

Books published

- 1 Immersed Boundary Methods – Development and Applications, S. Roy, A. De (AE), E. Balaras, Springer Singapore, 2020, ISBN: 978-981-15-3940-4.
- 2 Innovations in Sustainable Energy and Cleaner Environment, A. K. Gupta, A. De (AE), S. K. Aggarwal, A. Kushari (AE), A. K. Runchal, Springer Singapore, 2019, ISBN: 978-981-13-9012-8.
- 3 DNS of Wall-Bounded Turbulent Flows' and co-edited the book 'High Performance Computing of Big Data for Turbulence and Combustion, Tapan K. Sengupta (co-author) (AE), Springer.
- 4 Chemical and Synthetic Biology Approaches to Understand Cellular Functions - Part A, Arun. K Shukla (Guest Editor) (BSBE), Elsevier, 2019, ISBN: 978-0-12-818117-1.
- 5 Chemical and Synthetic Biology Approaches to Understand Cellular Functions - Part B, Arun. K Shukla (Guest Editor) (BSBE), Elsevier, 2019, ISBN: 978-0-12-818119-5.
- 6 G Protein-Coupled Receptors, Part B, Arun. K Shukla (Guest Editor) (BSBE), Elsevier, 2019, ISBN: 978-0-12-815107-5.
- 7 Chemical and Synthetic Biology Approaches to Understand Cellular Functions - Part C, Arun. K Shukla (Guest Editor) (BSBE), Elsevier, 2020, ISBN: 978-0-12-819128-6.
- 8 GPCR Signaling in Cancer, Arun. K Shukla (Guest Editor) (BSBE), Elsevier, 2020, ISBN:978-0-12-820230-2.
- 9 Cyber Security in India: Education, Research and Training, Manindra Agrawal (CSE), Sandeep Kumar Shukla (CSE), Springer-Singapore, 2020, ISBN: 978-981-15-1674-0.
- 10 Economic and Financial Integration in South Asia A Contemporary Perspective, Sanjay Sehgal, Wasim Ahmad (ESc), Piyush Pandey, Sakshi Saini, Routledge-London, 2021, ISBN: 978-0-8153-8013-9 (Hardbook) ISBN: 978-1-003-09756-3 (eBook).
- 11 Advances in Energy and Power Systems, Springer Notes in Electrical Engineering, S N Singh (EE), Springer Nature Singapore Pte Ltd,2018, ISBN: 978-981-13-0662-4.
- 12 Advances in System Optimization and Control, Springer Notes in Electrical Engineering, S N Singh (EE), Springer Nature Singapore Pte Ltd, 2018, ISBN: 978-981-13-0665-5.

- 13 ICRRM 2019-System reliability, Quality Control, Safety, Maintenance and Management, S N Singh (EE), Springer Nature Singapore Pte Ltd, 2020, ISBN: 978-981-13-8506-3.
- 14 Engineering Electromagnetics, 8/e (SIE), 2nd Reprint, W H Hayt, J A Buck, M J Akhtar (EE), McGraw Hill Education (India) Private Ltd., 2019, ISBN:13-978-93-392-0327-6.
- 15 Mathematical aspects of signal processing, P. Sircar (EE), Cambridge University Press-, 2016, ISBN: 9781316 796832.
- 16 Industry Standard FDSOI Compact Model BSIM-IMG for IC Design, Chenming Hu, Sourabh Khandelwal, Yogesh S Chauhan (EE), Thomas Mckay, Josef Watts, Juan P Duarte. Pragya Kushwaha, and Harshit Agarwal, ELSEVIER, 2019, ISBN: 9780081024010.
- 17 Mathematical aspects of signal processing, P. Sircar (EE), Cambridge University Press, 2016, ISBN: 9781316 796832.
- 18 Intelligent Condition Based Monitoring: For Turbines, Compressors, and other Rotating Machines, Nishchal K. Verma (EE), Al Salour, Studies in Systems, Decision and Control, Springer, 2020, ISBN: 978-981-15-0512-6.
- 19 Computing Algorithms with Applications in Engineering, Proceedings of ICCAEEE 2019, Nishchal K. Verma (EE), Vinod Kumar Giri, Raj Kumar Patel, Vijay Pratap Singh, Advances in Intelligent Systems, Springer, 2020, ISBN: 978-981-15-2369-4.
- 20 Computational Intelligence: Theories, Applications and Future Directions-Volume I (ICCI-2017), Nishchal K. Verma (EE), A. K. Ghosh (AE), Springer, 2019, ISBN: 978-981-13-1131-4.
- 21 Computational Intelligence: Theories, Applications and Future Directions-Volume II (ICCI-2017), Nishchal K. Verma (EE), A. K. Ghosh (AE), Springer, 2019, ISBN: ISBN 978-981-13-1134-5.
- 22 Naval, Prashant Bagad (HSS), Rohan Prakashan-Pune, India, 2020 Forthcoming.
- 23 Regulatory Framework for Long-term Demand Forecasting and Power Procurement Planning, Anoop Singh (IME), Manvendra Pratap, Abhishek Das, Piyush, A Sharma, Kamal K Gupta, Centre for Energy Regulation, IIT Kanpur-Kanpur, 2019, ISBN: 978-93-5321-969-7.

- 24 Working Paper Series: Lecture Notes in Management Science: Vol 3”, A collection of 150 working papers, R. R. K. Sharma (IME), EXCEL PUBLISHERS NEW DELHI, 2020, ISBN: 978-93-89947-08-3.
- 25 Working Paper Series: Lecture Notes in Management Science: Vol 1”, A collection of 148 working papers, R. R. K. Sharma (IME), EXCEL PUBLISHERS NEW DELHI, 2019, ISBN:9-789-388-237116.
- 26 Piezoelectric Energy Harvesting in Biomechanical Applications, Ritamay Bhunia, Bushara Fatma, Shashikant Gupta, Prateek Prajapati, Raju Gupta and Ashish Garg (MSE), Elsevier Series on Energy Harvesting, Invited, 2020.
- 27 Architecting Robust Co-Design of Materials, Products, and Manufacturing Processes, Nellippallil, A. B. Allen, J. K. Gautham, B. Singh, A. K. Mistree, Amarendra Kumar Singh (MSE), Springer, 2020.
- 28 High Entropy Alloys in Bulk Form: Processing Challenges and Possible Remedies in HIGH ENTROPY ALLOYS: Innovations, Advances and Applications, Reshma Sonkusare, Surekha Yadav, N P Gurao (MSE) and Krishanu Biswas (MSE), Springer-New York, 2019, ISBN: In press
- 29 Infiltration Technique to Fabricate Nano-structured Electrodes for High-Performance Solid Oxide Fuel Cells, Chemical Solution Synthesis for Materials Design and Thin Film Device Applications, Soumen Das and Sandip Dhara, Shobit Omar (MSE), Elsevier, 2020.
- 30 Rough Sets. International Joint Conference, IJCRS 2019 Debrecen, Hungary, June 17-21, 2019, Proceedings. Lecture Notes in Artificial Intelligence (LNAI) 11499, Tamás Mihálydeák, Fan Min, Guoyin Wang, Mohua Banerjee (MTH&S), Ivo Düntsch, Zbigniew Suraj, Davide Ciucci, Springer Nature -Switzerland AG,2019, ISBN: 978-3-030-22815-6.
- 31 Fundamentals of Convective Heat Transfer, Biswas Gautam (ME), Dalal Amaresh and Dhir Vijay K., CRC Press-Boca Raton, London, New York,2019, ISBN: 978-1-138-10329-0.

