# Curriculum Vitae

Name Dr. Mahesh Kumar Yadav

Date of Birth April 05, 1987 (Alwar Rajasthan, India)

Nationality Indian

Designation Assistant Professor (August 2019 onwards)

Present Address Department of Mechanical Engineering

Punjab Engineering College (Deemed to be University)

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Google Scholar <a href="https://scholar.google.co.in/citations?user=xKF7d9UAAAAJ&hl=en">https://scholar.google.co.in/citations?user=xKF7d9UAAAAJ&hl=en</a>

(Citations: 154; *h*-index: 6; *i*10-index: 5)

**Research Gate** <a href="https://www.researchgate.net/profile/Mahesh Yadav7">https://www.researchgate.net/profile/Mahesh Yadav7</a>

#### Fields of interest

Passive Nuclear Reactor Containment Cooling, Hydrogen Management and Mitigation, Phase-Change Heat Transfer, and Inverse Heat Transfer and Measurement Techniques.

## **Academic qualifications [Transcripts]**

Degree	Year	Major	Institute/University/Board	CGPA/ %
Ph.D.	2012 - 2019	Fluid and Thermal Sciences	Indian Institute of Technology (IIT) Kanpur	7.6/10.0
M. Tech.	2008 - 2010	Fluid and Thermal Engineering	Indian Institute of Technology (IIT) Guwahati	8.0/10.0
B. E.	2004 - 2008	Mechanical Engineering	Government Engineering College Bikaner Rajasthan/ University of Rajasthan	73.0% (1 <sup>st</sup> Div. & Honors)
XII	2002 - 2003	Math Science	Board of Secondary Education Ajmer, Rajasthan	69.5%, 1 <sup>st</sup> Div.
X	2000 - 2001	English, Hindi, Sanskrit, Math, Science, Social Science	Board of Secondary Education Ajmer, Rajasthan	75.3%, 1 <sup>st</sup> Div.



## **Professional experience**

Desig- nation	Institute	Pay/ Pay Scale	Job profile	From- To	Major contributions
Asst. Prof.	Punjab Engineering College (Deemed to be University) Chandigarh	15600- 39100 AGP 7000	Teaching and Research	Aug 2019 to ongoing	Online/offline teaching; published 5 articles; 2 projects under review.
Student on Project	Indian Institute of Technology (IIT) Kanpur (Bhabha Atomic Research Centre, BARC - IIT Kanpur MoU project)	20000 (Fixed)	Research	Jan 2017 to Dec 2018	Proposal writing; Instrumentation and benchmarking of the large setup.
Ph.D. Student	IIT Kanpur (Board of Research in Nuclear Sciences, BRNS - IIT Kanpur Basic Research Project)	31000 (Fixed)	Research	April 2015 to March 2018	Completed the full 3 years project, from the proposal writing to the final report submission.
Asst. Prof.	Delhi Technological University (formerly Delhi College of Engineering) Delhi	15600- 39100 AGP 6000	Teaching	Aug 2011 to Nov 2011	Taught undergraduate students

## • Ph. D. - Indian Institute of Technology Kanpur, India 2019.

Thesis Title: Steam Condensation Studies Towards Understanding Post-Severe Nuclear Accident Scenarios [Synopsis] [Thesis]

Thesis supervisor: Prof. Sameer Khandekar

The study was focused on passive containment cooling during a severe nuclear accident. An instrument extensive experimental program was performed to investigate the steam condensation heat transfer in the presence of air and helium gases. Initially, commercial heat flux sensors' inability to correctly envisage the transient condensation flux was highlighted via a numerical case study in ANSYS CFX. A corrective measurement system based on inverse heat conduction technique was successfully developed on the MATLAB platform, validated and benchmarked against numerical as well as experimental data. The measurement system was successfully employed to measure transient condensation heat flux. Two semi-empirical condensation heat transfer coefficient correlations were developed using the subsequent condensation experiments. Additionally, the relationship of different parameters viz., bulk pressure and temperature, bulk Reynolds number, wall subcooling, non-condensable mass fraction, type of non-condensable gases, inclination angles of the test surface on condensation heat transfer coefficient were established. Hands-on experience on thermopile based conventional heat flux sensors; pressure transducers; mass flow meter cum controller for steam, air and helium gases; pressure reducing station; online mass spectrometer system for evaluating steam-air-helium composition; infrared and optical imaging; and preparation and characterization of hydrophobic/hydrophilic textured aluminum surfaces was gained during the study. Theoretical/numerical studies were also undertaken to design the experimental setup and find the optimum boundary heat flux using the inverse heat conduction technique.

