



MANIPAL

ACADEMY of HIGHER EDUCATION

(Deemed to be University under Section 3 of the UGC Act, 1956)

MAHE Research Bulletin

Apr - June 2019



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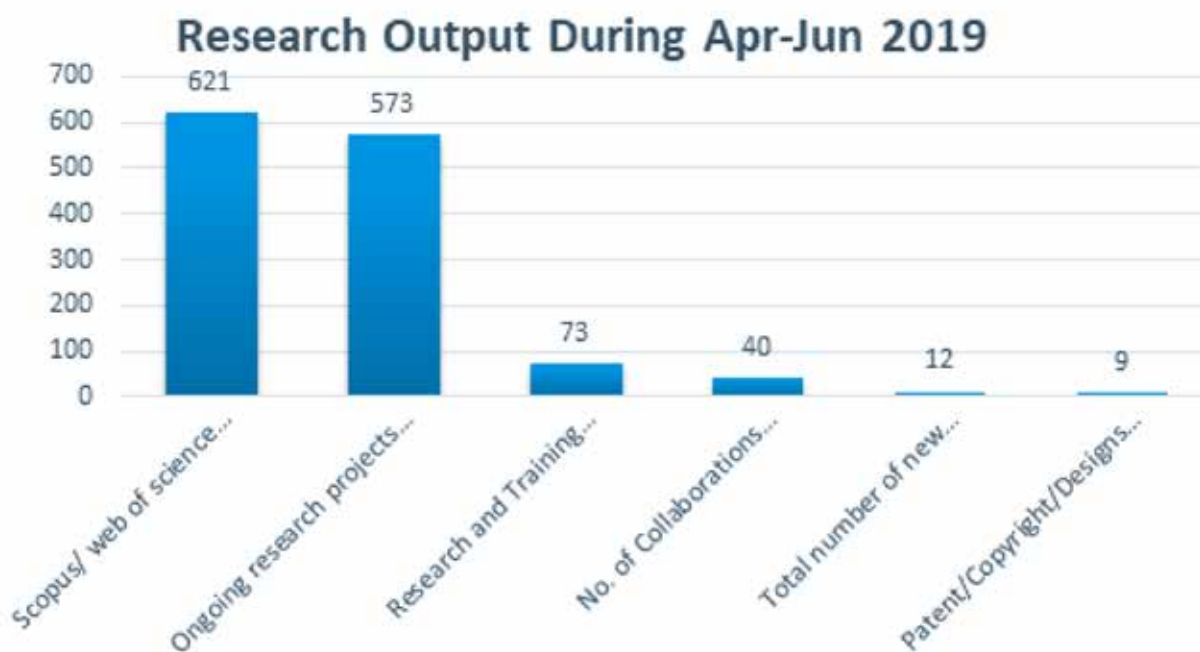
Part III

Activities of MAHE Students' Research Forum (MAHE-SRF)

Part I

Manipal Academy of Higher Education (MAHE) is one of the premier universities in India. MAHE considers both academics and research equally important for the betterment of the institution. The faculty members and the research scholars at MAHE have embraced the research culture. They publicize their research work in scientific publications, through presentations in various conferences and obtain patents, research grants etc. In this report, we present to you **an overview of the research activities** at MAHE during the period **Apr-June 2019**.

A. Details of research activities of MAHE for the period Apr - June 2019



B. Faculty and institution achievements

1 Dr Sathisha Nayak, Professor and Head, Department of OBG, Melaka Manipal Medical College was felicitated with "Balavaatsalya Sindhu Award" by SriKrishna Sevadhama Trust sponsored by Srikrishna Balanikethana, Kukkikatte, Udupi presided by Sri Sri Vishweshwara Theertha Swamiji, Pejawara Adhokshaja Mutt, Udupi on 2 May, 2019. This prestigious annual award was bestowed on Dr Sathisha for his dedicated service in the field of child safety, child friendly environment, POCSO Act and prevention of child sex abuse in Udupi, Dakshina Kannada and neighbouring districts from 2014 to 2019.