- 32 Simulations and Optical Diagnostics for Internal Combustion Engines Current Status and Way Forward, Akhilendra Pratap Singh, Pravesh Chandra Shukla, Joonsik Hwang, Avinash Kumar Agarwal (ME), Springer-Singapore, 2019, ISBN: 978-981-15-0335-1.
- 33 Advanced Combustion Techniques and Engine Technologies for the Automotive Sector, Akhilendra Pratap Singh, Nikhil Sharma, Ramesh Agarwal, Avinash Kumar Agarwal (ME), Springer-Singapore, 2019, ISBN: 978-981-15-0368-9.
- 34 Alternative Fuels and Their Utilization Strategies in Internal Combustion Engines, Akhilendra Pratap Singh, Yogesh C. Sharma, Nirendra N. Mustafi, Avinash Kumar Agarwal (ME), Springer-Singapore, 2019, ISBN: 978-981-15-0417-4.
- 35 Solar Energy Systems, Challenges, and Opportunities, Himanshu Tyagi, Prodyut Chakraborty, Satvasheel Powar, Avinash Kumar Agarwal (ME), Springer-Singapore, 2019, ISBN: 978-981-15-0675-8.
- 36 Measurement, Analysis and Remediation of Environmental Pollutants, Tarun Gupta (CE), Swatantra Pratap Singh, Prashant Rajput, Avinash Kumar Agarwal (ME), Springer-Singapore, 2019, ISBN: 978-981-15-0540-9.
- 37 Paper Microfluidics Theory and Applications, Shantanu Bhattacharya (ME), Sanjay Kumar, Avinash Kumar Agarwal (ME), Springer-Singapore, 2019, ISBN: 978-981-15-0489-1.
- 38 Design and Development of Heavy-Duty Diesel Engines, P. A. Lakshminarayanan, Avinash Kumar Agarwal (ME), Springer-Singapore, 2019, ISBN: 978-981-15-0970-4.
- 39 Automotive Tribology, Jitender Katiyar, Vinay Kumar Patel, Shantanu Bhattacharya (ME), Springer-Singapore, 2019, ISBN: 978-981-15-0433-4.
- 40 Theory for the FCC-ee: Report on the 11th FCC-ee Workshop Theory and Experiments; Monographs, Joydeep Chakraborty (PHY), CERN Yellow Report-CERN, Geneva Switzerland, 2020, ISSN 2519-8076 (Online), ISSN 2519-8068 (Print).

- 41 Energy Transfers in Fluid Flows: Multiscale and Spectral Perspectives, Mahendra K. Verma (PHY), Cambridge University Press.

Fellowships

- 1 Dr. Ashoke De (AE) has been elected as a Fellow of West Bengal Academy of Science & Technology (WAST) for the year 2019.
- 2 Professor Bushra Ateeq (BSBE) has been elected as Senior Fellow by Wellcome Trust/DBT India Alliance.
- 3 Drs. Santosh Kr. Misra, Nitin Mohan & Dibyendu Kr. Das, (BSBE), have been declared recipients of the prestigious Ramalingaswami Re-entry Fellowship by Department of Biotechnology (DBT) for the year 2018-19.
- 4 Professor Rajesh Sathiyamoorthy (CE) has received Talented Young Scientist Fellowship by Ministry of Science and Technology, China.
- 5 Professor Tarun Gupta (CE) has been elected as ISEES FELLOW International Society for Energy, Environment and Sustainability.
- 6 Professor S. P. Rath (CHM) has been elected as a fellow of Indian Academy of Sciences, Bangalore.
- 7 Dr. Ritika Gautam (CHM) has been chosen for DST-INSPIRE Faculty Fellowship for 5 years by Department of Science and Technology.
- 8 Dr. Nagma Parveen (CHM) has been chosen for DST-INSPIRE Faculty by Department of Science and Technology.
- 9 Dr. Wasim Ahmad (Ecos) has been chosen for Subir Chowdhury Post-doctoral Fellowship on Quality and Economics, 2019-2020 by London School of Economics and Political Science (LSE), London, UK.
- 10 Professor Animesh Biswas (EE) (presently on deputation as Director), National Institute of Technology, Rourkela) has been elected as a Fellow of West Bengal Academy of Science & Technology (WAST) for the year 2019.
- 11 Professor Debajyoti Paul (ES) has renewed Research Fellowship by Alexander von Humboldt Foundation.

- 12 Professor Braj Bhushan (HSS) has been elected as Fellow of Shastri Mobility Programme by Shastri Indo-Canadian Institute.
- 13 Dr. Ritwij Bhowmik (HSS) has received “2020-2021 Fulbright-Nehru Academic and Professional Excellence Fellowships” by The United States – India Educational Foundation (USIEF).
- 14 Professor B. V. Rathish Kumar has been elected as ISMMACS Fellow by ISMMACS.
- 15 Professor Avinash Kumar Agarwal (ME) has been selected as the Fellow of the American Association for the Advancement of Science (AAAS) in the Section on Engineering.
- 16 Professor Sameer Khandekar (ME) has been elected as Fellow of Indian National Academy of Engineering FNAE, by Indian National Academy of Engineering.
- 17 Professor Avinash Kumar Agarwal (ME) has been selected as Sir J. C. Bose fellow Science and Engineering Research Board, GoI.
- 18 Professor Shantanu Bhattacharya (ME) has been elected as Fellow of Institution of Electronics and Telecommunication Engineering.
- 19 Dr. Krishanu Biswas (MSE) has been elected as Fellow, West Bengal Academy of Science and Technology (WBST) 2019.
- 20 Professor Mahendra K. Verma (PHY) has been elected as a fellow of Indian Academy of Sciences.
- 21 Professor Mahendra K. Verma (PHY) has been selected as an INSA fellow this year (2019).
- 22 Dr. Arjun Bagchi (PHY) has been awarded with Swarna Jayanti Fellowship from Department of Science and Technology, Government of India for the year 2018-19.
- 23 Dr. Joydeep Chakraborty (PHY) has received P.K. Kelkar Research fellowship by IIT Kanpur.
- 24 Dr. Arjun Bagchi (PHY) has received P.K. Kelkar Research fellowship by IIT Kanpur.

Awards and Honors

- 1 Dr. Arun Kumar Shukla (BSBE) has received the Young Scientist Award by Prof. H. S. Srivastava Foundation given for outstanding contributions in the emerging areas of Science and Technology.