## • M. Tech. - Indian Institute of Technology Guwahati, India, 2010.

Thesis Title: Modeling and simulation of a combined cycle.

A cogeneration power plant based on combined Joule-Brayton and Rankine cycles in the primary and the secondary loop, respectively, was considered to overcome limited fuel efficiency of the commonly used power generation systems. Different components, i.e., heater, compressor, and turbines, heat exchanger, condenser, and pump were modeled in ASPEN PLUS® software to optimize the thermal parameters, and the exergy and economic aspects of the combined cycle. It was found that higher thermal efficiency not always results in lower exergy destruction of individual components, and a combined first and second law analyses were performed. The mass flow rate of fluid in the primary loop is optimized for power to heat ratio, and 15 - 20 % improvement was seen in the efficiency of the plant.

• B. E. (Mechanical Engineering) - Govt. Engg. College Bikaner Rajasthan, India, 2008.

# Research experience/ Sponsored research

- Worked on a project, Local heat transfer coefficient during film condensation of steam hydrogen mixtures, funded by Board of Research in Nuclear Sciences (BRNS), Mumbai, India with Prof. Sameer Khandekar (PI) and Prof. K. Muralidhar (Co-PI) from April 2015 March 2018 (Ph.D. Thesis Drafted as Final Project Report). The work carried out during this project includes (Click here for more details):
  - Assisted in ideation, writing, and revising the project proposal (total worth of INR 5.25 million) to study condensation of steam at small scale under typical severe nuclear accident conditions.
  - Completed design, fabrication, and instrumentations of the experimental setup from the scratch to perform the generic condensation studies.
  - Developed and validated an inverse technique based high heat flux measurement system for adverse environmental conditions.
  - Prepared project progress report, project completion report, and mentored undergraduate, graduate, and post-graduate students.
  - Written six journal articles on transient heat flux measurements and scrutinizing condensation heat transfer under different operating conditions.
- Worked on a project, Studies on heat transfer during condensation of steam-hydrogen mixtures inside closed containment, funded by Bhabha Atomic Research Center (BARC), Mumbai, India with Prof. Sameer Khandekar (PI) and Prof. K. Muralidhar (Co-PI) for two years from January 2017 December 2018 (Click here for more details):
  - Assisted in writing and revising the project proposal worth INR 12.9 million, and prepared drawings of the large scale facility (0.96 m diameter and 3.6 m height).
  - Worked on design, fabrication, erection and instrumentation of the single-compartment Thermal-HYdraulic test facility for CONtainment (THYCON).
  - Performed calibration and early-stage experiments for benchmarking of a complex online mass-spectrometry system (Hiden Analytical® make with 20 sampling ports) to estimate the mass fractions of individual species in a steam-air-helium mixtures, the gases with significantly different molecular masses.
  - Written articles on local transport and combustion issues of steam-air-hydrogen mixtures, and design and development of the experimental setups (published in International Journal of Hydrogen Energy and Progress in Nuclear Energy).

