PROSPECTIVE AREAS OF
Collaboration

INTEGRAL UNIVERSITY
LUCKNOW-INDIA

SZÉCHENYI ISTVÁN UNIVERSITY
GYŐR, HUNGARY

TABLE OF CONTENTS _____

PREFACE

This research collaboration document is a culmination of the efforts of Integral University, aimed at fostering collaborative research partnerships with SZE (Széchenyi István University). Our vision is to create a culture of innovation, scientific excellence, and knowledge sharing that will contribute to the betterment of society.

Integral University was founded in 2004 by Prof. S.W. Akhtar. It is an educational organization approved by the University Grants Commission (UGC) in 2004, accredited as 'Good' by the National Assessment and Accreditation Council (NAAC) in 2015 and ranked as a leading institution in the country by National Institutional Ranking Framework (NIRF) in specific fields in 2017, 2018 and 2022. The campus provides state-of-the-art hostel accommodation, and houses a 800 bedded hospital, as a part of the Medical College, with state-of the art medical facilities, and more than 180 doctors. The University collaborates with some top MNCs and academic institutions of higher learning for academic enhancements at national and international levels. The University offers more than 120 programs across 38 disciplines, and currently hosts around 12000 students from more than 35 countries at its 130-acre lush-green campus.

As a leading academic institution, Integral University is committed to promoting cutting-edge research in various disciplines, including but not limited to engineering, medicine, management, humanities, and social sciences. We recognize the value of collaboration in achieving this goal and believe that partnerships with other institutions and industry partners will help us leverage our strengths and capabilities for maximum impact.

This document outlines our approach to collaborative research and joint programmes, including our priorities, and key collaboration areas. It aims to serve as a guide for SZE seeking to collaborate with us and as a roadmap for ongoing collaborations. We are committed to ensuring that all collaborations are founded on mutual respect, trust, and a shared commitment to excellence.

We invite SZE to collaborate with us and join us on this journey of discovery and innovation. Together, we can make significant contributions to solving some of the world's most pressing challenges and improve the quality of life for all.

SYED ADNAN AKHTAR
Lucknow (India), March 2023

DEPARTMENT OF COMMERCE AND BUSINESS MANAGEMENT

Collaboration Areas

1. International economics and business management, including international trade, macroeconomics, financial management, and marketing

Prospective Collaborations

Title	Dual Degree Masters Program in International Economics and Business Management
Description	The Faculty of Commerce and Management is offering various undergraduate and postgraduate programs, including 1. BBA 03 Years Core Program in collaboration with IBM and Safeducate. 2. B.Com (Hons.) 03 years Core Program 3. M.Com 02 years Core Program. 4. MBA 02 years with dual specializations in Marketing, HR, and Finance. 5. Full-Time and Part-Time Ph.D. Program specializing in functional areas of Commerce, Management, Information Technology, etc. The Faculty of Commerce and Management express interest in collaborating with SZE to offer a dual degree Master's program in International Economics & Business Management. The faculty has a strong commitment to promoting academic excellence and we believe that this program would be a significant addition to our portfolio of offerings. The dual degree program would provide students with a unique and valuable educational experience, allowing them to earn two globally recognized Master's degrees. The program would also provide students with exposure to different cultural and academic environments, further enriching their educational experience. We would like to propose a collaboration with SZE University to offer this program to students from both institutions. The program would consist of a rigorous curriculum that would cover a range of topics in international economics and business management, including international trade, macroeconomics, financial management, and marketing, among others. The curriculum would be designed to provide students with a comprehensive understanding of the most up-to-date practices in these fields.

INTEGRAL INSTITUTE OF MEDICAL SCIENCES AND RESEARCH

Collaboration Areas

1. Ayurveda
2. Yoga and Naturopathy
3. Unani

Prospective Collaborations

Title	Programmes in Ayurveda
Description	With the increase in demand for traditional medicines and healthcare services over the years, a career in Ayurveda has become a much sought after career option. Herbal drug cultivation and trade is another prominent area to explore as huge demand of Ayurvedic drugs is there across the globe. The University proposes to collaborate on programmes in Ayurveda between the duration of 03-06 Months. Some of the collaborative programmes proposed are 1. Certificate In Arthritic Care & Diet By Ayurveda (06 Months) 2. Certificate In Ayurveda Massage & Treatment (06 Months) 3. Certificate In Ayurveda & Panchakarma (06 Months) 4. Diploma In Ayurveda, Panchakarma & Patient Care (06 Months) 5. Certificate In Ayurvedic Food Science and Cooking (03 Months) 6. Diploma In Ayurvedic Lifestyle Coach (06 Months)

