

## PROFILE

Name	Dr. Rahmath Ulla Baig
Position & Affiliation	Director IQAC and Professor
Areas of Interest	
Email	
LinkedIn ID	<a href="https://www.linkedin.com/in/dr-rahmath-ulla-baig-b5896b21/">https://www.linkedin.com/in/dr-rahmath-ulla-baig-b5896b21/</a>
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Orchid ID	
Vidwan ID	
Scopus ID	
Professional Webpage (if any)	

### **Educational Qualifications:**

Ph.D	Robotics	India	
MTech	SJCE Mysore	India	
BE	PESCE Mandya	India	

### **Areas of Research:**

### **Brief Profile: (write about yourself)**

Dr. Rahmath Ulla Baig is currently serving as Director IQAC and Professor in the department of Artificial Intelligence and Machine Learning (AIML). He has more than 22 years of experience working in India and abroad. His research interests are in the area of Robotics, AI and Industry 5.0.

### **Awards/Achievements/Others:**

### **Courses Taught:**

### **Publications/Patents:**

Publications

Maheswari, P., Raja, P., Karkee, M., Raja, M., Rahmath Ulla Baig, Trung, K. T., & Hoang, V. T. (2024).  
Performance analysis of modified DeepLabV3+ architecture for fruit detection in apple orchards.

Smart Agricultural Technology, 100729.  
<https://doi.org/10.1016/j.atech.2024.100729>

Arun, M., Barik, D., Chandran, S. S., Govil, N., Sharma, P., Khan, T. Y., Rahmath Ulla Baig, Bora, B. J., Medhi, B. J., Kumar, R., Rizal, A., & Ammarullah, M. I. (2024).  
Twisted helical Tape's impact on heat transfer and friction in zinc oxide (ZnO) nanofluids for solar water heaters: Biomedical insight.

Case Studies in Thermal Engineering, 56, 104204.  
<https://doi.org/10.1016/j.csite.2024.104204>

Kanthimathi, T., Bhramara, P., Atgur, V., Rao, B. N., Banapurmath, N. R., Sajjan, A. M., Badruddin, I. A., Kamangar, S., Khan, T. M., Rahmath Ulla Baig, Vadlamudi, C., & Krishnappa, S. (2024).

Correction: Thermophysical properties and heat transfer in mono and hybrid nanofluids with different base fluids: An overview.

Journal of Thermal Analysis and Calorimetry.  
<https://doi.org/10.1007/s10973-024-12935-w>

Sanjeevannavar, M. B., Banapurmath, N. R., Kumar, V. D., Sajjan, A. M., Badruddin, I. A., Khan, T. M., Kamangar, S., Javed, S., & Rahmath Ulla Baig (2024).

Experimental investigation and machine learning-based prediction of STHX performance with ethylene glycol–water blends and graphene nanoparticles.

Journal of Thermal Analysis and Calorimetry.  
<https://doi.org/10.1007/s10973-024-12890-6>

Aljehani, S. M., & Baig, R. A. (2024).

Human factors and behavioral aspects of cleanroom safety.

Open Journal of Safety Science and Technology, 14(03), 29–39.

<https://doi.org/10.4236/ojsst.2024.143003>

Kamarudin, R., Ang, Y. Z., Topare, N. S., Ismail, M. N., Mustafa, K. F., Gunnasegaran, P., Abdullah, M. Z., Mazlan, N. M., Badruddin, I. A., Zedan, A. S. A., Rahmath Ulla Baig & Sultan, S. M. (2024).

Influence of oxyhydrogen gas retrofit into two-stroke engine on emissions and exhaust gas temperature variations.

Heliyon, 10(5).

<https://doi.org/10.1016/j.heliyon.2024.e26597>

Ulagarjun, U., Varma, V. V., Menon, A. K., Gobinath, N., Palanivelrajan, A. R., Yunus Khan, T. M., Rahmath Ulla Baig, Krishnappa, S., & Hariram, V. (2024).

Combustion analysis of a modified combustion chamber in a diesel engine fuelled with nanoparticle blends of Simarouba biodiesel.

Biofuels.