2. To recognize the listing of Manipal Poison Detection Centre on the World Directory of Poison Centres, a plaque unveiling ceremony was organized on 13 June 2019. Manipal Poison Detection Centre is the product of collaborative efforts between the Departments of Biochemistry and Forensic Medicine and Toxicology, KMC, Manipal



and Department of Pharmacy Practice, MCOPS, Manipal. Dr H Vinod Bhat, Vice Chancellor, MAHE, unveiled the plaque. Dr Bhat addressed the gathering and complemented the team for its achievement. Dr Pragna Rao, Dean, KMC highlighted the importance of this Centre and the contributions of each departments. Dr Girish Thunga P, Faculty, Department of Pharmacy Practice gave an overview of Manipal Poison Information Centre.

3. Dr Saleena Ummer V, Associate Professor and Head, received an honour for facilitating the externship in clinical, teaching and research for the faculty from Kabul University of Medical Sciences as part of capacity building during 15–30 April, at the Department of Medical Laboratory Technology, MCHP, MAHE, Manipal, implemented by the University of Minnesota and Manipal Academy of Higher Education under the University Support and workforce development program.



4. The Optical Society Board of Directors has recognized Dr Nirmal Mazumder, Assistant Professor, Department of Biophysics, MSLS, MAHE, Manipal as OSA Senior Member for his contributions and accomplishments in field of research.

5. Mrs Karthi Pradeep obtained admission for a three-year funded PhD program at the University of Bordeaux, France. This work will focus on the contribution to wafer characterization of FD-SOI transistors in sub-THz range. It will be jointly supervised by STMicroelectronics (Crolles) and the IMS laboratory in France.



6. Dr S Raja, Associate Professor - Senior scale, Department of Chemical Engineering, MIT received a Research Grant under RGS/F scheme, VGST, Karnataka in June 2019.
7. Dr S Shanmuga Priya, Associate Professor, Department of Chemical Engineering, MIT published two research papers in Q1 journal in 2019. She was a visiting faculty to the Universiti Malaysia Pahang (UMP), Kuantan, Malaysia from May to June 2019.
8. UNSW delegation visited Manipal School of Architecture & Planning, MAHE on April 03, 2019 to develop and invest in a landmark partnership for education to promote academic and educational exchange between their universities.
9. UNSW Portfolio Workshop was conducted by Professor Lisa Zamberlan and Professor Simone Z Leao from University of New South Wales, Australia on April 03, 2019.
10. A delegation from University of Queensland visited Manipal School of Architecture & Planning, MAHE on April 15, 2019 to promote a greater understanding of the multiple perspectives brought to international issues and to increase the competencies of students who will live and work in an increasingly interdependent world.
11. Dr Rajiv Mishra, Faculty of Welcomgroup Graduate School of Hotel Administration, received a Commendation Letter for his PhD thesis by Union Ministry of Tourism, Government of India.

Dr Mishra's Doctoral Research Thesis titled "Assessing the Effectiveness of Internship Component in Hospitality Management Education: An Exploratory Study in Indian Context" (awarded by Vinoba Bhave University, Hazaribag) is highly applauded by Ministry Officials stating that, the study has filled the gap in literature by exploring the effectiveness of hospitality internship in Indian perspective. It is further commended by mentioning that, the asserted-novelty and exploration detailed in the study would certainly benefit all the stakeholders of hospitality and tourism sectors (including academia, industry and student community) in making hospitality internship more interesting and effective.



C. Achievements by research scholars and students

1. Ms Reema Narayan, Research Scholar received the "Best poster award" and cash prize for the poster presented in PhD poster presentation competition organized by Deputy Registrar Academics, MAHE at Manipal Research Colloquium held between April 1-3, 2019. Reema is pursuing her PhD under the guidance of Dr Usha Nayak, Associate Professor, Department of Pharmaceutics, MCOPS, Manipal and Professor Sanjay Garg, School of Pharmacy and Medical Sciences, University of South Australia, Adelaide.
2. Mr Dan Isaac Pothiyil was awarded the Best Paper award for "Attitude towards menstruation among male adults: A Qualitative Study" in the 45th National Annual Conference of Indian Association of Clinical Psychologists during 25 – 27 May 2019.
3. Mr Jackson Rodrigues, PhD Scholar, Manipal School of Life Sciences, MAHE, Manipal, was awarded with a fellowship by Indian Council of Medical Research for the project entitled, "Establishment of Patient-Derived Breast tumor Xenograft and assessment of tumor progression by photoacoustic spectroscopy ex vivo".
4. Soumyabrata Banik received the Best Prize in "3 minute Oral Presentation" in Manipal Research Colloquium 2019 MAHE, Manipal during April 1-3, 2019 for the paper titled, "Development of cost effective, portable and easy-to-use microscopic device for disease detection" authored by Soumyabrata Banik, K K Mahato, N Mazumder.
5. Mr Bharath H R, PhD scholar working under the guidance of Dr K K Mahato, Department of Biophysics, Manipal School of Life Sciences, MAHE received an International travel grant from CSIR, Government of India to present his work at the Tissue Repair and Regeneration Gordon Research Conference during June 9-14, held at Colby-Sawyer College, New London, New Hampshire, USA.