## Academic achievements/fellowships

- Recognized as *Outstanding Reviewer* by the international journal 'Measurement Science and Technology', the world's first scientific instrumentation and measurement journal for the year 2020.
- Recognized as *IOP Trusted Reviewer* in recognition of an exceptionally high level of peer review competency in the year 2020.
- Student Best Poster award for the paper titled 'Effect of surface inclination on film condensation heat transfer in the presence of non-condensable gases' at 27<sup>th</sup> International Conference on Nuclear Engineering (ICONE-27) by JSME and ASME.
- International travel grant from IIT Kanpur for attending the International Conference on Recent Advances in Fluid and Thermal Sciences (iCRAFT-2018), BITS Pilani, Dubai campus, Dubai, UAE, 05-07 December 2018.
- Received *higher education scholarship* from Government of India to pursue M. Tech. at Indian Institute of Technology Guwahati, Guwahati (Assam), India (2008-2010), and Ph.D. at Indian Institute of Technology Kanpur, Kanpur (UP), India (2012-2017).

## Peer-reviewed international journal publications

- 1. Punetha M., **Yadav M.K.**, Jain S., Khandekar S., Sharma P.K., *Thermal-hydraulic test facility for nuclear reactor containment: Engineering design methodology and benchmarking*, Progress in Nuclear Energy, Vol. 138, pp. 103837, 2021. IF: 2.256, DOI: <a href="https://doi.org/10.1016/j.pnucene.2021.103837">https://doi.org/10.1016/j.pnucene.2021.103837</a>. ISSN: 0149-1970. SCIE. Q1 [Download]
- 2. **Yadav M.K.**, Yadav V., *Time limit for using the semi-infinite heat transfer solutions: A novel approach*, IOP SciNotes, Vol. 1, pp. 024402, 2020. DOI: <a href="https://doi.org/10.1088/2633-1357/abaf67">https://doi.org/10.1088/2633-1357/abaf67</a>. ISSN: 2633-1357. [Download]
- 3. Yadav M.K., Punetha M., Bhanawat A., Khandekar S., Sharma P.K., Steam condensation heat transfer during initial blow-down period of a severe nuclear accident, ASME Journal of Nuclear Engineering and Radiation Science, Paper No: NERS-19-1164, pp. 041108-1-9, 2020. IF: 0.5, DOI: <a href="https://doi.org/10.1115/1.4046910">https://doi.org/10.1115/1.4046910</a>, ISSN: 2332-8983. ESCI. Q3 [Download]
- 4. Bhanawat A., **Yadav M.K.**, Punetha M., Khandekar S., Sharma P.K., *Effect of surface inclination on filmwise condensation heat transfer during flow of steam-air mixtures*, ASME Journal of Thermal Science and Engineering Application, Paper No: TSEA-19-1551, pp. 041028-1-13, 2020. IF: 1.47, DOI: <a href="https://doi.org/10.1115/1.4046867">https://doi.org/10.1115/1.4046867</a>, ISSN: 1948-5085. SCIE. Q2 [Download]
- 5. Punetha M., **Yadav M.K.**, Khandekar S., Sharma P. K., Ganju S., *Intrinsic transport and combustion issues of steam-air-hydrogen mixtures in nuclear containments*, International Journal of Hydrogen Energy, Vol. 45, pp. 3340-3371, 2020. IF: 5.816, DOI: <a href="https://doi.org/10.1016/j.ijhydene.2019.11.179">https://doi.org/10.1016/j.ijhydene.2019.11.179</a>, ISSN: 0360-3199. SCIE. Q1 [Download]
- 6. **Yadav M.K.**, Singh S.K., Parwez A., Khandekar S., *Inverse models for transient wall heat flux estimation based on single and multi-point temperature measurements*, International Journal of Thermal Sciences, Vol. 124, pp. 307-317, 2018. IF: 3.744, DOI: <a href="http://dx.doi.org/10.1016/j.ijthermalsci.2017.10.027">http://dx.doi.org/10.1016/j.ijthermalsci.2017.10.027</a>, ISSN: 1290-0729, SCIE. Q1 [Download]

