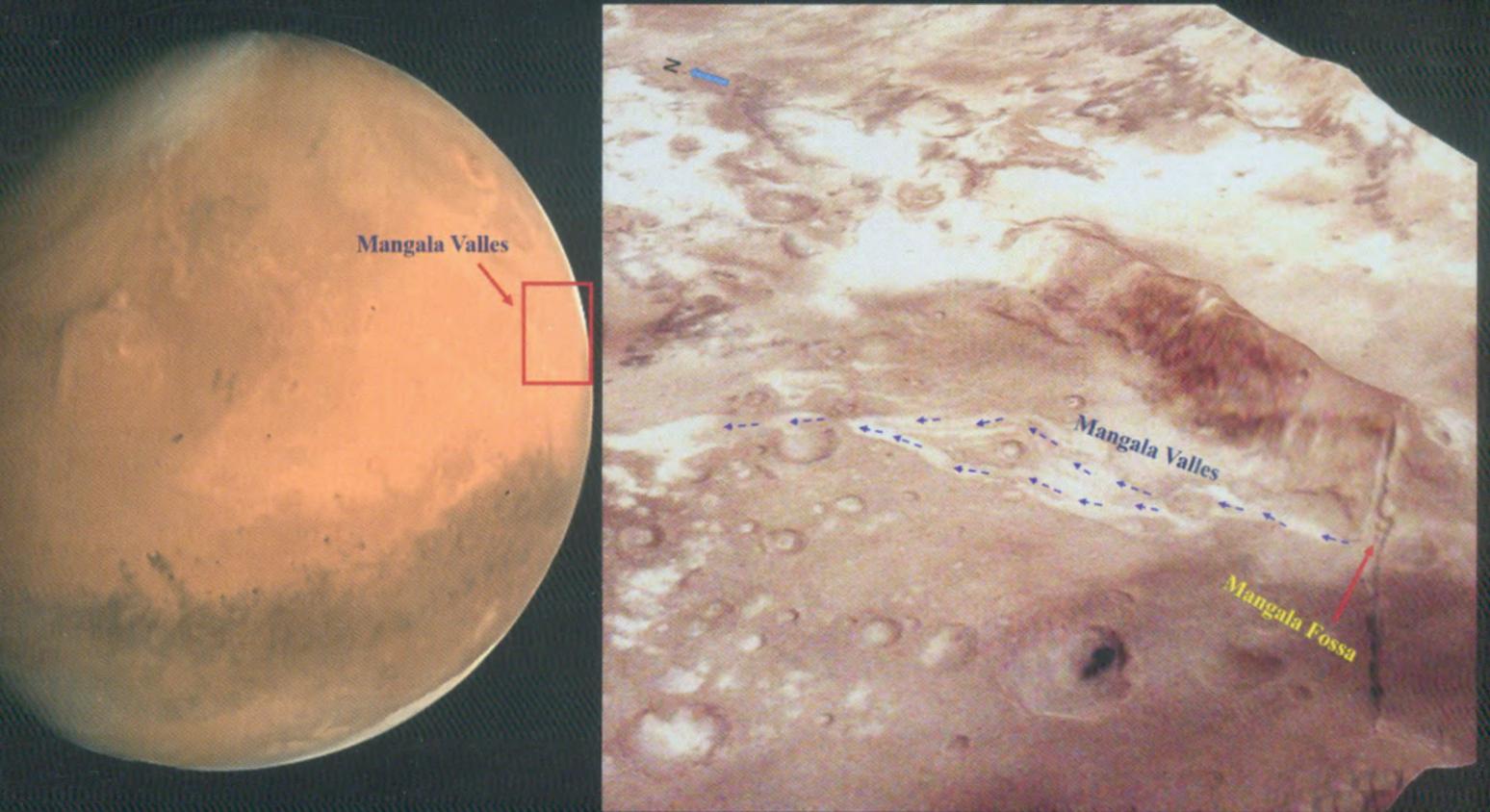
BOOK REVIEWS

| | |
|--|-----|
| Alicia Dickenstein and Giorgio Ottaviani (Reviewers), Invitation to nonlinear algebra, by Mateusz Michałek and Bernd Sturmfels | 185 |
|--|-----|