- 2 Dr. Bushra Ateeq (BSBE) has been selected for the Sayeeda Begum Women Scientist Prize 2019.
- 3 Dr. Arun Shukla (BSBE) has been selected for the Young Chemical Biologist award 2019 by the International Chemical Biology Society (USA).
- 4 Dr. Jayandharan Rao (BSBE) has been awarded the prestigious 2019-Global Hemophilia ASPIRE [Advancing Science through Pfizer Investigator Research Exchange] research award instituted by Pfizer Inc. USA.
- 5 Dr. Arun K. Shukla (BSBE) has been selected for the Sun Pharma Research Award, for the year 2019 by SunPharma Science Foundation.
- 6 Dr. Bushra Ateeq (BSBE) has been selected for the CSIR-CDRI Award-2020 for the excellence in drug research under Life Sciences category.
- 7 Dr. Bushra Ateeq (BSBE) has been selected for the Wellcome Trust/DBT India Alliance, Senior Fellowship Award by Wellcome Trust/DBT India Alliance.
- 8 Dr. Bushra Ateeq (BSBE) has been selected for CNR Rao Faculty Award for the Excellence in Research 2019 by IIT Kanpur.
- 9 Professor Jayant K. Singh (CHE) has been chosen for SERB - Science and Technology Award for Research (SERB STAR) for the year 2019.
- 10 Professor Animangsu Ghatak (CHE) has been chosen for SERB - Science and Technology Award for Research (SERB STAR) for the year 2019.
- 11 Professor Jitendra K Bera (CHM) has been selected for Silver Medal by Chemical Research Society of India (CRSI) in recognition of his excellent contributions to research in chemistry.
- 12 Dr. Basker Sundararaju (CHM) has been chosen for Merck Young Scientist Award by Merck.
- 13 Professor D. H. Dethe (CHM) has been selected for the Bronze Medal of Chemical Research Society of India (CRSI) in recognition of his excellent contributions to research in chemistry
- 14 Dr. Dharmaraja Allimuthu (CHM) has been chosen for Har-Gobind Khorana Innovative Young Biotechnologist Award

- (IYBA) by Department of Biotechnology (DBT)-India for the year 2019.
- 15 Professor Sandeep Verma (CHM) (currently on deputation as Secretary, SERB) has been selected for the Shri S.R. Thakore Memorial Lecture (2020)
 - 16 Professor J. N. Moorthy (CHM) (currently on deputation as Director of IISER Thiruvananthapuram) has been awarded the SASTRA-CNR Rao Award for excellence in Chemistry and Materials Science for the year 2020.
 - 17 Professor Sandeep Verma (CHM) (currently on deputation as Secretary, SERB) has been selected for the Distinguished Alumnus Award of Banaras Hindu University.
 - 18 Professor Vinod Singh (CHM) has been selected for Prof. Asima Chatterjee Life Time Achievement Award Lecture-2020 by Asima Chatterjee Foundation.
 - 19 Professor Tarun Gupta (CE) has been chosen for the V. N. M. M. Award-2017 of IIT Roorkee.
 - 20 Professor Tarun Gupta (CE) has been selected for N C Nigam Chair Professor by IIT Kanpur.
 - 21 Professor Tarun Gupta (CE) has been awarded Gold Medal for the innovation “Electro-Surgical Cautery” by International Innovation Fair (IIIF) 2019 in NSIC Hyderabad.
 - 22 Professor Sudhir Kumar Jain (CE) has been awarded Padma Shri.
 - 23 Dr. Gaurav Tiwari (CE) has been awarded IGS-Prof. Leonard’s Annual Award for the year 2018.
 - 24 Dr. Sandeep Anand (EE) has been selected for "NASI-Young Scientist Platinum Jubilee Award - 2019".
 - 25 Dr. Ketan Rajawat (EE) has been selected for the INAE Young Engineer Award 2019.
 - 26 Professor Rajiv Sinha (ES) has been selected for Lalit Mohan Kapoor Chair by IIT Kanpur.
 - 27 Professor Indra Sen (ES) has received ATAL New India Challenges by NITI Aayog.
 - 28 Professor Debajyoti Paul (ES) has received Excellence-in-Teaching award by IIT Kanpur.

- 29 Professor Braj Bhushan (HSS) has been selected for Platinum Jubilee Lecture at 107th Indian Science Congress 2020.
- 30 Dr. Pradip Swarnakar has been selected for Distinguished Visiting Scholar by University of Technology Sydney, Australia.
- 31 Professor E C Subbarao, the First regular head of the department of Metallurgical Engineering (MSE), IIT Kanpur is conferred the LIFE TIME ACHIEVEMENT AWARD by the National Academy of Engineering, India.
- 32 Professor Dipak Mazumdar (MSE) has been awarded National Metallurgist Award 2019 by Ministry of Steel, Govt. of India.
- 33 Professor K. Balani (MSE) has been awarded Nanomaterials and Energy Prize for the year by Institution of Civil Engineers, London, UK.
- 34 Professor K. Biswas (MSE) has been selected for Ranjit Singh chair -2019 by IIT Kanpur.
- 35 Professor Kallol Mandal (MSE) has been selected to receive “Excellence in Teaching Award” during Teacher's Day Function 2019 by IIT Kanpur.
- 36 Professor Subhra Shankar Dhar (MTH&S) has received the prestigious C. R. Rao National Award given by the Ministry of Statistics and Programme Implementations, Government of India.
- 37 Professor Shantanu Bhattacharya (ME) has been selected to receive the Er. M. P. Baya National Award-2019 by Institution of Engineering, India.
- 38 Professor Shantanu Bhattacharya (ME) has been selected for the NASI Reliance Platinum Jubilee Award-2019.
- 39 Dr. Manjesh Kumar Singh (ME) has been awarded the first prize for his contributed oral talk at recently held IndiaTrib 2019 at IISc Bangalore, jointly organized by the Tribological Society of India and IISc Bangalore.
- 40 Professor P. Venkitanarayanan (ME) has been selected for F. Zandman Award by Society for Experimental Mechanics, USA.
- 41 Professor P. Venkitanarayanan (ME) has been selected to receive Excellence in teaching award by IIT Kanpur.

- 42 Dr. Saurabh Mani Tripathi (PHY) has been awarded the IPA S. N. Seshadri Memorial Instrumentation Award in Physical Sciences – 2018 conferred by the Indian Physics Association.
- 43 Dr. Joydeep Chakraborty (PHY) has been selected for Buti Foundation Award for Excellence in Theoretical Physics, Astrophysics and Biophysics for 2018.
- 44 Dr. Anjani Kumar Tiwari (PHY), INSPIRE faculty fellow, has been awarded the prestigious INSA Young Scientist Medal 2019.
- 45 Professor Harish Chandra Verma (PHY) has been awarded Padma Shri.

Appointments

- 1 Professor D. P. Misra (AE) is appointed the Director of National Institute of Technical Teachers' Training and Research, Kolkata.
- 2 Dr. Arun Kumar Shukla (BSBE) has been selected for the Associateship of the Indian Academy of Sciences, Bangalore.
- 3 Dr. Jayandharan G. Rao (BSBE) has been included in the National Gene therapy Advisory and evaluation committee [GTAEC]- an apex committee of the Department of Health Research, Ministry of Health and Welfare, Government of India, that will facilitate gene therapy product development and clinical trials in the country.
- 4 Professor Yogesh Joshi (CHE) has been appointed to the Editorial Advisory Board of the AIP journal: Physics of Fluids.
- 5 Professor Sandeep Verma (CHM) is appointed the Secretary at Science and Engineering Research Board, New Delhi.
- 6 Professor J. N. Moorthy (CHM) is appointed the Director, IISER Thiruvananthapuram.
- 7 Professor Vinod Kumar Singh (CHM) has been elected as the President of the Chemical Research Society of India for next three years (2020-2023).
- 8 Dr. Purushottam Kar (CSE) is appointed as a Consultant at Microsoft Research India Ltd., Bengaluru.

- 9 Professor Malay Banerjee (MTH&S), has been invited to become an Associate Editor of the International Journal of Bifurcation and Chaos (IJBC), for a period of two years.
- 10 Professor Kamal Kar (ME and MSP) has been invited to join as the Editor-in-chief for a major reference book "Polymers and Polymeric Composites: A Reference Series having 20 volumes" by the Springer International Publishing AG.
- 11 Dr. Joydeep Chakraborty (PHY) has been recently selected to join Indian National Young Academy of Science (INYAS) for a period of five years with effect from January 2020.
- 12 Dr. Subramaniam Anantha Ramakrishna (PHY) is appointed the Director at Council of Scientific and Industrial Research-Central Scientific Instruments Organization, Chandigarh (CSIR-CSIO).