Title	Programmes in Yoga and Naturotherapy
Description	Yoga has evolved as one of the promising and potential domains of career over the past few decades, especially with the tide of globalization sweeping across the world. There is a great career scope for Yoga professionals not only in India but also abroad. The awareness amongst people about the benefits of Yoga for a healthy mind and body has increased the prospects of Yoga as a lucrative career. Further with the declaration of 21st June as International Yoga Day by the UN, the importance of Yoga as a career has increased many folds. Collaboration may be in the form of the following programmes: 1. Certificate In Practical Yoga (06 Months) 2. Certificate In Yogic Science (06 Months) 3. Certificate In Herbs & Natural Diet (06 Months) 4. Certificate In Spinal Manipulation by Naturopathy (06 Months) 5. Certificate In Child Health by Yoga (06 Months) 6. Certificate In Breathing Techniques by Yoga (06 Months)

Title	Programmes in Unani
Description	Unani medicine is a system of alternative medicine among the seven Ayush systems that is believed to have originated in ancient Greece around thousands of years ago, but is now practiced primarily in India. This system of medicine includes addressing the prevention and treatment of disease by using herbal remedies, dietary changes and alternative therapies. The Unani system of medicine was documented in Al- Qanoon, a medical classic, by Sheikh Bu-Ali Sina (Avicena) (980-1037) AD) and in Al-Havi by Razi (850-923 AD). It is the fourth most popular traditional and complementary system of medicine practiced in India after the Allopathy, Ayurveda, and Homoeopathy systems. It works on the principle that a body has its own self-healing power which needs to be boosted. Collaboration is sought with respect to the following programmes 1. Diploma In Unani & Acupuncture (01 Year) 2. Certificate Of Basic/Advance Unani (06 Months) 3. Advanced Diploma in Unani (01 Year) 4. Diploma In Hijama Therapy (01 Year)

DEPARTMENT OF COMPUTER APPLICATION & COMPUTER SCIENCE ENGINEERING

Collaboration Areas

1. Software Engineering

2. Big Data

3. Image Processing and Virtual Reality

4. Information Security

5. IOT, Sensor based networks, cloud computing

6. Data Analytics, Medical Image Processing

7. Machine Learning and Soft Computing

Prospective Collaborations

Title	**Development of Machine Learning-Based Smart Farming System Using Satellite Images**
Description	Artificial and Deep Neural Networks (ANNs and DL) and Support Vector Machines (SVMs) are the most common models in agriculture among all the techniques accessible under supervised machine learning for implementing precision agriculture and acquiring information for Managing plant species, soil health monitoring, crop health management, or livestock management. Smart farming system requires a supervised machine-learning algorithm to provide predictions for irrigation patterns based on crop health, soil health, and water level. The proposed work will help to monitor crop health and crop growth and will provide predictions on crop stress and drought stress there by help to increase the yield.

Title	**Student Exchange in Robotics and Automation**
Description	Student exchange (03-06 months) for joint project on motion planning, dynamics and control, formation control, and Model Predictive Control

Title	Certification Program of Six Month on "Cyber Security and Digital Forensics"
Description	The program aims to educate and aware technical as well as managerial aspirants and industry professional about Cyber Ethics and Security, Cyber Law and Digital Forensics, enabling them to be capable in tackling cybercrimes, provide empirical knowledge and skills for developing a tactical expertise to make personal and professional data information more protected to the infringement, and imparting knowledge and skills in the field of digital forensics also.

Title	Health Suggestive Tool for Early Detection of Disease for Modern Medical System
Description	The tool will use Statistical Analysis and Prediction Based Machine learning to provide results for the input given by patients, thereby informing patients of their health condition and suggesting the best doctors. The second phase of the project involves collaborating with various pathology labs in order to acquire patient reports directly, thereby minimizing patient effort while also storing patient records over the web.
References	[1]-[6]