CURRENT SCIENCE

Volume 125 Number 11

10 December 2023



Sinkholes in urban roads

Ancient megafloods on Mars

Climate change on agriculture ecosystems and resilience

CURRENT SCIENCE

Volume 125 Number 11

10 December 2023

1154 In this issue

EDITORIAL

- 1155 Rooting for the love of plants: importance of being a taxonomist**
Vinita Gowda
-

CORRESPONDENCE

- 1157 A universal primer set for specific vis-à-vis simultaneous differentiation of *Escherichia coli* and *Klebsiella* species**
Rajib Deb, Gyanendra Singh Sengar, Soumendu Chakravarti, Linda Ningthoukhongjam, Seema Rani Pegu, Swaraj Rajkhowa, Pranab Joyti Das and Vivek Kumar Gupta
-

NEWS

- 1158 Current Science Reports**
- 1162 Nobel Prize in Chemistry 2023: discovery and synthesis of quantum dots**
Malay Krishna Mahato and Anoop Thomas
- 1166 Physics Nobel 2023: the study of physical phenomena with Attosecond time resolution**
Reji Philip
- 1168 The 2023 Nobel Prize in Physiology or Medicine**
Manish Nag and Raghavan Varadarajan
- 1170 Vishwavidyalaya Anusandhan Utsav 2023 – showcasing the research potential of Indian universities**
A. Shivaprasad and Pratishtha Pandey
- 1171 Deccan-next**
Hetu Sheth
-

COMMENTARY

- 1173 Geoscience education and workforce development for energy transition**
Rasoul Sorkhabi
-

GENERAL ARTICLES

- 1175 ‘Reach the Unreached’: a perspective for public outreach in Earth and space science**
B. Kakad, S. Devanandhan, C. Nayak and A. P. Dimri
- 1180 Unknown urban cavities – formation, problem and possible mapping**
P. Anbazhagan, H. Thakur, K. Panjani, Malashree and V. Logu
-

REVIEW ARTICLE

- 1190 Impact of climate change on agriculture ecosystems and resilience for sustainable development under the Global Framework for Climate Services in India**
Kamaljit Ray and Shibendu S. Ray
-

RESEARCH ARTICLES

- 1197 Uncertainty analysis using Monte Carlo simulation and rock physics modelling to explore subsurface properties of Krishna–Godavari Basin, India**
Richa and Satya P. Maurya
-



- 1216 **Ancient megafloods of Mars: interpretations from MOM MCC data and hydrodynamic simulations**
Praveen Kumar Thakur, Sanjay Kumar Dwivedi, Sehajpal Singh, Pankaj Ramji Dhote and Raghavendra Pratap Singh
- 1227 **Space–time dynamics of local scour around submerged tandem and staggered piers in sand beds**
L. N. Pasupuleti, P. V. Timbadiya and P. L. Patel
- 1235 **Do the information networks of farmers differ across gender? Evidence from the hills of Uttarakhand, India using social network analysis**
Kushagra Joshi and Jyoti Rawal
- 1244 **A machine learning model for studying the seasonality of aphids in wheat-based cropping systems of the terai zone of Darjeeling, West Bengal, India**
Biwash Gurung, Suprakash Pal, Md. Wasim Reza, Bishal Gurung and Achal Lama
- 1250 **GC–MS profiling of phytochemicals in the leaves of *Vitex negundo* L.**
Sangeetha Kaliyannagounder, Swaminathan Chitraputhirapillai, Renuka Raman, Vellaikumar Sampathrajan, Nivethadevi Palani and Sivasankari Baskaran
- 1259 **Implications of single-stage deep learning networks in real-time zooplankton identification**
Sadaf Ansari, Dattesh V. Desai, Aya Saad and Annette Stahl

BOOK REVIEWS

- 1267 **Annual Review of Cell and Developmental Biology, 2022.** Ruth Lehmann, Jennifer Lippincott-Schwartz and Alexander F. Schier (eds); *reviewed by* R. Nagaraj
- 1268 **Annual Review of Phytopathology, 2022.** Steven E. Lindow and John M. McDowell (eds); *reviewed by* Chandramani Raj and Rasappa Viswanathan