- 7. Singh S.K., **Yadav M.K.**, Sonawane R., Khandekar S., Muralidhar K., *Estimation of time-dependent wall heat flux from single thermocouple data*, International Journal of Thermal Sciences, Vol. 115, pp. 1-15, 2017. IF: 3.744, DOI: <a href="http://dx.doi.org/10.1016/j.ijthermalsci.2017.01.010">http://dx.doi.org/10.1016/j.ijthermalsci.2017.01.010</a>, ISSN: 1290-0729, SCIE. Q1 [Download]
- 8. Singh S.K., **Yadav M.K.**, Khandekar S., *Measurement issues associated with surface mounting of thermopile heat flux sensors*, Applied Thermal Engineering, Vol. 114, pp. 1105-1113, 2017. IF: 5.295, DOI: <a href="http://dx.doi.org/10.1016/j.applthermaleng.2016.12.076">http://dx.doi.org/10.1016/j.applthermaleng.2016.12.076</a>, ISSN: 1359-4311, SCIE. Q1 [Download]
- 9. **Yadav M.K.**, Khandekar S., Sharma P.K., *An integrated approach to steam condensation studies inside reactor containments: A review*, Nuclear Engineering and Design, Vol. 300, pp. 181-209, 2016. IF: 1.869, DOI: <a href="http://dx.doi.org/10.1016/j.nucengdes.2016.01.004">http://dx.doi.org/10.1016/j.nucengdes.2016.01.004</a>, ISSN: 0029-5493, SCIE. Q1 [Download]
- 10. Kundu A., **Yadav M.K.**, Janeshwar, Samir S., *Transport behavior of leaking hydrogen in an underground storage warehouse, associated safety issues and mitigation*, Ready for Submission.
- 11. **Yadav M.K.**, Yadav V., Khandekar S., *New time-limit for using semi-infinite approximate heat transfer solutions*, <u>Ready for Submission</u>.
- 12. **Yadav M.K.**, Khandekar S., *Experimental study of steam condensation in the presence of air on a small vertical surface*, <u>Under Preparation</u>.
- 13. **Yadav M.K.**, Khandekar S., *Effect of surface inclination angles on dropwise condensation of steam in a range of sessile to pendant configurations*, <u>Under Preparation</u>.

### **Book chapters**

- **Yadav M.K.**, Punetha M., Bhanawat A., Khandekar S., Muralidhar K., *Measurement of Condensation Heat Transfer*, in 'Drop Dynamics and Dropwise Condensation on Textured Surfaces', Springer Mechanical Engineering Series, pp. 351-377, 2020. ISBN: 978-3-030-48460-6. DOI: <a href="http://dx.doi.org/10.1007/978-3-030-48461-3">http://dx.doi.org/10.1007/978-3-030-48461-3</a>.
- Yadav M.K., Somwanshi P., Khandekar S., Chatterjee, S., Gonga, M., Muralidhar K., Bhattacharjee S., *Surface Preparation: Some Techniques*, in 'Drop Dynamics and Dropwise Condensation on Textured Surfaces', Springer Mechanical Engineering Series, pp. 331-350, 2020. ISBN: 978-3-030-48460-6. DOI: <a href="http://dx.doi.org/10.1007/978-3-030-48461-3">http://dx.doi.org/10.1007/978-3-030-48461-3</a>.

## Peer reviewed conference proceedings (published/presented)

- 1. Kundu A., **Yadav M.K.**, Dhamija R., Kalra D., Bansal H., Singh S., Chauhan S., Kumar P., Bali K., *Hydrogen leakage in a confined warehouse: Distribution pattern and identification of explosion locations*, Number: IHMTC2021-611, Proceedings of the 26<sup>th</sup> National and 4<sup>th</sup> International ISHMT-ASTFE Heat and Mass Transfer Conference, IIT Madras, Tamil Nadu, India, December 17-20, 2021, Proceedings in Begell House Digital Library, ISSN: 2688-7231, <u>Accepted for Publication</u>.
- 2. **Yadav M.K.**, Yadav V., Khandekar S., *New time-limit for using semi-infinite heat transfer solutions in inverse problems*, Number: ICIPE20-I.1.14, 10<sup>th</sup> International Conference on Inverse Problems in Engineering (ICIPE-20), Francavilla al Mare (Chieti), Italy, 15-19 May 2022, Journal of Physics: Conference Series, ISSN: 1742-6596 Accepted for Publication.