DEPARTMENT OF MECHANICAL ENGINEERING

Collaboration Areas

1. Solid Mechanics
2. Tribology/FEM
3. Thermofluid/Automotive Engine

Prospective Collaborations

Title	Automotive Engine Cooling Using Different Types of Nanofluids.
Description	The research on heat transfer enhancement analysis of IC engine cooling through the radiator has been done using different nano-fluid based on SiO_2, TiO_2, Al_2O_3 and $ZnO-SiO_2$ nanopowders. To analyze the heat transfer performance of the prepared nano-fluids, various sets of experiments have been conducted in which different input parameters have been chosen to observe the output responses, viz thermal conductivity of the nano-fluid, heat transfer coefficient, the viscosity of the nano-fluid, engine pumping power required to pump the desired amount of the nano-fluid, and the stability of the nano-fluid.
References	[7]-[8]

Title	Solid Mechanics Modelling over Hollow Corrugated and Comparison with the Conventional Structures by using Modern Software's (Solid work and ANSYS)
Description	A series of simulations considering relevant variables are carried out in which tube mean diameter, thickness, amplitude and frequency are varied to establish trends thereby analysing the effect on results. Therefore, multiple models are tested by comparing the results of simulations. The collapse behaviour of corrugated structures is drawn out essential to energy absorber design. The key factors affecting the characteristics of energy absorption will be determined and evaluated within a broad data set for all of these structures. This new sinusoidal corrugated thin walled tubes is being proposed which eliminates the drawbacks of existing conventional thin walled tubes.
References	[9]-[10]

Title	Analysis on Wear and Tear of Hip Implants
Description	An analysis on hydrodynamic lubrication fluid of metal and metal (MOM) hip implant is carried out for the Newtonian lubricant fluids. The pressure and performance characteristics of this MOM hip joint bearing is calculated using the Reynolds equation coupled with stress equilibrium equation. A schematic design of hip bearing is considered to develop a governing Reynolds equation for applying in the clearance space of MOM implant involving angular velocities in x, y and z direction of motions.
References	[11]-[12]

DEPARTMENT OF BIOSCIENCES
& DEPARTMENT OF BIOTECHNOLOGY

Collaboration Areas

1. Plant-Microbe-Environment Interaction Associated with Plant.

2. Bacterial and Cell Analysis Using FACS Flow-Cytometry, M Transgenom

3. Plant Tissue Culture Techniques, Synthetic Seed Technology, Molecular Biology, Chemoprofiling, Physiological and Biochemical Studies.

4. Bioformulation of ACC Deaminase.

5. PCR-Based Detection and Identification of Antibotic Resistance Genes in Environmental Bacteria.

6. In vitro effects of Brassinosteroids on enhanced regeneration and alterations in metabolic profile in *Albizialebbeck*–a multipurpose legume

Prospective Collaborations

Title	Bio formulation of ACC Deaminase Producing Plant Growth Promoting Rhizobacteria for Soil Under Salt Stress
Description	Research is primarily focused on sustainably increasing the growth and yield of agricultural crops by deploying plant growth promoting rhizobacteria. ACC deaminase producing bacteria, can be of major help in sustaining plant growth and development in salt stressed land resulting in its utilization. The study aims at the development of an effective bioformulation, which will be formulated by selecting suitable agrowastes/wastes and then optimizing it for maximum shelf life as well as analyzing its effect on test plants like Pea or Chickpea. Moreover, the impact of the formulation on seedlings as measured by the increase in plant growth and health will also be studied by assessing the morphological/biochemical and molecular parameters.
References	[13]-[17]

Title	PCR-Based Detection and Identification of Antibiotic Resistance Genes in Environmental Bacteria
Description	The research will paint a picture of WWTPs as an ARB and ARG reservoir and look at the effectiveness of various ARB and ARG reduction approaches used in waste water treatment plants. Furthermore, WWTPs have the ability to horizontally transmit these genes to local river water bacteria, expanding the genetic diversity of multi-drug resistant environmental bacteria. Findings will help us better understand the health risks connected with treated wastewater discharged into rivers by WWTPs. Cutting-edge strategies will also be tested for their efficacy in treating wastewater and decreasing ARB and ARG levels. The project will further aim for the development of a novel approach for treating waste water effluent in order to successfully lower ARB and ARG levels in wastewater prior to their disposal in river water.
References	[18]-[22]