HISTORICAL NOTES

- 1271 **Lieutenant-Colonel Henry Haversham Godwin-Austen (1834–1923): a pioneering surveyor, naturalist, geologist and malacologist of British India**
Neelavar Ananthram Aravind
-



- ◀ COVER. Full disk image of Mars taken on 07 October 2014 from Mars Colour Camera (MCC) onboard Mars Orbiter Mission (*left*) and Mangala Valles image taken on 02 December 2014 from MCC draped over MOLA-HRSC Digital Elevation Model (*right*). See page 1216.

Indexed in CURRENT CONTENTS/GEOTitles/CHEMICAL ABSTRACTS/IndMED/SCOPUS/
WEB OF SCIENCE

CURRENT SCIENCE

Volume 125 Number 12

25 December 2023

An aerial photograph of a mountain valley. A river flows through the center, surrounded by green fields and small settlements. The mountains are steep and covered in dense forests. The sky is blue with scattered white clouds.

Megalithic iron smelting

Springs – threats and management

VELC onboard the ADITYA-L1 mission

Current Science Association

Indian Academy of Sciences

CURRENT SCIENCE

Volume 125 Number 12

25 December 2023

1286 In this issue**EDITORIAL**

- 1287 FAIR principles, data transparency and drug approvals**
Aarushi Kataria and Gayatri Saberwal

CORRESPONDENCE

- 1289 Rebuttal to ‘publications in gold open access and article processing charge expenditure: evidence from Indian scholarly output’**
Moumita Koley and Achal Agrawal; *Response by* Raj Kishor Kampa, Manoj Kumar Sa and Mallikarjun Dora
- 1290 Cost of publishing for gold open-access articles**
Jitendra Narayan Dash; *Response by* R. K. Kampa *et al.*
- 1290 Need for a wider debate on APCs**
Milind Watve; *Response by* R. K. Kampa *et al.*

NEWS

- 1292 Current Science Reports**
- 1296 ‘One Health’ approach to antimicrobial resistance: environment and manufacturing industry**
Biba Jasmine
- 1298 Direction and scope of luminescence dating research in India**
Madhav K. Murari and Devender Kumar

-
- 1299 Addendum to ‘Publications in gold open access and article processing charge expenditure: evidence from Indian scholarly output’**
Raj Kishor Kampa, Manoj Kumar Sa and Mallikarjun Dora [*Curr. Sci.*, 2023, **125**(10), 1057–1062]

OPINION

- 1300 Reimagining people’s participation in the People Biodiversity Register through citizen science – a case of small mammal and bats from the Eastern Himalaya, India**
Thangsuanlian Naulak and Sunita Pradhan

COMMENTARY

- 1302 Sub-National Repository for Traditional Knowledge**
Indrani Barpujari

GENERAL ARTICLES

- 1304 Bibliometric analysis of paleotsunami research: current trends and overview**
Purna Sulastya Putra, Jakah, Septriono Hari Nugroho, Wiko Setyonegoro and Amar
- 1310 Ancient iron making process at Naikund, Vidarbha region of India: a thermochemical analysis of megalithic iron smelting**
P. P. Deshpande, V. S. Kathavate, N. K. Nath and V. S. Shinde

REVIEW ARTICLE

- 1316 Springs – threats and management**
Vijeta Thakur, Amita Sharma and S. K. Bhardwaj
-

