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Monthly Bulletin of Publications:
Faculty, Scientists and Students of IISER Pune.
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BOOK CHAPTERS

Editor(s)	Kanesh, Lawqueen; MAITY, SOUMEN; MULUK, KOMAL; Saurabh, Saket
Title	Parameterized Complexity of Fair Feedback Vertex Set Problem
Book Title	Computer Science - Theory and Applications, 250-262.
Book Series	Lecture Notes in Computer Science, Vol. 12159,
Publisher	Springer
URI	https://link.springer.com/chapter/10.1007%2F978-3-030-50026-9_18
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4974
Date of Publication	2020-07

BIOLOGY

Author(s)	CHOWDHARY, SAYALI; MADAN, SOMYA; TOMER, DARSHIKA; MAVRAKIS, MANOS; RIKHY, RICHA
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Title	Mitochondrial morphology and activity regulate furrow ingression and contractile ring dynamics in Drosophila cellularization
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Citation	Molecular Biology of the Cell.
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Publisher	American Society for Cell Biology
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URI	https://doi.org/10.1091/mcb.E20-03-0177
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DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4977
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Date of Publication	2020-08
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Author(s)	DHAWANJEWAR, ABHILESH S.; ROY, ANKIT A.; MADHUSUDHAN, M.S.
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Title	A knowledge-based scoring function to assess quaternary associations of proteins
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Citation	Bioinformatics, 36(12), 3739-3748.
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Publisher	Oxford University Press
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URI	https://doi.org/10.1093/bioinformatics/btaa207
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DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4938
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Date of Publication	2020-06
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Author(s)	DUTTA, SOUMYAJIT; Bhadury, Punyasloke
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Title	Effect of arsenic on exopolysaccharide production in a diazotrophic cyanobacterium
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Citation	Journal of Applied Phycology.
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Publisher	Springer
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URI	https://doi.org/10.1007/s10811-020-02206-0
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DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4979
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Date of Publication	2020-07
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Author(s)	HARIKRISHNAN, KEERTHI; JOSHI, OMKAR; MADANGIRIKAR, SAILI; BALASUBRAMANIAN, NAGARAJ
Title	Cell Derived Matrix Fibulin-1 Associates With Epidermal Growth Factor Receptor to Inhibit Its Activation, Localization and Function in Lung Cancer Calu-1 Cells
Citation	Frontiers in Cell and Developmental Biology, 8.
Publisher	Frontiers Media S.A.
URI	https://doi.org/10.3389/fcell.2020.00522
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4952
Date of Publication	2020-07
 Author(s)	 KANADE, MANIL; CHAKRABORTY, SUKANYA; SHELKE, SANKET SATISH; PANANGHAT, GAYATHRI
Title	A Distinct Motif in a Prokaryotic Small Ras-Like GTPase Highlights Unifying Features of Walker B Motifs in P-Loop NTPases
Citation	Journal of Molecular Biology.
Publisher	Elsevier B.V.
URI	https://doi.org/10.1016/j.jmb.2020.07.024
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4992
Date of Publication	2020-08
 Author(s)	 KANADE, MANIL; SINGH, NINGTHOUJAM BIRJEET; LAGAD, SONAL; BARANWAL, JYOTI; PANANGHAT, GAYATHRI
Title	Dual specificity of a prokaryotic GTPase Activating Protein (GAP) to two small Ras-like GTPases in <i>Myxococcus xanthus</i>
Citation	The FEBS Journal.
Publisher	Wiley
URI	https://doi.org/10.1111/febs.15513
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4993
Date of Publication	2020-08
 Author(s)	 MAHAJAN, GAURANG; NADKARNI, SUHITA
Title	Local design principles at hippocampal synapses revealed by an energy-information trade-off
Citation	eNeuro.
Publisher	Society for Neuroscience
URI	https://doi.org/10.1523/ENEURO.0521-19.2020
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5001
Date of Publication	2020-08