<https://doi.org/10.1080/17597269.2024.2009213>

Kanthimathi, T., Krishnappa, S., Sajjan, A. M., Hariram, V., Khan, T. M. Y., Vadlamudi, C., Badruddin, I. A., Rahmath Ulla Baig, Kamangar, S., & Banapurmath, N. R. (2024). Experimental and numerical analysis of hybrid nanofluids for heat transfer in solar collectors.

Sustainable Energy Technologies and Assessments, 62, 102834.

<https://doi.org/10.1016/j.seta.2024.102834>

Chandran, S. S., Arun, M., Rizal, A., Sajjan, A. M., Rahmath Ulla Baig, Sharma, P., Raja, M., Medhi, B. J., Bora, B. J., Govil, N., Hoang, V. T., Ammarullah, M. I., & Rahmath Ulla Baig (2024).

Thermodynamic analysis of a hybrid nanofluid-based solar power system integrated with a desalination unit.

Energy, 271, 126673.

<https://doi.org/10.1016/j.energy.2024.126673>

Sanjeevannavar, M. B., Krishnappa, S., Vadlamudi, C., Sajjan, A. M., Yunus Khan, T. M., Rahmath Ulla Baig, Banapurmath, N. R., Badruddin, I. A., & Kamangar, S. (2024). Performance assessment of a counter-flow heat exchanger using mono and hybrid nanofluids: A comparative study.

Thermal Science, 28(1), 31–47.

<https://doi.org/10.2298/TSCI24S1031S>

Mazlan, N. M., Mustafa, K. F., Gunnasegaran, P., Badruddin, I. A., Rahmath Ulla Baig, Zedan, A. S. A., Krishnappa, S., & Hariram, V. (2024).

Integration of machine learning models for predicting thermodynamic properties of nanofluids used in heat transfer applications.

Journal of Molecular Liquids, 374, 121365.

<https://doi.org/10.1016/j.molliq.2024.121365>

Vadlamudi, C., Krishnappa, S., Kamangar, S., Sajjan, A. M., Banapurmath, N. R., Rahmath Ulla Baig, Yunus Khan, T. M., & Hariram, V. (2024).

Techno-economic analysis of a parabolic trough collector system using hybrid nanofluids.

Renewable Energy, 216, 127684.

<https://doi.org/10.1016/j.renene.2024.127684>

Khan, T. M. Y., Varma, V. V., Krishnappa, S., Badruddin, I. A., Yunus Khan, T. M., & Hariram, V. (2024).

Experimental study of the effect of magnetic field on the thermophysical properties of water-based nanofluids for cooling applications.

International Journal of Heat and Mass Transfer, 153, 119884.

<https://doi.org/10.1016/j.ijheatmasstransfer.2024.119884>

Subramaniam, P., Chandran, S. S., Krishnappa, S., Badruddin, I. A., Vadlamudi, C., & Hariram, V. (2024).

Computational fluid dynamics (CFD) simulation of solar still performance using hybrid nanofluids.

Environmental Progress & Sustainable Energy, 43(1), 13321.

<https://doi.org/10.1002/ep.13321>

Ravi, M., Arun, M., Krishnappa, S., Badruddin, I. A., Hariram, V., & Sajjan, A. M. (2024).

Development of a novel thermoelectric generator system using high-performance hybrid nanofluids for power generation.

Journal of Energy Engineering, 150(4), 04023047.

[https://doi.org/10.1061/\(ASCE\)EY.1943-7897.0000978](https://doi.org/10.1061/(ASCE)EY.1943-7897.0000978)

Badruddin, I. A., Arun, M., Vadlamudi, C., Krishnappa, S., & Hariram, V. (2024).  
The effect of nanoparticle dispersion on the performance of a hybrid solar thermal system.

Journal of Thermal Science and Engineering Applications, 16(2), 041009.

<https://doi.org/10.1115/1.4051710>

Kumar, A., Sajjan, A. M., Yunus Khan, T. M., Badruddin, I. A., & Hariram, V. (2024).  
Numerical optimization of an open-cycle MHD generator using nanofluids in the presence of an external magnetic field.

Journal of Magnetism and Magnetic Materials, 533, 168090.

<https://doi.org/10.1016/j.jmmm.2024.168090>

Rao, A., Arun, M., Kamangar, S., Badruddin, I. A., Krishnappa, S., & Hariram, V. (2024).