RESEARCH ARTICLES

- ◀ 1323 **Silicon carbide-based functional components in the Visible Emission Line Coronagraph on-board the ADITYA-L1 mission**
Bhaskar Prasad Saha, Dulal Chandra Jana, Prasenjit Barick, V. Natarajan, Suresh Venkata, Abhijit A. Adoni, D. R. Veerasha, R. Venkateswaran, P. U. Kamath, Roy Johnson, K. V. Sriram, B. Raghavendra Prasad and G. Padmanabham
- 1328 **Evaluation of deep eutectic solvents as a potential non-aqueous medium for the efficient dissolution and biomaterial preparation of ϵ -poly-L-lysine**
Nishith A. Chudasama, Rosy Sequeira, Tapan Kumar Maity and Kamalesh Prasad
- 1334 **Quantifying indoor PM_{2.5} reduction through control measures**
Sangita Ghatge Goel and Rajesh Gupta
- 1339 **Delineation of saline soils in coastal India using satellite remote sensing**
Uttam Kumar Mandal, Dibyendu Bikas Nayak, Amit Ghosh, Ajay Kumar Bhardwaj, T. D. Lama, Gopal Ramdas Mahajan, Bappa Das, M. S. Nagaraja, Vittal B. Kuligod, P. Prasuna Rani, Sudipa Mal, Arpan Samui, K. K. Mahanta, Subhasis Mandal, S. Raut and D. Burman
- 1354 **Climate change adaptation strategies for the native communities of Agasthyamalai Biosphere Reserve, South India**
S. Aiswarya, R. N. Padaria, R. R. Burman, Sujit Sarkar, Pramod Kumar and Achal Lama
- 1360 **Which pricing policy do road users accept?**
Chintaman Santosh Bari, Adurthi Naga Murali, Yogeshwar V. Navandar and Ashish Dhamaniya
- 1369 **Regional-scale landslide susceptibility assessment for the hilly state of Himachal Pradesh, NW Himalaya, India**
Vikram Gupta, Ramandeep Kaur, Sandeep Kumar, Bikash Kumar Ram and Ruchika S. Tanton
- 1381 **Optimizing the preparation of seaweed-based edible cones with response surface methodology**
K. Sravani, P. Ganesan, S. Balasundari, N. Muralidharan, B. Chrisolite and K. Dhanapal

RESEARCH COMMUNICATION

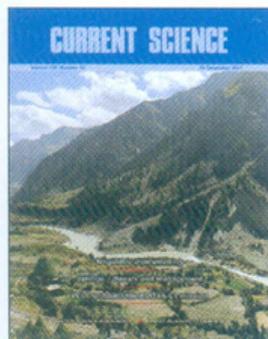
- 1388 **Development of a control panel system and Android Bluetooth app for real-time integrated sensors**
Vinay Kumar

BOOK REVIEW

- 1391 **Science, War and Imperialism: India in the Second World War.** Jagdish N. Sinha; reviewed by G. Parthasarathy

-
- 1392 **Institutional Members**

-
- 1400 **Acknowledgements**
-



- ◀ COVER. Chandrabhaga landslide – Lahaul and Spiti district in Himachal Pradesh during 2021. See page 1369.

Indexed in CURRENT CONTENTS/GEOTitles/SCOPUS/WEB OF SCIENCE

ISSN 0002-9920 (print)
ISSN 1088-9477 (online)