He presented his abstract titled "Augmentation of burn-inflicted skin repair by photobiomodulation" as a poster. Bharath is pursuing his PhD in a DAE BRNS, Government of India sponsored project.





6. Ms Anu Radha Sharma, PhD Scholar won Best Poster award with a cash prize in Manipal Research Colloquium 2019.
7. Mr Sampara Vasishta, PhD Scholar won third prize in the oral presentation for paper titled "Influence of Glucose on DNA Methyltransferases in Human Endothelial Cells".
8. Ms Manasa Hegde, PhD Scholar clinched the third prize in the oral presentation for paper titled "Targeted Liposomal Drug Delivery Strategies Against Glioblastoma".
9. Mr Manik Vohra, PhD Scholar received a consolation prize in the oral presentation for paper titled "Transcriptomics Reveal Allele Specific Gene Expression in Metformin Drug Response of Type 2 Diabetes".
10. Mr Soumyabrata Banik, 3rd year BSc Biotechnology received the Best 3 minutes oral Presentation prize on the topic: Portable Optical Microscopy using Smartphone for Disease Diagnosis in MRC 2019.
11. Ms Kshipra Petkar, 3rd year BSc Biotechnology won the second prize in poster presentation titled, "Probing lead- induced mitochondrial dysfunction and its alleviation by taurine".
12. Dr P K Rath, Research faculty, MCNS participated in Manipal Research Colloquium 2019 and won the second prize for the paper titled "Fabrication of a Table Top Accelerator (TTA) at MCNS".
13. Mr B Ananthamoorthy, Junior Research Fellow, MCNS bagged the second prize for presentation titled "UVIT Onboard Astrosat: A New Horizon" at Manipal Research Colloquium during 1-3 April, 2019.

D. Achievements by research scholars and students

1. Dr Keerthilatha M Pai, Dean and Professor of Oral Medicine and Radiology won the best presentation award for the paper titled "Visibility of borders of mandibular canal: A comparative in vitro study using digital panoramic radiography, reformatted panoramic radiography and Cross sectional CBCT" in the 21st International Conference on Dentistry, Dental Medicine and Surgery held in London during 27 – 28 June, 2019.
2. Dr K K Mahato, Professor and Head, Department of Biophysics, Manipal School of Life Sciences, MAHE was awarded with Dr TMA Pai gold medal for the outstanding research publication for the year 2018 titled, "Probing endogenous collagen by laser-induced auto-fluorescence in burn wound biopsies: A pilot study" in Manipal School of Life Sciences, MAHE, Manipal.
3. Dr Gayathri Prabhu, Faculty, Manipal Centre for Humanities received the Erasmus +ICM scholarship for faculty exchange at the University of Groningen during May 27 to 31, 2019. The scholarship includes travel and daily allowance.





4. Dr Neeta Inamdar, Professor and Head, Manipal Centre for European Studies edited a book titled, "Internationalization of Higher Education: The Dynamics of Education Ecology" published by Manipal Universal Press in 2019. She also co-authored a paper "Cultural Constructs: Multiculturalism, Interculturalism and Transculturalism" presented at Twelfth Global Studies Conference at Jagiellonian University, Krakow, Poland, June 27, 2019.
5. Ms Priya Poojary, Faculty member, Manipal Centre for European Studies was awarded Erasmus+ Teaching Mobility to University of Warmia and Mazury, Olsztyn, Poland.
6. Srinivasa Kumar N Acharya, Assistant Professor, Manipal Centre for European Studies was awarded Erasmus+ Teaching Mobility to University of Castilla-La Mancha, Spain, in October 2018.
7. Dr Vijendra Prabhu, Assistant Professor-Senior Scale, Department of Biotechnology, MIT received International Travel Grant from Science and Engineering Research Board (SERB), Government of India to attend and present a paper in "European Conferences on Biomedical Optics" during 23-27 June 2019 held at Munich, Germany.
 