- 3. Vikas, Yadav A., **Yadav M.K.**, Samir S., *Phase Change Materials for Comfort Management of Poultry Farms A Review*, 3<sup>rd</sup> International Conference on Contemporary Advances in Mechanical Engineering (ICCAME-2021), Chandigarh Engineering College Chandigarh, India, 27-28 August 2021. Published in Materials Today: Proceedings. ISSN: 2214-7853.
- 4. Punetha M., Kulkarni S., **Yadav M.K.**, Khandekar S., *Numerical Study on Combined Effect of Steam Condensation and Mixing Inside Thermal-Hydraulic Test Facility for Containment (THYCON*), Manuscript ID: IHMTC2019-MPF-096, 25<sup>th</sup> National and 3<sup>rd</sup> International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTC-2019), IIT Roorkee, Roorkee, India, 28-31 December 2019.
- 5. Punetha M., **Yadav M.K.**, Bhanawat A., Khandekar S., *Steam condensation heat transfer inside reactor containment at the initial transient after a severe accident*, 27<sup>th</sup> International Conference on Nuclear Engineering, Ibaraki, Japan, 19-24 May 2019. Proceedings of ICONE-27, Japan Science and Technology Agency, ISSN: 2424-2934, Selected for Journal Publication.
- 6. Bhanawat A., **Yadav M.K.**, Punetha M., Khandekar S., *Effect of surface inclination on film condensation heat transfer in the presence of non-condensable gases*, 27<sup>th</sup> International Conference on Nuclear Engineering, Ibaraki, Japan, 19-24 May 2019. Proceedings of ICONE-27, Japan Science and Technology Agency, ISSN: 2424-2934, Awarded Student Best Poster jointly by JSME and ASME.
- 7. **Yadav M.K.**, Bhanawat A., Khandekar S., *Characteristics of dropwise condensation of steam in a range of sessile to pendant configurations*, International Conference on Recent Advances in Fluid and Thermal Sciences (iCRAFT-2018), BITS Pilani, Dubai campus, Dubai, UAE, 05-07 December 2018, <u>Presentation only</u>.
- 8. **Yadav M.K.**, Singh S.K., Khandekar S., *Non-intrusive local wall heat flux measurement system*, Paper No. IHMTC2017-08-0144, 24th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTC-2017), BITS Pilani, Hyderabad campus, Hyderabad, India, 27-30 December 2017.
- 9. **Yadav M.K.**, Singh S.K., Khandekar S., Sharma P.K., *Experimental validation of an inverse heat conduction based non-intrusive thermal sensor*, Paper no. 123, Thorium Energy Conference, ThEC 2015, BARC, Mumbai, India, 12-15 October 2015.
- 10. Singh S.K., **Yadav M.K.**, Khandekar S., Sharma P.K., *Modelling of steam condensation using inverse heat transfer technique*, Paper no. 122, Thorium Energy Conference, ThEC 2015, BARC, Mumbai, India, 12-15 October 2015.
- 11. **Yadav M.K.**, Khandekar S., Sharma P.K., *Steam condensation on nuclear reactor containments (post-Fukushima): theory and experiments*, Proceedings of International Workshop on New Horizons in Nuclear Reactor Thermal Hydraulics and Safety, INIS 45 (34), IW-NRTHS 2014, BARC, Mumbai, India, 13-15 January 2014.
- 12. Sonawane R., **Yadav M.K.**, Khandekar S., Muralidhar K., Sharma P.K., *Modelling and analysis of inverse heat transfer problems for containment wall applications*, Proceedings of International Workshop on New Horizons in Nuclear Reactor Thermal Hydraulics and Safety, INIS 45 (34), IW-NRTHS 2014, BARC, Mumbai, India, 13-15 January 2014.

### Reviewer of internal journal/conference papers

- *Journals*: Measurement Science and Technology, Institute of Physics (IOP), SCIE; Physica Scripta, IOP, SCIE; International Journal of Precision Engineering and Manufacturing (IJPEM), Springer, SCIE; Processes, MDPI, SCIE; ACTA Polytechnica Czech, Technical University in Prague, ESCI.
- Conference: Fluid Mechanics and Fluid Power (FMFP).