Notices

of the American Mathematical Society

January 2024

Volume 71, Number 1



FEATURES

| | |
|---|-----|
| In Search of the Viscosity Operator on Riemannian Manifolds..... | 8 |
| <i>Magdalena Czubak</i> | |
| Running a Minimal Model Program..... | 17 |
| <i>Joaquín Moraga</i> | |
| <hr/> | |
| Letters to the Editor..... | 4 |
| A Word from... Sergei Gelfand..... | 6 |
| Early Career: What Does a Mathematician Do? | 30 |
| Does One Have to be a Genius to Do Maths? | 30 |
| <i>Terence Tao</i> | |
| What Does a Mathematician Do?..... | 32 |
| <i>William Thurston</i> | |
| Summertime at the Mathematics Research Communities (MRCs)..... | 33 |
| <i>Sarah Bryant</i> | |
| Engaging Students Through Math Competitions | 35 |
| <i>Béla Bajnok</i> | |
| Writing for an MAA Periodical..... | 37 |
| <i>Della Dumbaugh and Deanna Haunsperger</i> | |
| Getting Involved in AMS Governance | 39 |
| <i>Boris Hasselblatt</i> | |
| Math Outreach..... | 42 |
| <i>Denise Taunton Reid and Sandra Davis Trowell</i> | |
| Dear Early Career..... | 44 |
| Memorial Tribute: John Coates (1945–2022): Celebration of a Life | 46 |
| <i>Barry Mazur, Stephen Lichtenbaum, Andrew Wiles, Leila Schneps, Sujatha, and Mahesh Kakde</i> | |
| Education: Metacognition in the Mathematics Classroom | 57 |
| <i>Jo Boaler, Lakeshia Legette Jones, Yvonne Lai, John Nardo, and Jennifer Schultens</i> | |
| What is... a Skew Brace? | 65 |
| <i>Leandro Vendramin</i> | |
| Book Review: Graph Theory in America: The First Hundred Years..... | 68 |
| <i>Reviewed by Małgorzata Marciniak</i> | |
| Bookshelf..... | 72 |
| AMS Bookshelf..... | 73 |
| Communication: Abel Interview 2023: Luis Ángel Caffarelli..... | 74 |
| <i>Bjørn Ian Dundas and Christian F. Skau</i> | |
| Communication: Mathematical Proof Between Generations | 79 |
| <i>Jonas Bayer, Christoph Benz Müller, Kevin Buzzard, Marco David, Leslie Lamport, Yuri Matiyasevich, Lawrence Paulson, Dierk Schleicher, Benedikt Stock, and Efim Zelmanov</i> | |
| Communication: Using Generative AI for Literature Searches and Scholarly Writing: Is the Integrity of the Scientific Discourse in Jeopardy?..... | 93 |
| <i>Paul G. Schmidt and Amnon J. Meir</i> | |
| Communication: On the Importance of Illustration for Mathematical Research..... | 105 |
| <i>Rémi Coulon, Gabriel Dorfsman-Hopkins, Edmund Harriss, Martin Skrodzki, Katherine E. Stange, and Glen Whitney</i> | |
| Short Stories: Baguenaudy, Baguenaudier, Baguenaudiest | 117 |
| <i>Danny Calegari</i> | |
| News: AMS Updates..... | 122 |
| News: Mathematics People..... | 124 |
| Classified Advertising..... | 126 |
| New Books Offered by the AMS..... | 129 |
| Meetings & Conferences of the AMS..... | 132 |



FROM THE AMS SECRETARY

| | |
|---|-----|
| Calls for Nominations & Applications | 120 |
| I. Martin Isaacs Prize for Excellence in Mathematical Writing..... | 120 |
| 2024 MOS-AMS Fulkerson Prize | 120 |



INVITATIONS FROM THE AMS

| | |
|-------------------------------------|--------------------|
| Current Events Bulletin 2024 | inside front cover |
| Member Activities at JMM 2024 | 64 |
| Fan China Exchange Program | 116 |

AMS Graduate Student

TRAVEL GRANTS



Now providing support for doctoral student travel to the January Joint Mathematics Meetings or AMS Sectional Meetings

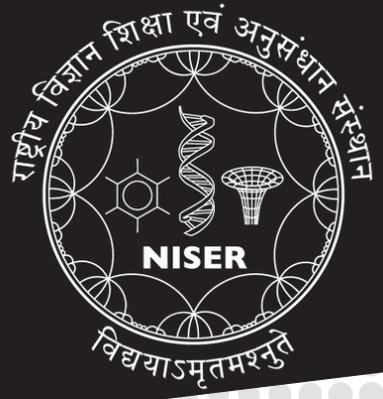
- Connect with fellow researchers
- Advance your career through job services
- Present your research
- Explore new mathematical areas
- Build your knowledge of professional and educational issues



Check program announcements, eligibility requirements, and learn more at:

www.ams.org/student-travel





Thank You

Please do reach out to us if you need any additional information or assistance.

Central Library

National Institute of Science Education and Research

Email: libniser@niser.ac.in/librarian@niser.ac.in

Contact No. 0674-2494171

Website: <https://www.niser.ac.in/library>

OPAC: <https://opac.niser.ac.in/>

Digital Repository: <http://idr.niser.ac.in:8080/jspui>

IRINS Faculty Profiles: <https://niser.irins.org/>



NISER



Library



Repository



Web OPAC



IRINS