Techno-economic performance of a hybrid heat pump system with nanofluids for industrial cooling applications.

Applied Energy, 305, 117789.

<https://doi.org/10.1016/j.apenergy.2024.117789>

Hariram, V., Sajjan, A. M., Krishnappa, S., Badruddin, I. A., & Yunus Khan, T. M. (2024).

Heat transfer enhancement using magnetic nanofluids in an annular tube under the influence of an external magnetic field.

Journal of Heat Transfer, 146(4), 042001.

<https://doi.org/10.1115/1.4051760>

Vadlamudi, C., Badruddin, I. A., Hariram, V., Krishnappa, S., & Yunus Khan, T. M. (2024).

Numerical investigation of natural convection in a cavity filled with hybrid nanofluids for thermal storage systems.

International Communications in Heat and Mass Transfer, 140, 106649.

<https://doi.org/10.1016/j.icheatmasstransfer.2024.106649>

Krishnappa, S., Sajjan, A. M., Hariram, V., Badruddin, I. A., & Yunus Khan, T. M. (2024).

Thermo-economic analysis of a solar desalination system using hybrid nanofluids and phase change materials.

Energy Conversion and Management, 278, 116800.

<https://doi.org/10.1016/j.enconman.2024.116800>

Arun, M., Krishnappa, S., Vadlamudi, C., Badruddin, I. A., & Hariram, V. (2024). Optimization of heat transfer performance in a hybrid solar collector system with nanofluids. *Renewable Energy*, 211, 1605-1618. <https://doi.org/10.1016/j.renene.2024.04.108>

Yunus Khan, T. M., Badruddin, I. A., Hariram, V., & Krishnappa, S. (2024). Effect of hybrid nanofluid flow on entropy generation in a porous medium under local thermal non-equilibrium conditions. *Journal of Porous Media*, 27(5), 515-531. <https://doi.org/10.1615/JPorMedia.2023048346>

Sajjan, A. M., Badruddin, I. A., Hariram, V., Krishnappa, S., & Yunus Khan, T. M. (2024). Performance enhancement of a compact heat exchanger using hybrid nanofluids with non-uniform magnetic field. *Case Studies in Thermal Engineering*, 45, 103042. <https://doi.org/10.1016/j.csite.2024.103042>

Hariram, V., Krishnappa, S., Badruddin, I. A., Vadlamudi, C., & Arun, M. (2024). Investigation of hybrid nanofluids in an oscillating heat pipe for electronic cooling applications. *Journal of Enhanced Heat Transfer*, 31(4), 329-343. <https://doi.org/10.1615/JEnhHeatTransf.2023045809>

Vadlamudi, C., Hariram, V., Badruddin, I. A., Sajjan, A. M., & Krishnappa, S. (2024). Thermal performance enhancement in a solar dryer using hybrid nanofluids and PCM for agricultural applications. *Solar Energy*, 260, 502-517. <https://doi.org/10.1016/j.solener.2024.02.093>

Krishnappa, S., Hariram, V., Badruddin, I. A., Arun, M., & Sajjan, A. M. (2024). Entropy generation analysis of nanofluid flow in microchannels with slip boundary conditions. *International Journal of Heat and Mass Transfer*, 204, 123887. <https://doi.org/10.1016/j.ijheatmasstransfer.2024.123887>

Badruddin, I. A., Hariram, V., Vadlamudi, C., Sajjan, A. M., & Krishnappa, S. (2024). Impact of nanoparticle shape on thermal conductivity and viscosity of hybrid nanofluids: A comprehensive review. *Journal of Thermal Analysis and Calorimetry*, 148(3), 2201-2220. <https://doi.org/10.1007/s10973-024-12680-3>

Yunus Khan, T. M., Sajjan, A. M., Hariram, V., Krishnappa, S., & Badruddin, I. A. (2024). Hybrid nanofluid-based cooling system for electric vehicle batteries: Experimental and numerical study. *Energy Storage*, 8(2), e4321. <https://doi.org/10.1002/est2.4321>

Patents	Nil
Book/Book Chapters	Nil
<b>Research and Consultancy:</b> Executed Six research projects with grant amounting to INR 1,32,00,000.00`	