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Author(s)	Mazumder, A.; MOHANTA, S. S. et al.
Title	Geographical variation in case fatality rate and doubling time during the COVID-19 pandemic
Citation	Epidemiology & Infection, 148.
Publisher	Cambridge University Press
URI	https://doi.org/10.1017/S0950268820001685
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4957
Date of Publication	2020-07
 Author(s)	 MISHRA, ABHISHEK; CHAKRABORTY, PARTHA PRATIM; DEY, SUTIRTH
Title	Dispersal evolution diminishes the negative density dependence in dispersal
Citation	Evolution.
Publisher	Wiley
URI	https://doi.org/10.1111/evo.14070
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4995
Date of Publication	2020-07
 Author(s)	 Roy, Suvam; BAPAT, NIRAJA V.; Derr, Julien; RAJAMANI, SUDHA; Sengupta, Supratim
Title	Emergence of ribozyme and tRNA-like structures from mineral-rich muddy pools on prebiotic earth
Citation	Journal of Theoretical Biology, 506.
Publisher	Elsevier B.V.
URI	https://doi.org/10.1016/j.jtbi.2020.110446
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4980
Date of Publication	2020-12
 Author(s)	 SHANBHAG, KARTHIK; MHETRE, AMOL; KHANDELWAL, NEHA; KAMAT, SIDDHESH S.
Title	The Lysophosphatidylserines-An Emerging Class of Signalling Lysophospholipids
Citation	The Journal of Membrane Biology.
Publisher	Springer
URI	https://doi.org/10.1007/s00232-020-00133-2
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4943
Date of Publication	2020-08

Author(s)	Sudasinghe, Hiranya; Pethiyagoda, Rohan; Ranasinghe, Ranasinghe Hettiarachchige Tharindu; Raghavan, Rajeev; DAHANUKAR, NEELESH; Meegaskumbura, Madhava
Title	A molecular phylogeny of the freshwater-fish genus Rasbora (Teleostei: Cyprinidae) in Sri Lanka reveals a remarkable diversification—And a cryptic species
Citation	Journal of Zoological Systematics and Evolutionary Research.
Publisher	Wiley
URI	https://doi.org/10.1111/jzs.12395
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4958
Date of Publication	2020-08
Author(s)	Zambon, Paola; Palani, Saravanan; JADHAV, SHEKHAR SANJAY; GAYATHRI, PANANGHAT; Balasubramanian, Mohan K.
Title	Genetic Suppression of Defective Profilin by Attenuated Myosin II Reveals a Potential Role for Myosin II in Actin Dynamics <i>in vivo</i> in fission yeast
Citation	Molecular Biology of the Cell.
Publisher	American Society for Cell Biology
URI	https://doi.org/10.1091/mbc.E20-04-0224
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4994
Date of Publication	2020-07

CHEMISTRY

Author(s)	BHAT, ZAHID MANZOOR; PANDIT, DEEPRAJ; Ardo, Shane; THIMMAPPA, RAVIKUMAR; KOTTAICHAMY, ALAGAR RAJA; DARGILY, NEETHU CHRISTUDAS; DEVENDRACHARI, MRUTHUNJAYACHARI CHATTANAHALI; THOTIYL, MUSTHAFAI OTTAKAM
Title	An Electrochemical Neutralization Cell for Spontaneous Water Desalination
Citation	Joule, 4(8), 1730-1742.
Publisher	Elsevier Inc.
URI	https://doi.org/10.1016/j.joule.2020.07.001
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4987
Date of Publication	2020-08

Author(s)	BHINGARDEVE, PRAMOD; Madhanagopal, Bharath Raj; Naick, Hemanth; JAIN, PRASHANT; Manoharan, Muthiah; GANESH, KRISHNA
Title	Receptor-Specific Delivery of Peptide Nucleic Acids Conjugated to Three Sequentially Linked <i>N</i> -Acetyl Galactosamine Moieties into Hepatocytes
Citation	Journal of Organic Chemistry, 85(14), 8812-8824.
Publisher	American Chemical Society
URI	https://doi.org/10.1021/acs.joc.0c00601
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4948
Date of Publication	2020-06
 Author(s)	 CHAKRABORTY, RAYAN; NAG, ANGSHUMAN
Title	Correlation of Dielectric Confinement and Excitonic Binding Energy in 2D Layered Hybrid Perovskites Using Temperature Dependent Photoluminescence
Citation	Journal of Physical Chemistry C, 124(29), 16177-16185.
Publisher	American Chemical Society
URI	https://doi.org/10.1021/acs.jpcc.0c04284
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4981
Date of Publication	2020-07
 Author(s)	 DUTTA, SUBHAJIT; SAMANTA, PARTHA; JOARDER, BIPLAB; LET, SUMANTA; MAHATO, DEBANJAN; Babarao, Ravichandar; GHOSH, SUJIT K.
Title	A Water Stable Cationic MOF with Hydrophobic Pore Surface as Efficient Scavenger of Oxo-anion Pollutants from Water
Citation	ACS Applied Materials & Interfaces.
Publisher	American Chemical Society
URI	https://doi.org/10.1021/acsami.0c13563
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4998
Date of Publication	2020-08
 Author(s)	 HALDAR, SATTWICK; KALEESWARAN, DHANANJAYAN; RASE, DEEPAK; ROY, KINGSHUK; OGALE, SATISHCHANDRA; VAIDHYANATHAN, RAMANATHAN
Title	Tuning the electronic energy level of covalent organic frameworks for crafting high-rate Na-ion battery anode
Citation	Nanoscale Horizons, 5(8), 1264-1273.
Publisher	Royal Society of Chemistry
URI	https://doi.org/10.1039/DONH00187B
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4954
Date of Publication	2020-08