8. Ms Vasundhara Acharya, Assistant Professor, Department of CSE, bagged the first prize in oral presentation for her research work titled "Computer-Aided Diagnosis to Identify Acute Myeloid Leukemia" at Manipal Research Colloquium-2019 held at MAHE, Manipal.
9. Dr. Mandeep Singh was selected for the award of INSA Visiting Scientist 2019-20 to pursue research at Applied Photonics Lab, Department of Electrical Communication Engineering, Indian Institute of Science (IISc), Bangalore.
 
10. Dr Nagraj Kamath, Assistant Professor-Selection Grade won the best paper award for the presentation, titled "Comparison of Quality, Cost and Delivery obtained through Total Production Management, a 3M model supporting Make in India, Clean Green India and Skill Development", in SARC International Conference, Pattaya, Thailand, on 22 – 23 May 2019.
 
11. Mr Nithesh Kumar, Assistant Professor, MIT attended "Asia International Conference on multidisciplinary research", in Sri Lanka, in May 2019. He was awarded the Best Paper award for the research paper titled "Awareness of online presence of printed newspapers among the readers of coastal Karnataka - A Case study".
 

A. Featured researcher of MAHE

Dr Poornesh P
Assistant Professor-Selection Grade
Department of Physics,
Manipal Institute of Technology,
Manipal Academy of Higher Education



Dr Poornesh's educational journey started in Chickmagalur. He obtained his Bachelor's degree in Physics from Kuvempu University in 2003 and Master's degree in Physics with condensed matter physics as specialization from Mangalore University in 2005. Dr Poornesh was awarded the Full-Time Institute Scholarship from National Institute of Technology Karnataka (NITK), Surathkal to pursue PhD in 2010. He started his teaching/research career at MIT, Manipal in the year 2008 as a Lecturer. Dr Poornesh is a recipient of Young Scientist Research award (YSRA) from Department of Atomic Energy, Board of Research in Nuclear Sciences (DAE-BRNS), Government of India, seed money to Young Scientist for Research (SMYSR) from Vision Group on Science and Technology (VGST), Government of Karnataka. Utilizing the funds from the above-mentioned schemes, he was instrumental in establishing "Laser and Nonlinear Optics Research lab" in the department. The lab facilities include Z-scan system for evaluation of nonlinear properties, CW He Ne Laser, optical power/energy meter with detectors. To his credit, he has over fifty research papers in Scopus Indexed international journals and one patent under evaluation. He was successful in getting an International collaboration with Professor I V Kityk, from Czestochowa University of Technology, Poland. Dr Poornesh has mentored one PhD and ten postgraduate students. At present, three students are pursuing their doctoral studies under his guidance.

Poornesh is actively involved in studying transparent metal oxide nanostructured semiconductors and evaluating its suitability for gas sensors and photonics device applications under the influence of electron beam. His research areas of interest include Nonlinear Optics, Materials for power limiting and switching applications, Laser Material Processing, Metal oxide semiconductors thin films and Gas sensors.

Dr Poornesh's message to budding researchers: *"I am of the opinion that my young fellow-mates who aspire to do research should be honest, believe in hard work, be passionate and follow ethics. Researchers should try to work in a group, as research domain is heading towards multi-disciplinary approach rather than individual-centric. Hence, building a strong collaboration becomes essential which should preferably start at the early days of the research. I feel that the research work undertaken should benefit society at large".*

Dr Poornesh plans to establish a state-of-the-art centre for research in "Laser and Nonlinear Optics" for which, he has submitted research proposals for grants to various Government funding agencies. On the other hand, he is planning to offer "Laser and Nonlinear Optics" course as an open elective to BTech students and train them in the area of lasers.