Editorships/Membership

- 1 Dr. Arun Shukla (BSBE) has been invited to join the Editorial Advisor Board of ACS Pharmacology & Translational Science.
- 2 Dr. Arun Shukla (BSBE) has been invited to join the Editorial Board of British Journal of Pharmacology.
- 3 Dr. Bushra Ateeq (BSBE) has been invited to join as Co-Editor-in-Chief of Translational Oncology, Elsevier.
- 4 Dr. Santosh Kumar Misra (BSBE) has been invited to join as Frontiers in Pharmacology: Xenobiotic Exposure and Predictive Toxicology, Frontiers.
- 5 Professor S.N. Tripathi (CE) has been invited to join the Editorial Advisory Board of Environmental Science & Technology Letters, American Chemical Society.
- 6 Professor Nihar Ranjan Patra (CE) became a member of Indian Geotechnical Journal, a Springer publication.
- 7 Dr. Raju Gupta (CHE) has been invited to join as an Editorial Board member of Scientific Reports, a Nature Research journal.
- 8 Professor Jayant K. Singh (CHE) has been invited to join the Editorial Board of Fluid Phase Equilibria.
- 9 Dr. Basker Sundararaju (CHM) became the Early Career advisory board member of ACS Catalysis, American Chemical Society.

- 10 Dr. Basker Sundararaju (CHM) has been invited to join as International advisory board member INEOS open access journal, Russian chemical society.
- 11 Dr. Basker Sundararaju (CHM) has joined as an Associate Editor of Journal of Heterocyclic Chemistry, Wiley publication.
- 12 Dr. Ritika Gautam (CHM) has joined as Review Editor of Inorganic Chemistry (specialty section of Frontiers in Chemistry Frontiers Media SA is a publisher of peer-reviewed open access scientific journals).
- 13 Dr. D.L.V.K. Prasad (CHM) has been invited to join as Member of Editorial Board Journal of Innovative Materials in Extreme Conditions, Serbian Society for Innovative Materials in Extreme Conditions, Belgrade University.
- 14 Professor Sandeep Verma (CHM) (currently on deputation as Secretary SERB), has been invited to become a Member, Governing Board, Indo-US Science and Technology Forum (IUSSTF), New Delhi.
- 15 Professor Debabrata Goswami (CHM) has been invited to join the Editorial Board of Science Advances as an Associate Editor.
- 16 Professor Sandeep Verma (CHM) (currently on deputation as Secretary SERB), has been invited to join as Associate Editor of Chemical Communications, RSC, UK.
- 17 Professor Sandeep Verma (CHM) (currently on deputation as Secretary SERB), has been invited to join as Member, Editorial Advisory Board of ChemBioChem, Wiley, Germany.
- 18 Professor Amalendu Chandra (CHM) has been invited to join as a Member, Editorial Advisory Board of Journal of Molecular Liquids, Elsevier.
- 19 Professor Vinod K Singh (CHM) has been the Editor of Tetrahedron Lett. since 2014, Elsevier.
- 20 Professor Vinod K Singh (CHM) has been invited to be the Member, Editorial Advisory Board of J. Org. Chem., ACS.
- 21 Dr. Kumar Vaibhav Srivastava (EE), has been invited to join the Editorial Board of Wiley Microwave and Optical Technology Letters (MOTL), a very prestigious journal in the area of Microwave and Optical Technology.

- 22 Professor Debajyoti Paul (ES) has been invited to be the member of Chemical Geology, Elsevier.
- 23 Professor Rajiv Sinha (ES) has joined as a Member of Editorial Board of Earth Surface Processes & Landforms, Wiley Interscience.
- 24 Professor Rajiv Sinha (ES) has joined as a Member of Editorial Board of Current Science, Indian Academy of Sciences, Bangalore.
- 25 Professor Ravi Priya (HSS) has been invited to serve as a member of the Indigenous Psychology Task Force of the Division 32, that is, Society for Humanistic Psychology of American Psychological Association.
- 26 Professor Sameer Chavan (Math) has joined as an Associate Editor of Indian Journal of Pure and Applied Mathematics, Springer.
- 27 Professor Avinash K Agarwal (ME) has been invited to join as Associate Principal Editor of FUEL, Elsevier.
- 28 Professor P. Venkitanarayanan (ME) has been invited to join as a Member of Editorial Board International Journal of Adhesion & Adhesives, Elsevier.
- 29 Professor P. Venkitanarayanan (ME) has been invited to join as a Member of International Advisory Board of Experimental Mechanics.
- 30 Professor Shantanu Bhattacharya (ME) has been invited to join as an Associate Editor of Journal of Micro-manufacturing, SAGE.
- 31 Professor Sameer Khandekar (ME) has been invited to join the Editorial Board of the International Journal of Thermal Sciences, as an Associate Editor.
- 32 Dr. Sudhanshu Shekhar Singh (MSE) has been appointed as a Member of Council, the highest decision making body, of the Indian Institute of Metals (IIM) for the year 2019-2020.
- 33 Professor Kantesh Balani (MSE) has been invited to join the editorial board of Journal of Materials Research, MRS Publishing.
- 34 Professor Kantesh Balani (MSE) has been invited to join as the Editor-in-chief of Nanomaterials and Energy, ICE Publication.
- 35 Professor Kantesh Balani (MSE) has been chosen for a key reader of Metallurgical and Materials Transactions A, Springer.

- 36 Professor Krishanu Biswas (MSE) has been invited to be a Guest Editor of Processing Challenges and Properties of Nanostructured High Entropy Materials, Journal of Materials Research.
- 37 Professor Amarendra K Singh (MSE) has been invited to be a Member of Editorial Board of Transactions of Indian Institute of Metals, Springer.
- 38 Professor Ashish Garg (MSE) has joined as an Associate Editor of Oxford Open Materials Science, Oxford University Press.
- 39 Professor Debashish Chowdhury (PHY) has been elected as a member of the council, the highest decision making body, of the Indian National Science academy (INSA), Delhi, for the three years 2020-2022.
- 40 Professor Sudeep Bhattacharjee (PHY) has been invited to join as an Editorial Board member of the Springer journal: Reviews of Modern Plasma Physics.
- 41 Professor Sudeep Bhattacharjee (PHY) has been invited to join as an Editorial Board member of Plasma Research Express, Institute of Physics (IOP).
- 42 Professor Sudeep Bhattacharjee (PHY) has been invited to join as an Associate Editor of Frontiers in Physics, Frontiers Media SA.
- 43 Professor Mahendra Verma (PHY) has been invited to join as Editorial Board Member of Europhys. Letters, Inst of Physics.

Student Awards

1. Shribharat B (PhD/AE), Akhil B Krishna (PhD/AE) and Chirag Jain (MS/AE) were awarded support for DST-Lockheed Martin-Tata Trusts IIGP 2.0 - University Challenge 2019 at the ceremony held on 17th July 2019 at New Delhi. The program supported innovative technologies which had a strong potential for commercialization. The team had proposed solutions for Orbital Debris Mitigation for developing into a viable product.
2. Parvraj Pachore (MTech/EE), Yugal Gupta (PhD/EE) and Nachiketa Deshmukh (PhD/EE) were selected for IIGP 2.0 - University Challenge 2019. The program was to provide technical cum economical help and support to the teams with potential ideas for businesses. The team received a fund to develop and

commercialize the product. The awards ceremony took place on 17th July 2019 at New Delhi.