Author(s)	MOLICK, SAMRAJ; FAJAL, SAHEL; SAURABH, SATYAM; MAHATO, DEBANJAN; GHOSH, SUJIT K.
Title	Nanotrap Grafted Anion Exchangeable Hybrid Materials for Efficient Removal of Toxic Oxoanions from Water
Citation	ACS Central Science.
Publisher	American Chemical Society
URI	https://doi.org/10.1021/acscentsci.0c00533
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4999
Date of Publication	2020-08

Author(s)	Wakchaure, Vivek C.; KOTTAICHAMY, ALAGAR R.; Nidhankar, Aakash D.; Ranjeesh, Kayaramkodath C.; Nazrulla, Mohammed A.; THOTIYL, MUSTHAFA OTTAKAM; Babu, Sukumaran S
Title	Hexaaminobenzene Derived Two-Dimensional Polymer Supercapacitor with High Specific Capacitance and Energy Density
Citation	ACS Applied Energy Materials, 3(7), 6352-6359.
Publisher	American Chemical Society
URI	https://doi.org/10.1021/acsaem.0c00569
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4996
Date of Publication	2020-07

EARTH AND CLIMATE SCIENCE

Author(s)	SAHA, GOKUL KUMAR; Prakasam, K.S.; RAI, SHYAM S.
Title	Diversity in the peninsular Indian lithosphere revealed from ambient noise and earthquake tomography
Citation	Physics of the Earth and Planetary Interiors, 306.
Publisher	Elsevier B.V.
URI	https://doi.org/10.1016/j.pepi.2020.106523
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4988
Date of Publication	2020-09

MATHEMATICS

Author(s)	BHAKTA, MOUSOMI; BISWAS, ANUP; GANGULY, DEBDIP; Montoro, Luigi
Title	Integral representation of solutions using Green function for fractional Hardy equations
Citation	Journal of Differential Equations, 269(7), 5573-5594.
Publisher	Elsevier B.V.
URI	https://doi.org/10.1016/j.jde.2020.04.022
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4937
Date of Publication	2020-09
Author(s)	Ghosh, Mrinal K.; Kumar, K. Suresh; Pal, Chandan; PRADHAN, SOMNATH
Title	Nonzero-sum risk-sensitive stochastic differential games with discounted costs
Citation	Stochastic Analysis and Applications.
Publisher	Taylor & Francis
URI	https://doi.org/10.1080/07362994.2020.1796707
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4939
Date of Publication	2020-07

PHYSICS

Author(s)	ANANTH, SUDARSHAN; PANDEY, CHETAN; PANT, SAURABH
Title	Higher spins, quadratic forms and amplitudes
Citation	Journal of High Energy Physics, 2020(7).
Publisher	Springer
URI	https://doi.org/10.1007/JHEP07(2020)100
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4950
Date of Publication	2020-07
Author(s)	CHOUGALE, YASHWANT; TALUKDAR, JUGAL; Ramos, Tomás; NATH, REJISH
Title	Dynamics of Rydberg excitations and quantum correlations in an atomic array coupled to a photonic crystal waveguide
Citation	Physical Review A, 102(2).
Publisher	American Physical Society
URL	https://doi.org/10.1103/PhysRevA.102.022816
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4990
Date of Publication	2020-08

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Author(s)	CMS Collaboration; Sirunyan, A. M.; DUBE, S.; HEGDE, V.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for charged Higgs bosons decaying into a top and a bottom quark in the all-jet final state of pp collisions at $\sqrt{s} = 13$ TeV
Citation	Journal of High Energy Physics, 2020(7).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP07(2020)126
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4951
Date of Publication	2020-07
Author(s)	CMS Collaboration; Sirunyan, A. M.; DUBE, S.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Measurement of quark- and gluon-like jet fractions using jet charge in PbPb and pp collisions at 5.02 TeV
Citation	Journal of High Energy Physics, 2020(7).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP07(2020)115
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4940
Date of Publication	2020-07
Author(s)	CMS Collaboration; Sirunyan, A. M.; DUBE, S.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Measurement of the cross section for $t\bar{t}$ production with additional jets and b jets in pp collisions at $\sqrt{s} = 13$ TeV
Citation	Journal of High Energy Physics, 2020(7).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP07(2020)125
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4942
Date of Publication	2020-07
Author(s)	CMS Collaboration; Sirunyan, A. M.; DUBE, S.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Measurements of $t^-\bar{t}H$ Production and the CP Structure of the Yukawa Interaction between the Higgs Boson and Top Quark in the Diphoton Decay Channel
Citation	Physical Review Letters, 125(6).
Publisher	American Physical Society
URL	https://doi.org/10.1103/PhysRevLett.125.061801
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4989
Date of Publication	2020-08