Title	In Vitro Effects of Brassinosteroids on Enhanced Regeneration and Alterations in Metabolic Profile in Albizia Lebbeck–a Multipurpose legume
Description	The research will have practical applications in the improvement of micropropagation techniques for usually hard-to-propagate woody plants, especially trees. The proposed study will be the first approach of exploring role of 24-Epibrassinolide (EBL), an analogue of BR, on *in vitro* regeneration potential of *A. lebbeck*. GC-MS based comparative evaluation of metabolites of tissue culture raised and mother plants of *A. lebbeck* will be used to ascertain the presence of any new the rapeutically potent compound sin the micro plantlets.
References	[23]-[27]

Title	Student Exchange Program in BSc. Food Engineering
Description	The student exchange program will last for a period of 3 to 6 months, starting from February 2024.During their stay at the Integral University, the student will be required to carry out their thesis work under the supervision of our experienced faculty. One faculty member from the Szechenyi Istvan University, Hungary can also be their co-supervisor. This will not only provide hands-on experience in the field but also enable the student to gain valuable insights into the latest advancements in Food Engineering.

DEPARTMENT OF AGRICULTURE

Collaboration Areas

1. Application of Technologies on Precision Agriculture.

2. Application of Wireless Sensor Networks in Agriculture.

3. Application of Artificial Intelligence for Recognizing Plant Diseases.

4. Application of Site-Specific Nutrient Management.

5. Plant Nutrition and Product Quality.

6. Monitoring the Seasonal Dynamics of Soil Moisture.

7. Application of Renewable Energy Sources.

8. Wastewater Treatment and Utilization

9. Impact of Climate Variability on Cultivated Plants.

Prospective Collaborations

Title	- Nutrient Management - Soil Moisture Management/Irrigation Management - Precision Agriculture/Climate-Smart Agriculture

Ongoing Works

1. Precision Livestock Breeding

2. Drone Agriculture.

3. Plant Production and Horticultural Sciences (Dr. Dóra Beke).

4. Agricultural meteorology

5. Applied environmental science studies (Dr. Zoltán Varga).

6. Sensor network.

7. Nutrient Management.

8. Plant Bio stimulants.

9. Vertical Farming.

10. Water Management.

11. Agriculture Drought.

DEPARTMENT OF ELECTRICAL ENGINEERING

Collaboration Areas

1. Solar PV Plant Assessment
2. Solar MPPT
3. Multilevel Inverters
4. Industrial Process Control
5. Solar Photovoltaic
6. Power Electronics

Prospective Collaborations

Title	Controller Design in improved Control Structure for Biological and advanced Control systems
Description	In recent trends, most of the process industries use PID controllers as there are several advantages. PIDs have certain limitations in a simple feedback configuration such as, the system may have the tendency to oscillate for higher order and integrating process. These limitations can be overcome and more demanding control specification can be achieved by the PID controller, but with enhance control structures. Some of the enhanced control structures are Cascade control structures, Smith predictor structure, Parallel structure, Modified IMC structure. The aim is to design a controller which can be implemented on different control structure to get desired Servo as well as regulatory response. 1. Controller design for series cascade structure to control the Blood Glucose Regulation. 2. Controller design for parallel cascade structure to control the Regulation. 3. Controller design for modified Internal Model Control schemes and Smith Predictor scheme to control the Blood Glucose Regulation 4. Automatic drug infusion control through modified control structure for regulating the mean arterial blood pressure 5. Disturbance Rejection PID Controller for Quadcopter through modified control structure.
References	[28]-[31]

REFERENCES

[1] Manish Madhava Tripathi, N.K Joshi, "Big Data Issues in Medical Healthcare", published by: Intelligent Communication, Control and Devices(pp.1757-1765) January 2018,DOI:10.1007/978-981-10-59032_181.
https://link.springer.com/book/10.1007/978-981-10-5903-2?page=4#toc

[2] M M Tripathi, Mohd Haroon, Faiyaz Ahmad "Application of Machine Learning In ForensicScience", published by Critical Concept, Standards and Techniques in Cyber Forensics, IGI Global(DOI:10.4018/978-1-7998-1558-7.ch013).

[3] Manish Madhav Tripathi, Mohd Haroon, Tameem ahmad, Afsaruddin "Improving the HealthCare and Public Health Critical Infrastructure by Soft Computing an Overview" published in Pervasive Healthcare : A Compendium of Critical Factors for success by, EAI/Springer Innovations in Communications and Computing (EAISICC) book series(2020). (SCOPUS Indexed).