3. Jitesh Kumar (PhD/MSE) received the Best Poster Award for his poster on "Alloying Effect of Al Addition on Microstructural Evolution and Mechanical Properties in Equiatomic CoCrFeMnNi High Entropy Alloy" in 26th International Symposium on Metastable, Amorphous and Nanocrystalline Materials (ISMANAM-2019) during July 8-12, 2019 organized by IIT Madras at Chennai.
4. Sabeeha Parveen (PhD/CHM) received the best poster award of ACS Omega at the "25th Chemical Research Society of India (CRSI) National Symposium in Chemistry", during July 19-21, 2019, at IIT Kanpur.
5. Ajithaprasad Sreepasad (PhD/PSE) received the Best Student Presentation Award in SPIE International Conference on Optical and Photonic Engineering (ICOPEN) 2019 organized during July 16-20, 2019 at Phuket, Thailand for presenting the paper: "A GPU Assisted Space Frequency Method for Dynamic Defect Detection in Optical Metrology".
6. Tiasa Bal (PhD/HSS) was selected to attend the Bergen-Belsen International Summer School at the Bergen-Belsen Memorial (Anne-Frank-Platz, 29203 Lohheide, Germany) during August 03-14, 2019.
7. Poulami Nandi (PhD/PHY) received a Fulbright-Nehru doctoral award to spend 9 months at the University of California at Davis starting from March 2020. She was one of the two awardees (in the doctoral category) from Physical Sciences in the year. She also received a SERB Overseas Doctoral Fellowship for a 12 month stay at the Vienna University of Technology, Austria.
8. Juhi Srivastava (PhD/MSE) won second prize for student poster competition in the 5th World Congress on Integrated Computational Materials Engineering (ICME-2019 conference) held at Indianapolis, USA during July 21-25, 2019.
9. Meha Mishra (PhD/HSS) was awarded a research fellowship of three months to carry on her work at Department of Philosophy, University of Hamburg from October 1 to December 31, 2019 - along with a travel award to visit Hamburg. During her research

visit, she worked on "Logic of conflicting obligations from the point of view of truth maker semantics".

10. Pankaj Singh (PhD/HSS) was awarded a research grant from Institute for Philosophy, Ruhr-University Bochum - for one month to visit University of Bochum and to work in the area of situated cognition. He also received a partial travel grant to participate in the summer school on "situated cognition" to be held in University of Bochum, Germany.
11. Prashant Kumar Varshney (PhD/EE) was invited to the 8th Asia Pacific Conference on Antennas and Propagation (APCAP) 2019 as an invited speaker and session chair. The conference was held at Incheon National University, Incheon, South Korea between August 4-7, 2019.
12. Nilesh Pandey (MTech/EE) was selected as a recipient of the 2019 IEEE Electron Devices Society Masters Student Fellowship - first time from India. He was one of the two students to receive this year's award among applicants from all over the world.
13. Dhyananand Yadav (PhD/CHE) and Shalini Arora (PhD/CHE) won the third prize in New Generation Ideation Contest 2019 held at HPCL R&D, Bengaluru held with a motto to encourage students in India to come up with bright ideas to tackle modern world challenges such as clean and sustainable energy, environmental pollution and growing consumerism, etc.
14. Mr. Manmohan Vishwakarma (PhD/AE) received the "Young scientist attendance grant" for attending ICA-ASA-DEGA conference held in Aachen, Germany during 9-14, September 2019. He was the sole winner from India selected for the grant.
15. Sakshi Goel (PhD/BSBE) received Scholar-in-Training Award from the American Association for Cancer Research (AACR)-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, Boston (October 26-30, 2019). This award recognizes outstanding young investigators presenting meritorious proffered papers at the American Association for Cancer Research Meetings. This award provides partial travel support for attending the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, Boston.

16. Nishat Manzar (PhD/BSBE) received Women-in-Cancer Research (WICR) Scholar Award from the American Association for Cancer Research (AACR)-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, Boston (October 26-30, 2019). This award is given to women scientists-in-training, who are presenters of the meritorious scientific papers at the American Association for Cancer Research Meetings. This award partially supports her travel for attending the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics at Boston.
17. Anukriti Singh (NDS/BSBE) received partial travel support from the Department of Biotechnology (DBT) to attend International Conference on Molecular Targets and Cancer Therapeutics, Boston (October 26-30, 2019). She presented her research findings on "MicroRNA-155 targets AGTR1/NF- κ B /CXCR4 axis and attenuates oncogenesis in Glioblastoma".
18. Jawahar Sivabharathy (PhD/AE) 's article "Wake transitions and Laminar Separation Bubble in the flow past an Eppler 61 airfoil POF19-AR-01249R" was chosen to be promoted as an Editor's Pick in Physics of Fluids.
19. Vikram Soni (PhD/ME) received the Green Talents Award at the prestigious "Green Talents – International Forum for High Potentials in Sustainable Development" hosted by the German Federal Ministry of Education and Research (BMBF) to promote the international exchange of innovative green ideas.
20. Namrata Baruah (PhD/BSBE) received a travel award from the Bill & Melinda Gates Foundation to attend the 54th US-Japan Joint Panel Conference on Cholera and Other Bacterial Enteric Infections, to be held at Osaka, Japan during December 10-13, 2019. She presented a paper titled: "Formulation and Application of a Stable IpaC Vaccine Against Shigellae in a Mouse Model" at the meeting.
21. Vikas Vats (PhD/ES) received the best presentation award in the 2nd Triennial FIGA congress on 'Geosciences for sustainable development goals' held during October 13-16, 2019 in CSIR-NGRI, Hyderabad.

22. Narendra Singh (PhD/CHM) received the best poster award for his work titled "Peptide-Based Hydrogen Sulfide Responsive Nanostructures for Biomedical Applications" in XV JNOST-2019 conference, held at University of Delhi (October 18-21, 2019).
23. Nusrat Khan (PhD/BSBE) was selected to receive an American Society of Hematology (ASH) Abstract Achievement Award for her abstract titled "Suicide Gene Therapy with a CD33 Targeted AAV6 Vector Expressing an Inducible Caspase-9 Suicide Gene Is Therapeutic in a Xenotransplantation Model of Acute Myeloid Leukemia (#3351)". The award supported her travel to the 61st ASH Annual Meeting and Exposition in Orlando, FL, taking place December 7-10, 2019.
24. Jayashree Majumdar (PhD/PHY) received a poster presentation prize in the 12th International Conference on Plasma Science and Applications (ICPSA 2019), held at the Department of Physics, University of Lucknow from November 11-14, 2019. The title of the poster was "Field emission properties of atomically heterogeneous metallic nanostructures created by microwave plasma generated low energy ion beams".
25. Prashant Kumar Varshney (PhD/EE) was awarded the Best Paper Award in the "2019 International Conference on Electrical, Electronics and Computer Engineering (UPCON)" held at the Zakir Hussain College of Engineering and Technology, Aligarh Muslim University, Aligarh from November 8-10, 2019.
26. Dr. Sahil Kalra (PhD/ME) was selected for the "IEI Young Engineers Award 2019-20" in Aerospace Engineering Division. The award was presented during the Inaugural Session of the 33rd National Convention of Aerospace Engineers held at Pune during November 16-17, 2019.
27. Vipul Bhatia (PhD/BSBE) received "Sun Pharma Science Scholar Awards-2019" in Bio-Medical Sciences category for excellence in original research work in Medical and Pharmaceutical Sciences.
28. Kartikeya Dixit's (PhD/ME) was selected for the award of best conference paper in the 13th IEEE International Conference on Nano/Molecular Medicine and Engineering (IEEE-NANOMED 2019), held from November, 21-24, 2019 at Gwangju, Korea. The

paper is on "Additively Manufactured Nanofiber Reinforced Bio-active Glass Based Functionally Graded Scaffolds for Bone Tissue Engineering"