# Membership of professional society

- American Society of Mechanical Engineers (ASME), Member 2022.
- American Society of Mechanical Engineers (ASME), Member 2021 (No. 103590421).
- Indian Society for Heat and Mass Transfer (ISHMT), Life member (No. 1449).
- The Institution of Engineers (India), Life member (No. M-1735548)

## **Project Proposals (submitted)**

- 'Transient Wall Heat Flux during Fire Accident Situations', amounting *INR 24.95 lakhs* to Bhabha Atomic Research Centre (BARC), Mumbai, India under the Young Scientist Research Award (YSRA) scheme.
- 'Analysis of Leaked Hydrogen Transport Behaviour and Associated Safety Issues in a Hydrogen Storage Warehouse', amounting *INR 21.88 lakhs* to Research Promotion Scheme (RPS) of AICTE as Principle Investigator (PI) with Prof. Ankit Yadav and Prof. Sushant Samir.
- 'Performance Analysis of Organic Phase Change Material based Thermal Management System for Consumer Electronics, amounting *INR 23.44 lakhs* to RPS of AICTE as Co-PI with Prof. Ankit Yadav (PI) and Prof. Sushant Samir (Co-PI).

#### **Invited talk**

• Presented an invited talk on 'Film condensation of steam-hydrogen-air mixtures on nuclear reactor containments under severe accident scenario' at Indo-French Workshop on Phase-Change Thermal Systems, Khajuraho (MP), India, 29 November - 01 December 2016.

### Courses and responsibilities undertaken at Punjab Engineering College (PEC)

- Joint Coordinator, Heat Engine Laboratory (January 2020 onwards).
- Joint Coordinator, Fluid Mechanics and Machine Laboratory (January 2020 onwards).
- Joint Coordinator, TEQIP III related activities (January 2020 onwards).
- Member, B. Tech. course curriculum development/ revision committee (January 2020 onwards).
- Member, Final year project evaluation committee (January December 2020).
- Member, 6th semester training evaluation committee (January December 2020).
- Member, U.G./ P.G. industrial tour committee (January December 2020).
- Courses taught: Thermodynamics, Applied Thermodynamics, Engineering Analysis and Design, Energy Conversion, Mechanical Measurement and Metrology, and Technical Communications.

• Courses developed: Applied Thermodynamics, Convective Heat and Mass Transfer, Two Phase Flow Heat Transfer, Experimental Methods for Engineers, Non-conventional Energy Resources, and Advanced Unconventional Energy Sources.

# Theses/projects guided at Punjab Engineering College (PEC)

Student(s) name	Thesis/ Project	Title	Year/ Session
Amit Parmar (Jointly with Prof. Rakesh Dang)	M. Tech Thesis	Hydrogen leakage inside a storage warehouse, local combustion threats, and mitigation using ventilation fans: A numerical study	Aug 2021 – July 2022 (Ongoing)
Anup Kundu	M. Tech Thesis	Simulation of hydrogen leakage and dispersion in air (Working on Final Draft of the Manuscript)	Aug 2020 – July 2021
Ankesh Kumar Singh, V Arvind, Avalnoor Singh, Ankit Kumar, Karanvir S. Garewal, Akshat Gaur	Major project	Numerical analysis of Taylor cone jet for electrospinning	Aug - Dec, 2021 (Ongoing)
Kunwar Bali, Rahul Dhamija, Sukhpreet Singh, Divyam Kalra, Shashank Chauhan, Harshit Bansal, Parvinder Kumar	Major project	CFD modelling of hydrogen leakage in a storage warehouse	Aug 2020 – June 2021
Ayush Sharma, Harmanpreet Singh, Akshit Kumar, Sanchit Kohli, Gitansh Aggarwal, Yatin Gupta	Major project	Intelligent multi-level car parking system	Jan - June, 2020
Ayush Sharma, Harmanpreet Singh, Akshit Kumar, Sanchit Kohli, Gitansh Aggarwal, Yatin Gupta	Major project	Arduino based 3D wire bending machine	Aug - Dec, 2019
Rishab Sharma, Rishabh Arora, Vikram Girish Rao, Rujul Singh Chahal, Manvesh Singh	Minor project	Numerical analysis of thermal behavior for a typical automotive disc brake	Aug - Dec, 2021 (Ongoing)
Shikhar Shiv, Vikram Singh Sidhu, Sahil Jindal, Vikas Barupal, Rahul	Minor project	Free energy magnetic fan	Aug - Dec, 2021 (Ongoing)
Abhilekh, Himanshu, Aditya, Kunal Kumar, Sumant Kumar, Anshul Kaushal	Minor project	Performance analysis of solar panels with tracking mechanism using Simulink and Matlab	Aug - Dec, 2020
Bhavya Jain, Ansh Lakhanpal, Mehul Jain, Sparsh Garg, Humayun Akhtar	Minor project	Thermal disturbance by mounting of a thermal sensor: A numerical case study	Aug - Dec, 2019