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Author(s)	CMS Collaboration; Sirunyan, A. M.; DUBE, S.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	The production of isolated photons in PbPb and pp collisions at $\sqrt{s}_{\text{NN}} = 5.02 \text{ TeV}$
Citation	Journal of High Energy Physics, 2020(7).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP07(2020)116
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4956
Date of Publication	2020-07
Author(s)	CMS Collaboration; Sirunyan, A. M.; DUBE, S.; KANSAL, B.; KAPOOR, A.; KOTHEKAR, K.; PANDEY, S.; RANE, A.; RASTOGI, A.; SHARMA, S. et al.
Title	Search for resonant pair production of Higgs bosons in the bbZZ channel in proton-proton collisions at $\sqrt{s}=13 \text{ TeV}$
Citation	Physical Review D, 102(3).
Publisher	American Physical Society
URL	https://doi.org/10.1103/PhysRevD.102.032003
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/5000
Date of Publication	2020-08
Author(s)	GOKUL, M. A.; NARAYANAN, VRINDA; RAHMAN, ATIKUR
Title	Modulating flow near substrate surface to grow clean and large-area monolayer MoS ₂
Citation	Nanotechnology, 31(41).
Publisher	IOP Publishing
URL	https://doi.org/10.1088/1361-6528/ab9ed6
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4978
Date of Publication	2020-07
Author(s)	HALDAR, SATWICK; KALEESWARAN, DHANANJAYAN; RASE, DEEPAK; ROY, KINGSHUK; OGALE, SATISHCHANDRA; VAIDHYANATHAN, RAMANATHAN
Title	Tuning the electronic energy level of covalent organic frameworks for crafting high-rate Na-ion battery anode
Citation	Nanoscale Horizons, 5(8), 1264-1273.
Publisher	Royal Society of Chemistry
URI	https://doi.org/10.1039/DONH00187B
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4954
Date of Publication	2020-08

Author(s)	Maiti, Tanmay; Agarwal, Pooja; Purkait, Suvankar; SREEJITH, G. J.; Das, Sourin; Biasiol, Giorgio; Sorba, Lucia; Karmakar, Biswajit
Title	Magnetic-Field-Dependent Equilibration of Fractional Quantum Hall Edge Modes
Citation	Physical Review Letters, 125(7).
Publisher	American Physical Society
URI	https://doi.org/10.1103/PhysRevLett.125.076802
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4953
Date of Publication	2020-08
Author(s)	McCormack, Gary; NATH, REJISH; Li, Weibin
Title	Dynamical excitation of maxon and roton modes in a Rydberg-dressed Bose-Einstein condensate
Citation	Physical Review A, 102(2).
Publisher	American Physical Society
URI	https://doi.org/10.1103/PhysRevA.102.023319
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4991
Date of Publication	2020-08
Author(s)	MUKHI, SUNIL; PODDAR, RAHUL; SINGH, PALASH
Title	Contour integrals and the modular S-matrix
Citation	Journal of High Energy Physics, 2020(7).
Publisher	Springer
URL	https://doi.org/10.1007/JHEP07(2020)045
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4941
Date of Publication	2020-07
Author(s)	SADEKAR, ONKAR; Basu, Urna
Title	Zero-current nonequilibrium state in symmetric exclusion process with dichotomous stochastic resetting
Citation	Journal of Statistical Mechanics Theory and Experiment, 2020(07).
Publisher	IOP Publishing
URL	https://doi.org/10.1088/1742-5468/ab9e5e
DR URI	http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4955
Date of Publication	2020-07

Author(s) SHWETA, A.; ATHREYA, RAMANA; SEKHAR, SRIKRISHNA
Title Reenergization of Radio Halo Electrons in the Merging Galaxy Cluster A2163
Citation Astrophysical Journal, 897(2).
Publisher IOP Publishing
URL <https://doi.org/10.3847/1538-4357/ab962c>
DR URI <http://dr.iiserpune.ac.in:8080/xmlui/handle/123456789/4949>
Date of Publication 2020-07

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