29. Rashmi (PhD/MSP) had her work titled "Coherency and Lattice Misfit Strain Critically Constrains Electron Hole Separation in Iso-material and Heteromaterial Type-II Heterostructures" published as cover page article in The Journal of Physical Chemistry C (10.1021/acs.jpcc.9b08451).
30. Anamika (PhD/BSBE) received "Student Award" - 1st Prize, Parvaiz A. Shiekh (PhD/BSBE) "Student Award" - 2nd Prize, Namrata Baruah (PhD/BSBE) Best Poster Award - 2nd Prize at BioTERM2019 (International conference on Biomaterial-based Therapeutic Engineering and Regenerative Medicine) held at IIT Kanpur India from November 28 to December 1, 2019.
31. Sagar Paul (PhD/PHY) and Dr. Ganesh Kotagiri (PDF/PHY) received the "J. C. Bose Prize for Innovation in Method" for a poster presentation titled, "Magnetic reversal through vortex nucleation in a single magnetic nano-particle probed using Nb micro-SQUIDS in hysteresis free mode" at "National Conference in electron spectroscopy-2019" held in SBNCBS, Kolkata during 26-29 Nov 2019.
32. Pravat Rajbanshi (PhD/CHE) received the Best Poster Award at "13th International Conference in Complex Fluid (CompFLU 2019)" held in IISER Bhopal during December 5 – 7, 2019 for his poster "Effect of Symmetry on fluid flow and mixing inside multi-helical microchannel" in Microfluidic Section.
33. Mayank Agarwal (PhD/CHE) received the Best Poster Award at "13th International Conference in Complex Fluid (CompFLU 2019)" held in IISER Bhopal during December 5 – 7, 2019 for his poster "Signatures of Overaging in Aqueous Dispersion of Carbo-pol" in nanomaterials section.
34. Khushboo Suman (PhD/CHE) received the Best Poster Award at "13th International Conference in Complex Fluid (CompFLU 2019)" held in IISER Bhopal during December 5 – 7, 2019 for her paper titled "A kinetic model for a sol-gel transition in a colloidal

dispersion on nanoparticles: Application of the Modified Bailey Criterion" in Rheology Section.

35. Gunjan Kholapure (MSR/CSE) won first prize in the Argoverse 3D tracking challenge. The winners were announced in the Thirty-third Conference on Neural Information Processing Systems (NeurIPS 2019) ML for Autonomous Driving workshop which was held during December 8-14, 2019 at Vancouver Convention Center. He received an award and an internship at ArgoAI (a VW and Ford backed startup in the Autonomous Driving Space).
36. Siddhant Shrivastava (PhD/DP), Anubhav Mishra (PhD/DP) and Abhishek Verma (PhD/DP) were awarded the best paper award in the "FORE International Conference on Frugal Approach to Innovation (FICFAI) 2019" on December 13-14, 2019 held at FORE School of Management, New Delhi. The title of the paper was "Frugal Innovation for Designing the Free Wheel Ratchet Based Differential System for Cycle Rickshaw".
37. Sucharita Maji, (PhD/HSS/Psy) was selected as a participant for the Emerging Psychologists' Programme of the International Congress of Psychology 2020 in Prague, Czech Republic (July 16th-19th 2020). The programme is designed for the selected aspiring and emerging scientists in psychology across the globe to facilitate international communication and networking.
38. Shashank Chaudhury (MDes/DP), Jyoti Pandey (MDes/DP), Shuki (MDes/DP), Omkar Lanke (MDes/DP) and Ashish Mishra (MDes/DP) won 1st Position at the "Secure Himalaya Hackathon" organised by "United Nations Development Programme".
39. Nitish Kumar Gupta (PhD/PSE) won Best Poster Presentation Award in the "IEEE-Workshop on Recent Advancements in Photonics (WRAP)- 2019", held at IIT-Guwahati during December 13-14, 2019. The topic of his presentation was "Information Encryption in Thermal Metamaterials through Emissivity Engineering."
40. Ashutosh Jena (PhD/ME) won the best paper award in engineering session of Fourth Sustainable Energy and Environmental Conference (SEEC-2019) held at NEERI Nagpur during November 27-

- 29, 2019 for his paper titled “Combustion analysis using optical diagnostics”.
41. Utkarsha Sonawane (PhD/DP) won the best paper award in engineering session of Fourth Sustainable Energy and Environmental Conference (SEEC-2019) held at NEERI Nagpur during November 27-29, 2019 for her paper titled “Performance, combustion, and emissions from Gasohol fuelled SI engine”.
 42. Anirban Banerjee (PhD/IME) won the 3rd prize under the category: Theory & Methodology during the recently concluded XXIII Annual International Conference of the Society of Operations Management (SOM 2019), held at IIT Kanpur, INDIA from December 19-21, 2019.
 43. Harsh Chittora (BT-MT/EE) received the Best Poster Award at the International Workshop on the Physics of Semiconductor Devices (IWPSD 2019) held in Calcutta from December, 17-20, 2019. The topic of his presentation was "Equivalence between constant phase element and transmission line models in impedance spectroscopy analysis" and it was presented in the “Photovoltaics, Flexible and Organic Devices” poster session at the workshop.
 44. Sadhana Naskar (PhD/HSS/FA) won a prestigious Certificate of Merit in the recent state-level art exhibition, Charukala Utsav organized by the Ministry of Information & Culture, Government of West Bengal in 2019. Two of Ms. Naskar's recent paintings were selected for the final round (professional category) display of their annual exhibition at the Academy of Fine Arts Gallery, Kolkata.
 45. Aditya Raj (BT-MT/CE) and Malik Faisal Nissar (BT-MT/CE) were awarded the First Prize in the National Student Award Competition for Civil/Structural Engineering Students for Best Innovative Structural Steel Design held during February 14-15, 2020 at the Institute for Steel Development and Growth (INSDAG), Kolkata.
 46. Abhinav Bhardwaj (PhD/EE) was awarded the Second Best Paper Award in the URSI Regional Conference on Radio Science (URSI-RCRS 2020) held at the Indian Institute of Technology Varanasi (IIT BHU) from February 12-14, 2020 for his paper titled

"Miniaturization and Enhancement of Out-coupled Power from a Waveguide filled with an Anisotropic Metamaterial.