## Short term courses/Conferences/Workshops participation

- Completed the 5-day online FDP on the theme *Inculcating Universal Human Values in* Technical Education organized by All India Council for Technical Education (AICTE) 27-30 December 2021.
- Completed a 6 weeks online course on Learning to teach online, offered by the University of New South Wales (UNSW), Sydney at the Coursera platform, April 09-
- QIP short term course on Thermal Energy Storage for Effective Energy Management, IIT Kanpur, Kanpur, India, 10-14 February 2020.
- International Conference on Recent Advances in Fluid and Thermal Sciences (iCRAFT-2018), BITS Pilani, Dubai campus, Dubai, UAE, 05-07 December 2018.
- 24th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTC-2017), BITS Pilani, Hyderabad campus, Hyderabad, India, 27-30 December 2017.
- Indo-French Workshop on Phase-Change Thermal Systems, Khajuraho, India, 29 November-01 December 2016.
- International Thorium Energy Conference (ThEC 2015), BARC, Mumbai, India, 12-15 October 2015.
- Indo-German Workshop on Modeling and Measurement Techniques for Microscale Flows, Chennai, India, 23-25 February 2015.
- International Workshop on New Horizons in Nuclear Reactor Thermal Hydraulics and Safety, BARC, Mumbai, India, 13-15 January 2014.
- 17th International Heat Pipe Conference, IIT Kanpur, India, 13-17 October 2013.
- Workshop on Phase-change Thermal Systems, IIT Kanpur, Kanpur, India, 19-20 March 2012.

### **Industrial exposure**

- In-plant training for one and a half month at Bharat Heavy Electricals Limited (BHEL), Haridwar (Uttarakhand), India from July 2007 - August 2007.
- In-plant training for one month at HMT Machine Tools Limited, Ajmer (Rajasthan) India from June 2006 - July 2006.

#### Administrative and co-curricular experience

- Garden Secretary, Married Student Welfare Committee, IIT Kanpur, 2016-2017.
- Technical Secretary, Hostels' Affairs Board, IIT Guwahati, 2009-2010.

#### Referee details

Dr. Sameer Khandekar

Professor & Head (Ph.D. Thesis Supervisor) Department of Mechanical Engineering, Indian Institute of Technology, Kanpur 208016, Kanpur (UP) - India Tel: +91-512-2597038 (O) E-mail: samkhan@iitk.ac.in

Mr. Pavan K Sharma

Scientist - H Reactor Safety Division (RSD) Bhabha Atomic Research Centre (BARC) 400085, Mumbai Maharastra - India Tel: +91-222-5595158 (O)

Dr. S. K. Mangal

Professor & Head Department of Mechanical Engineering, Punjab Engineering College (PEC) Chandigarh, Sector -12, 160012, Chandigarh - India Tel: +91-172-2753561 (O) 

# **Declaration**

I confirm that the information provided by me is true to the best of my knowledge and belief.

Date: March.23, 2022

Place: Chandigarh, India

Mahesh Kumar Yadav

- (End of the CV) -