[4] Manish Madhav Tripathi, Mohd Haroon, Tameem Ahmad, Afsaruddin "Improving the HealthCare and Public Health Critical Infrastructure by Soft Computing an Overview" published in Pervasive Healthcare : A Compendium of Critical Factors for success by, EAI/Springer Innovations in Communications and Computing (EAISICC) book series(2020). (SCOPUS Indexed)

[5] Manish Madhava Tripathi, "Application of Machine Learning in Forensic Science", published in book Critical Concepts, Standards, and Techniques in Cyber Forensics and published by IGI Global(2020) DOI: 10.4018/978-1-7998-1558-7.ch013 https://www.igi-global.com/chapter/application-of-machine-learning-in-forensic-science/247295.

[6] Manish Madhava Tripathi, Mohd Haroon, "A Survey on Multimedia Technology and Internet of Things", published in Multimedia Technologies in the Internet of Things Environment, Volume 2 published by Springer (2021).

[7] Seraj M, Yahya SM, Badruddin IA, Anqi AE, Asjad M, Khan ZA. Multi-Response Optimization of Nanofluid-Based I.C. Engine Cooling System Using Fuzzy PIV Method. *Processes.*2020; 8(1):30. https://doi.org/10.3390/pr8010030.

[8] Seraj, M., Yahya, S.M., Anas, M., Sutrisno, A. and Asjad, M. (2021), "Integrated Taguchi-GRA-PCA for optimising the heat transfer performance of nanofluid in an automotive cooling system", *Grey Systems: Theory and Application*, Vol. 11 No. 1, pp.152-165.https://doi.org/10.1108/GS-09-2019-0036.

[9] Rahim, Mohammad Reyaz Ur, S. Akhtar, and P. K. Bharti. "Comparative analysis of buckling load of circular and corrugated tubes by utilizing key performance indicators." *International Journal of Applied Mechanics and Engineering* 22.3 (2017): 789-797.

[10] Rahim, Mohd Reyaz Ur, and Prem Kumar Bharti. "Energy absorption characteristics of thin- walled sinusoidal corrugated tube using RSM-CCD." Production *Engineering Archives* 26.4(2020): 144-153.

[11] Sumita Chaturvedi, Prem Kumar Bharti, Syed Nadeem Akhtar, Metal-on-Metal hip prostheses lubrication analysis for Newtonian elastohydrodynamic fluid, Materials Today: Proceedings,10.1016/j.matpr.2021.04.441,46,(6859-6866),(2021).

[12] Sumita Chaturvedi, Prem Kumar Bharti, Saurabh Kumar Yadav, Saumya Singh "A finite simulation of MOM(metal-on-metal) hipimplant" Lubrication Science31(5): 210-217,2019. https://doi.org/10.1002/ls.1450.

[13] Sharma N and Swati Sharma (2008) Control of foliar diseases of mustard by Bacillus from reclaimed soil. *MicrobiologicalResearch*163:408-413.IF:5.415.

[14] Gupta A, Rai S, Bano A, Khanam A, Swati Sharma, Pathak, N (2021) Comparative Evaluation of Different Salt-Tolerant Plant Growth Promoting Bacterial Isolates in Mitigating the Induced Adverse Effect of Salinity in *Pisumsativum*. *Biointerface Research in Applied Chemistry,*11:13141–13154.

[15] Gupta A, Bano A, Rai S, Kumar M, Ali J, Swati Sharma, Pathak N(2021) ACC deaminase producing plant growth promoting rhizobacteria enhance salinity stress tolerance in *Pisumsativum.3Biotech* 11:1-17. IF:0.522.

[16] Gupta A, Bano A, Rai S, Dubey P, Khan F, Pathak N, Swati Sharma(2021) Plant Growth Promoting Rhizobacteria (PGPR): A sustainable agriculture orescue the vegetation from the effect of bioticstress: A Review. *Lett. Appl. NanoBiosci* 10: 2459-2465.

[17] Gupta A, Bano A, Rai S, Swati Sharma, Pathak N (2022)Selection of Carrier Materials to Formulate Bioinoculant Package for Promoting Seed Germination. *Lett. Appl. NanoBiosci* 12: 65.