47. Paramita Dasgupta (PhD/PHY) 's presentation at the "Young Scientists' Forum" of the "Moscow International School of Physics (Moscow ISP) 2020" was selected as the "Best Talk" by the committee. She received a Diploma for the best talk at the HSE study Centre, Voronovo, Moscow, Russia organized by P.N. Lebedev Physical Institute of the Russian Academy of Sciences. Her visit was funded by NASA.
48. Ankur Gupta (BT/EE), Nithya Muttineni (BTech/CSE) and Yash Varun (BTech/ME) secured the second place in the MHRD AICTE SAMADHAN competition in response to COVID-19. They proposed a user-friendly solution to fake-news detection on instant messaging and microblogging platforms.
49. Puja Sunil (PhD/AE) won 'Quantitatively Descriptive Flow Visualization Award' and first place in 'Quantitatively Descriptive Flow Visualization' category for her technical paper at 2020 AIAA AVIATION Forum.
50. Vishal Keswani (BS/ECO) and Sakshi Singh (BTech/CHE) won the first prize at FinSim Shared Task organized at Workshop on Financial Technology and Natural Language Processing (FinNLP). The research paper on the designed system was accepted at the conference and will be part of the proceedings.
51. Mohamad Aasif Bhat (PhD/EE) and Anteshwar Chimadge (MTech/EE) won the prestigious Qualcomm Innovation Fellowship 2020 for their work in Wideband Delay Lines with Reduced Insertion Loss for Beamforming at mm-wave Frequencies.
52. Dhanajit Brahma (PhD/CSE) got selected in one of the eleven winning teams of the prestigious Qualcomm Innovation Fellowship 2020. His proposal was on the problem of "continual learning", where the goal was to enable deep neural networks learning to solve a sequence of tasks in a way that, when learning to solve a new task, the neural network does not forget the knowledge acquired about solving previous tasks, a capability that is inherent to humans.

53. Priyanka Gupta (PhD/CHE) received the best oral presentation award in the recently concluded Chem-Conflux20 conference held at MNNIT Allahabad, Prayagraj. The title of her presentation was "Removal of Glyphosate from water by Catalytic Wet Air Oxidation using Fe Nanoparticles-dispersed Carbon Nanofiberous Activated Carbon Beads".
54. Swati Gupta (PhD/CHM) received the best oral presentation prize in Student Indian Peptide Symposium (sIPS-2020) held during February 20-21, 2020 in Madurai Kamaraj University, India. The topic of her presentation was "Biotransformation of 2,4,6-Trinitrotoluene by *Diaphorobacter* sp. strain DS2.
55. Anjali Sifar (PhD/CGS) won the Marr Prize 2020 for the best paper with a student as first author in the annual virtual meeting of the Cognitive Science Society held from July 29 – August 2, 2020. She won the prize for her paper "**Limits on Predictability of Risky Choice Behavior**".
56. Sarwar Nizam (PhD/ES) had his study selected to be on the front cover of the journal *Environmental Science & Technology (ES&T)*, an authoritative source of information for professionals in a wide range of environmental disciplines. The paper shows how the melting rates of western Himalayan glaciers are insensitive to fossil-fuel combustion residues, which is contrary to all recent findings.
57. Ekant Sharma (PhD/EE) won the Best Doctoral Dissertation Award (2019-20) at 13th International Conference on Signal Processing and Communications (SPCOM) held at Indian Institute of Science, Bangalore from July 19-24, 2020. Title of his thesis is Analysis and Optimization of Energy-Efficient Massive MIMO Wireless Relaying Systems.
58. Aditya Srivastava (BT-MT/EE) and Gyanajyoti Routray (PhD/EE) won the Best Student Paper Award at SPCOM 2019-20.
59. Tharun Kumar Reddy (PhD/EE), Madhurdeep Jain (BT/EE), Archit Bansal (BT/EE), Palashdeep Singh (BT/EE), Kushangi Mittal (BT/EE) and Madhurdeep Jain (BT/EE) as a team received 2nd position worldwide (team name: iBCI) in the Clinical BCI Challenge organized as a part of WCCI 2020.

60. Siddhant Shrivastava (PhD/DP) was selected for the "Gandhian Young Technological Innovation (GYTI) Award 2020", along with the research grant to take the product "Multipurpose Proctoscope" forward towards commercialization. The award function was held at Rashtrapati Bhavan, New Delhi.
61. Snehil Chandra (MTech/EE) and P Naga Yarasvi (PhD/EE) were selected as one of the Best papers at 2020 IEEE PES GM Session on August 3, 2020 for the paper titled Optimal Transmission Switching with Injection Uncertainties in the session titled Best Conference Papers on Planning, Operations, and Energy Markets.
62. I Avinash (PhD/CHM) was selected for S. S. Bhatnagar Young Scientist Award for his Oral Presentation at the International Seminar on "Recent Advances in Chemistry & Material Sciences (2020)" organized by the Indian Chemical Society. The title of his oral presentation was "Backbone Boron-Functionalized Imidazole Derivatives as Fluoride Sensors and as Ligand for Luminescent Copper Complexes".

Major Projects Sanctioned

1. Energy Storage Platform On Hydrogen (DST)
2. Elucidating The Conformational Dynamics Of Non-Canonical Seven-Transmembrane Receptor Activation And Signaling (WT)
3. NIDHI-SSS (DST)
4. Developing Efficient Method For The Measurement And Characterization Of High-Dimensional Quantum States For Photonic Quantum Information (DST)
5. Single-Carrier Decoy-State Frequency-Coded Quantum Key Distribution Over 50 Km Optical Fiber (DST)
6. Chromium Isotopes As Tracers Of Environmental Contamination And Remediation (IFCPAR)
7. Center Of Excellence For Defense Corridor-Office Expenses (UP-EIDA)
8. SPARC: Development And Neurological Application Of High Definition Fibre Tracking (HDFT) (MHRD)
9. SPARC: Developing Safe And Secure Autonomous Cyber-Physical Systems (MHRD)

10. Investigating The Molecular Mechanism Of Cartilage Segmentation During Early Chick Embryonic Development (DBT)
11. Improving Performances Of Power Electronic Circuits Using Gan-HEMT Devices (SERB)
12. India Agritech Incubation Network (Iain) (BMGF)
13. National Center Of Excellence In Geodesy (DST)
14. J C Bose National Fellowship (SERB)
15. Wind Tunnel Model Design, Fabrication & Testing Of Cruise UAV Variant (ADE)
16. SPARC: Adding Value To Additive Manufacturing-Advanced Characterization Of The Structure-Properties-Performance Of Ti6a14v (MHRD)
17. Development Of Multi-Functional Nano-Hap Bone Substitute For Effective Bone Regeneration In Critical Defects (DST)
18. Programming Robots By Demonstration For Industrial And Warehouse Automation (TCS)
19. Design Of Flexible Sweat Sensors Snd Stretchable Batteries Embedded In E-Textile To Monitor Personal Health And Fitness Parameters (IFCPAR)
20. Gan Based High Power LNA For 5G Applications (IUSSTF)
21. PPP Mode Industry Projects (Prototype Development Fund) (STAMLO)
22. Robot Skill Transfer From Simulation To Real World Development In Manufacturing Industries And Warehouse (Translearn) (IGSTC)
23. Linear Scaling DFT (CDAC)
24. Establishment Of A State-Of-The-Art Facility For Design And Fabrication Of Medical Devices And Equipment With In House Quality Control System For Cultivating A Local Production Hub Of Medical Grade TE (BIRAC)
25. Pilot Project On Development And Implementation Of Industry 4.0 Protocols For Rail-Coach Design & Manufacturing At Modern Coach Factory, Raebarely (DST)
26. EMI/EMC And Electrical Safety Testing Facility, IIT Kanpur (BIRAC)