B.Top publications for the period April-June 2019

Title of the publication	Name of the author	Department/ Institution	Name of the Journal	Month & Year of Publication	1-Yr Impact
LSPR based optical fiber sensor with chitosan capped gold nanoparticles on BSA for trace detection of Hg (II) in water, soil and food samples	Mr Kapil Sadani, Ms Pooja Nag	Manipal Institute of Technology	Biosensors and Bioelectronics	June 2019	8.173
Fortification of staple foods with vitamin A for vitamin A deficiency	Dr Bhumika T V	Public Health Evidence South Asia (PHESA)	Cochrane Database of Systematic Reviews	May 2019	6.754
Mito-TEMPO, a mitochondria-targeted antioxidant, prevents N-nitrosodiethylamine-induced hepatocarcinogenesis in mice	Sachin Shetty, Dr Rajesh Kumar, Dr Sanjay Bharati	Manipal College of Health Professionals	Free Radical Biology and Medicine	May 2019	6.02
AKM-IoV: Authenticated Key Management Protocol in Fog Computing-Based Internet of Vehicles Deployment	Dr Mohammad Wazid	Manipal Institute of Technology	IEEE Internet of Things Journal	June 2019	5.863
Voltage-Sensor-Based MPPT for Stand-Alone PV Systems Through Voltage Reference Control	Mr Muralidhar Killi	Manipal Institute of Technology	IEEE Journal of Emerging and Selected Topics in Power Electronics	June 2019	5.177
Asenapine maleate-loaded nanostructured lipid carriers: optimization and in vitro, ex vivo and in vivo evaluations	Dr Srinivas Mutalik, Renuka S Managuli, Raut Sushil Yadaorao, Shreya A B	Manipal College of Pharmaceutical Sciences	Nanomedicine	April 2019	5.005



Part III

A. Activities of MAHE Students' Research Forum (MAHE-SRF)

The Directorate of Research, Manipal Academy of Higher Education (MAHE) and Deputy Registrar Academics, MAHE organized the 6th edition of Manipal Research Colloquium (MRC), a three-day event during 1–3 April, 2019. The aim of the colloquium is to engage researchers across all scientific disciplines and enhance inter-institutional collaboration. It is a concerted effort to bring researchers from across diverse background on a single platform to showcase their research. Budding researchers from various fields of health sciences (HS), engineering and technical sciences (TS), basic sciences (BS) and management, humanities and social sciences (MS) put forth their research activities, innovative ideas and had interactions with various scientists, researchers from MAHE and other universities.

This event was inaugurated by Dr V M Katoch, NASI-ICMR Chair on Public Health Research, Rajasthan University of Health Sciences, Jaipur. Dr Katoch in his inaugural remarks focused on the need of interdisciplinary research and wished the event to be a learning experience for all the delegates. Dr H Vinod Bhat, Vice Chancellor, MAHE presided over the function and Dr Poornima Baliga, Pro Vice Chancellor (Faculty member - Health Sciences) MAHE was the Guest of Honour. Dr N Udupa, Director - Research, Health Sciences, welcomed the gathering and Dr Preetham Kumar, Deputy Registrar, Academics proposed the vote of thanks. The inaugural ceremony was graced by the Pro Vice Chancellor-Quality Assurance, Heads of the constituent institutions, adjunct faculty, Research Centre Heads, Scientists, Academicians and PhD scholars from the University.

On Day 1, Dr V M Katoch gave the keynote address and impressed upon the young researchers to have research goals based on societal needs. This was followed by a plenary lecture on Trends in Industrial Research by Dr Niranjana U C, Director Research and Training, MDN LABS. Dr Ramakrishna, Visiting Clinician Scientist, National Centre for Biological Sciences, TIFR, Bangalore presented a plenary lecture on Bridging Science, Technology, and Innovations with the Field of Primary Health Care: A Call for Action. Dr Arun Shanbhag, Chief Innovation Officer, MAHE spoke about Innovation: How to get started. This was followed by oral presentations by students and faculty.

Day 2 had invited lectures by Dr Manjula Das Mazumdar, Shaw cancer Centre, Bangalore on "Biotherapeutic Industry Fruit of Continuous Research" and Dr Manjunatha Pattabhi from Mangalore University on Thin films for Microelectronics. This was followed by PhD scholars' poster and oral presentations. Day 3 commenced with UG/PG poster presentations followed by 3 minute-oral presentations by students. The concluding talk was by Mr Rajaneesh Raja of Springer Nature (India) Private Limited on Introduction of e-books and value-added services to researchers.

A total of 104 oral papers and 246 poster presentations were made by undergraduates, post graduates and faculty members. The office of the Deputy Registrar, Academics, who organized the PhD poster competition for the final year students was attended by 140 PhD scholars who displayed their work. MAHE student research forum under the aegis of Directorate of Research made MRC 2019 a great success.

Dr Pragna Rao, Dean, Kasturba Medical College, Manipal and Mr Thirugnanasambantham K, Principal WGSMA, Manipal were invited as the guests of honour for the valedictory function who gave away the prizes to winners in different sections.



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