[18] Ansari MI, Calleja MLI, Silva L, Viegas M, Ngugi DK, Huete-Stauffer TM and Morán XAG (2022) High-Frequency Variability of Bacterioplankton in Response to Environmental Drivers in Red Sea Coastal Waters. Front. Microbiol. 13:780530. doi:10.3389/fmicb.2022.780530

[19] Silva L, Calleja ML, Huete-Stauffer TM, Ivetic S, Ansari MI, Viegas M and Morán XAG (2022) Heterotrophic Bacterioplankton Growth and Physiological Properties in Red Sea Tropical Shallow Ecosystems With Different Dissolved Organic Matter Sources. Front.Microbiol.12:784325. doi: 10.3389/fmicb.2021.784325

[20] Gupta, P., Singh, M.P., Goyal, K., Tripti, P., Ansari, M.I., Obli Rajendran, V., Dhama, K. and Malik, Y.S., 2021. Bats and viruses: a death-defying friendship. Virus disease, 32(3), pp.467-479.

[21] Malik, Y.S., Sircar, S., Bhat, S., Ansari, M.I., Pande, T., Kumar, P., Mathapati, B., Balasubramanian, G., Kaushik, R., Natesan, S. and Ezzikouri, S., 2021. How artificial intelligence may help the Covid-19 pandemic: Pitfalls and lessons for the future. Reviews in medical virology, 31(5), pp.1-11.

[22] Malik, Y.S., Ansari, M.I., Kattoor, J.J., Kaushik, R., Sircar, S., Subbaiyan, A., Tiwari, R.,Dhama, K., Ghosh, S., Tomar, S. and Zhang, K.Y., 2021. Evolutionary and codon usage preference insights into spike glycoprotein of SARS-CoV-2. Briefings in bioinformatics,22(2),pp.1006-1022.

[23] Taiba Saeed, Shahzad A, Sharma S (2020) Studies on single and double layered biocompatible encapsulation of somatic embryos in *Albizia lebbeck* and genetic homogeneity appraisal among synseed derived lines through ISSR markers. Plant Cell Tissue Organ Culture 140: 431-445. IF-2.711

[24] Ahmad A, Khan TA, Mubeen S, Shahzadi I, Akram W, Taiba Saeed, Bashir Z, Wang R, Alam M, Ahmed S, Hu D, LiG, Wu T (2020) Metabolic and proteomic perspectives of augmentation of nutritional contents and plant defense in *Vignaunguiculata*.

Biomolecules 10: 224. IF-4.569

[25] Khan TA, Yusuf M, Ahmad A, Bashir B, Taiba Saeed, Fariduddin Q, Hayat S, Mock HP, WuT(2019)Proteomic and physiological assessment of stress sensitive and tolerant variety of tomato treated with brassino steroids and hydrogen peroxide under low-temperature stress. Food Chemistry.289: 500-511.IF-7.514.

[26] Taiba Saeed, Shahzad A, Ahmad N, Parveen S.(2018) High frequency conversion of non-embryogenic synseeds and assessment of genetic stability through ISSR markers in *Gymnema sylvestre*. Plant Cell Tissue Organ Cult 134 163-168. IF-2.711

[27] Taiba Saeed and Shahzad A (2015) High frequency plant regeneration in Indian Siris via cyclic somatic embryogenesis with biochemical, histological and SEM investigations. Industrial Crops and Products 76:623–637. IF-6.40.

[28] M. A. Siddiqui, M. N. Anwar, S. H. Laskar, and M. R. Mahboob, "A unified approach to design controller in cascade control structure for unstable, integrating and stable processes," ISA Transactions, pp. 1–16, 2020, doi:10.1016/j.isatra.2020.12.038. (SCIE).

[29] M. A. Siddiqui, M. N. Anwar, and S. H. Laskar, "Enhanced control of unstable cascade systems using direct synthesis approach," Chemical Engineering Sciences, 232, pp. 116322, 2021, doi: 10.1016/j.ces.2020.116322. (SCIE).

[30] M. A. Siddiqui, M. N. Anwar, and S. H. Laskar, "Sliding mode controller design for second-order unstable processes with dead-time," Journal of Electrical Engineering, 71, no. 4, pp. 237–245, 2020, doi: 10.2478/jee-2020-0032. (SCIE).

[31] M. A. Siddiqui, M. N. Anwar, S. H. Laskar, M. Shamsuzzoha, and M. R. Mahboob, "Closed Loop Tuning of Cascade Controllers Based on Setpoint Experiment, "Journal of Engineering research, 8, no. 4, pp. 117–138, 2020, doi:10.36909/jer.v8i4.8492. (SCIE).

Creating Excellence *Globally!*

www.iul.ac.in