27. Unlocking Wastewater Treatment Water Re-Use And Resource Recovery Opportunities For Urban And Peri-Urban Areas In India (DBT)
28. Multiscale Microstructure Simulation And Modelling (CDAC)
29. Development Of A Vision Based Autonomous Quadrator System For Rescue And Search Operation (DRDO)
30. Development Of Integrated Dampers For Combustion Dynamics Abatement For Low Emission/Advanced, Biojet Fuel GT Combustors (SERB)
31. Complex Defense Object Recognition And Autonomous Handling In Unstructured And Noisy Outdoor Environment (Phase-I) (DRDO)
32. Investigation Of Wetting Behavior And Mobility Of Aqueous Drops On Lubricating Fluid Coated Slippery Surfaces (SERB)
33. Ultra-clean Emissions DME Fuelled Tractor Engine Prototype Development For Agricultural Applications (SERB)
34. Development Of TFT Array And Liquid Crystal Layer And Their Integration With Metasurface Antenna (ISRO)
35. RAA Labs for Samagra Shiksha Delhi (UEEM)
36. Synthetic Perspective Of Domino Ring-Opening Cyclization (DROC) And Ring-Opening Cyclization (ROC) Of Activated Aziridines And Azetidines To Various Biologically Significant Aza/Oxa-Heterocyclic Compound (SERB)
37. Deciphering The Role Of Small Rnas In The Development Of Hemophilic Arthropathy And Formulation Of A MicroRNA Based Therapeutic To Alleviate Joint Damage (SERB)
38. Modeling The Nature Of Active Sites And The Role Of Support In Hydrodeoxygenation Catalyst (SERB)
39. Highly Efficient, Low Emission Gasoline Compression Ignition Engine Prototype Development (SERB)
40. In Union There Is Strength To Sense Mechanisms Of MTORCI Clustering On Lysosome For Nutrient Sensing And Their Implications In Diabetes Probed With Super-Resolution Microscopy (SERB)
41. Turbulent Jet Manipulation Using Unsteady Injection (SERB)
42. Robotics And Automation In Agriculture (MEITY)

43. Cyclic-Proteins Triggered By Chemical Or Photocaged For Spatiotemporally Controlled Degradation Of Intracellular Proteins In Cancer (DBT)
44. One Symmetry To Rule Them All (SERB)
45. Controlling The Efficiency Of Molecular Switches And The Dynamics Of Switchable States On Surface (SERB)
46. Temperature-Sensitive TRP Ion Channels As Biological Thermometers To Gauge The Pain (DBT)
47. Nidhi Prayas-2020 (DST)
48. Hydrogenated Amorphous Silicon-Germanium Alloy Films For Enhanced Efficiency Of Thin-Film Solar-Cell Based On Cu₂ZnSnS₄(CZTS) (SERB)
49. Tribe Connect: Integrated Smart Tribal Eco-Platform-A Proof Of Concept In Chattisgarh (MEITY)
50. Understanding The Self-Assembly Of Amphiphilic Molecules In Supercooled Solvents Using Molecular Simulations (SERB)

Labs/ Facilities Developed

1. Cell Sorting Facility (FIST) & High Throughput Sequencing Facility (FIST & India Alliance). PI: Bushra Ateeq (BSBE).
2. Tissue culture lab/In progress/ equipments: 1. O#P/BSBE/RD/2019-20/92/621//Biological Safety Cabinet; 2. PO#P/BSBE/RD/2019-20/93/622//CO₂ Incubator (DBT). PI: Santosh K. Misra (BSBE).
3. Carbon nano-particle synthesis facility/MICROWAVE –UV-US SYNTHESIS/EXTRACTION SYSTEM WITH PRESSURISED REACTOR (Departmental Grant) PI: Santosh K. Misra (BSBE).
4. Aerosol Chemistry Laboratory in National Aerosol Facility (NAF) have been developed. PI: S. N. Tripathi (CE).
5. Drum composting facility created for biodegradable municipal solid waste management of IIT Kanpur campus from Institute funds. PI: A. Singh (CE).
6. GC-MS-TD established with funds from MOEFCC as part of on-going NCAP (CE).

7. Development of Instantaneous Volumetric Velocity Measurement Facility for Complex Flow Under FIST/IRPHA. PI: A. K. Saha (ME)
8. High Temperature Lab under IMPRINT (MSE).
9. ICME National Hub. PI: Dr. Amarendra K. Singh (MSE).

Software Developed

1. Technology named Willbot: automated chatbot for delivery of cognitive behavioral therapy for depression developed (BSBE).
2. dbAQP-SNP: A database of single nucleotide polymorphisms in human aquaporins (BSBE).
3. TChemPy: A beta-version of python code have been developed to calculate the thermochemistry of molecules. The results using this software is published in Journal of Physical Organic Chemistry (2020: <https://doi.org/10.1002/poc.4131>) (CHM).
4. Development of Open Source Solidification/ Melting Platform-OpenSol (ME).

Technologies Developed

1. PIPES (Polyethylene-based Improvised Protective Equipment under Scarcity): a low-cost PPE kit for COVID-19. PI: N. Gupta (BSBE).
2. Sensor for black carbon determination of air sampler, patent # 292000 (26012018) India. Patent granted. (PI: T. Gupta) (CE).
3. Electrosurgical Cautery with Suction Inbuilt by Dr. Tarun Gupta (CE), Mr. Roshna Kumar (Student, CHM), Mr. Ankur Bajaj (Student, BSBE), Dr. Pooja Ramakant (KGMU), Dr. Kul Ranjan Singh (KGMU), Dr. Anand K. Mishra (KGMU), 320342-001 Date Of Grant 01/08/2019. Patent granted (CE).
4. NSVS- Autonomous Aquatic Observatory for river water monitoring. PI: B. Bhattacharya (ME).
5. Inkjet Printable Capacitors on Textiles/ Paper substrates: Supported through Department of Science and Technology, Technology Systems Development Platform, "Inkjet printed electrodes of Graphene oxide- Metal oxide hierarchical nanostructured nanocomposites for improved energy density and power density thin

- flexible supercapacitors” Funded (Amount: 40,00,000 INR, USD \$65625). PI: S. Bhattacharya (ME).
6. Early Dengue Detection Biochip through paper microfluidics: Supported through BIRAC, Department of Biotechnology, “Lateral Flow Immunoassay based Point-of- Care Diagnostic Device for Ultrasensitive Colorimetric Detection of Dengue “ Funded to TCIP a technology company incubated by PI Funded (Amount: 50,00,000 INR, USD 70,000). PI: S. Bhattacharya (ME).
 7. Automated Stacking System for surgery blades supported by Kehr Surgical Instruments Ltd., “Design and development of a blade sorter system for high through segregation and stacking”, Funded (Amount: 7,00,000 INR, USD\$9722). PI: S. Bhattacharya (ME).
 8. Plasma assisted bonding process in thermoplastic and thermosetting composites for aerospace manufacture supported by Boeing Corporation, USA, “Joining Of Thermoplastic And Thermoset Composites”, Funded (Amount: 25,00,000 INR, USD\$35000). PI: S. Bhattacharya (ME).
 9. Gas sensor for Helium detection within Cyro Lab supported by ISRO, “Development of gas sensor to detect leakage of helium gas from inflatable space structures” Funded (Amount: 2000000 INR, USD\$28000). PI: S. Bhattacharya (ME).
 10. Developed a test facility called Acoustic Impedance Tube, which is used to measure the absorption and transmission loss of materials for acoustic waves. PI: Chandprakash C. (ME).