Government of West Bengal

Department of Science & Technology and Biotechnology (DSTBT)

Vigyan Chetana Bhavan, Block-DD, Plot-26/B, Sector-I Salt Lake, Kolkata-700064

<u>Application Format for Science Popularization Programme</u>

(Please upload the filled in "Application Format" along with necessary documents at Vigyansathi portal)

- 1. Programme Type (ref SN 11 of the Memorandum): Conference organised by University
- 2. Title of the proposed Programme: <u>3rd International Conference on Mechanical Engineering</u> (INCOM 2026)
- 3. Target Group (Faculty, Teacher, Research Scholar, College/ University Student, Community): Faculty, Teacher, Research Scholar, College/ University Student, Scientists, Practicing Engineers and Industry Professionals
- 4. Duration (days): 03 Days; Tentative Dates of the proposed Programme: 8-10 January, 2026
- 5. Aims, Objectives and Details of the Programme (attach separate sheet, if necessary):

Jadavpur University is a State University founded on 24th December 1955 under the Jadavpur University Act. Originating from the anti-colonial National Council of Education, Bengal (1906) the university has consistently set new frontiers in science, technology, humanities, social science innovation and outreach. It has provided research and policy support for state and national governments, international bodies. The University has a significant contribution in the domain of conventional and non-conventional technological development for society at large, including both established industries and disadvantaged groups, through innovation and adaptation. Currently, the University has four different faculties - Faculty of Arts, Faculty of Science, Faculty of Engineering and Technology and Faculty of Interdisciplinary, Law and Management Studies. There are 37 departments and 21 schools for interdisciplinary research associated with the different faculties. Apart from these there are around 50 centers for research in diverse fields. As per NIRF 2024, Jadavpur University is ranked 9th in University, 2nd in State Public University, 12th in Engineering and 17th in Overall category.

Mechanical Engineering Department of Jadavpur University has been established in 1906 under the National Council of Education, the Department of Mechanical Engineering is one of the oldest and largest departments at Jadavpur University. It became part of the university in 1955 and has since played a key role in engineering education in India.

The department offers:

- One undergraduate programme (B.E. in Mechanical Engineering),
- Two postgraduate programmes (M.E. in Mechanical and Automobile Engineering),
- Doctoral (PhD) programme.
- With a teaching strength of 79, it graduates around 120–140 undergraduates, 30–50 postgraduates, and 15–20 PhD scholars annually.
- It has been ranked in the 301 –350 band globally in the QS World University Rankings by Subject (2024).

Key Highlights:

- Strong research focus in areas such as CFD, tribology, materials science, and energy systems.
- Engaged in national research projects with organizations like DRDO, ISRO, DST, BRNS, etc.
- Over 500 research publications in the last five years.
- Recipient of DST-FIST and UGC-SAP funding.
- Hosts INCOM, an international conference on mechanical engineering.
- Houses state-of-the-art laboratories, workshops, and computing facilities.
- Vibrant student community involved in technical competitions, clubs (IMechE, ISHARE,

- Motorsports, Aerospace), and cultural activities.
- Faculty with international recognition, including top 2% scientist rankings (Stanford 2023), prestigious fellowships, and editorial roles in reputed journals.

The department remains committed to academic excellence, industry relevance, and nation building through research, innovation, and skilled human resource development.

About the Conference:

International Conference on Mechanical Engineering (INCOM) is a series of international conferences organized by the Department of Mechanical Engineering, Jadavpur University. The 1st and 2nd editions in this series were held with overwhelming success in 2018 and 2024, respectively. The 3rd International Conference on Mechanical Engineering (INCOM 2026) is going to be organised from 8 to 10 January 2026 at the Department of Mechanical Engineering, Jadavpur University. INCOM 2026 aims to continue the tradition of providing a global platform for researchers, academicians, scientists, practicing engineers and industry professionals to showcase their work, exchange ideas, share research advancements, explore collaboration opportunities and discuss emerging trends related to Mechanical Engineering and its associated interdisciplinary domains. The conference also aims to foster vibrant discussions through keynote and plenary lectures, panel discussions, and technical presentations. By facilitating both in-person and virtual participation, INCOM 2026 promotes inclusive and meaningful engagement across the global engineering community. The conference will be conducted in a hybrid format, accommodating both in person and virtual (online) presentations. However, physical attendance is highly encouraged, as it offers valuable opportunities to network and engage with participants from diverse research fields.

The conference is structured around the following ten technical tracks and their sub-tracks, each aiming to advance the respective field through scholarly interaction, knowledge dissemination, and interdisciplinary integration:

- Track 1: Thermo-fluids
- Track 2: Solid Mechanics and Structural Engineering
- Track 3: Engineering Design
- Track 4: Production Engineering and Management
- Track 5: Material Science and Engineering
- Track 6: Mechatronics, Control and Robotics
- Track 7: Energy, Natural Resources and Sustainable Development
- Track 8: Mechanical Engineering Education
- Track 9: Machine Learning and Data Science
- Track 10: Interdisciplinary and Other Emerging Trends in Mechanical Engineering

Objectives of INCOM 2026:

1. Exchange of Knowledge and Collaboration:

INCOM 2026 is committed to promote and collaborate among national and international experts in the broad domain of mechanical engineering and its allied interdisciplinary fields. By bringing together participants from academia, research institutions, and industry, the conference aims to create an intellectually stimulating environment for the exchange of innovative ideas, techniques, and applications.

2. Promote Cutting-edge Research in Key Areas:

The conference structure is centered around ten diverse and future-focused technical tracks-including Thermo-fluids, Solid Mechanics, Materials Engineering, Robotics, Mechatronics, Sustainable Energy, Machine Learning, and more. Each track encompasses emerging and high-impact subfields, such as Al-driven manufacturing, biomedical devices, green energy technologies, and computational mechanics-ensuring the conference remains at the forefront of global scientific discourse.

3. Encourage Multidisciplinary and Translational Research:

With the increasing convergence of technologies, mechanical engineering now overlaps significantly with data science, energy systems, life sciences, and environmental sustainability. INCOM 2026 encourages cross-disciplinary dialogues that can lead to impactful innovations addressing complex global challenges like climate change, resource efficiency, smart healthcare, mobility, and sustainable industrial practices.

4. Empower Young Researchers and Students:

The event aims to nurture young minds by providing opportunities to present their research, interact with leading scientists, and receive critical feedback. This exchange fosters professional development, enhances technical communication skills, and builds the confidence required for successful global careers.

5. Support the National Mission on Innovation and Sustainability:

In the Indian context, INCOM 2026 aligns with the goals of various national missions such as *Make in India*, *Atmanirbhar Bharat*, *National Education Policy (NEP 2020)*, and *National Mission on Sustainable Habitat*. The conference tracks on sustainable energy, AI in manufacturing, and smart materials strongly support India's transition toward advanced manufacturing, self-reliance, and green technologies.

6. Bridge Academia and Industry:

By involving industry professionals in key sessions and panels, INCOM 2026 seeks to reduce the gap between academic research and practical applications. The event will showcase scalable innovations and real-world problem-solving approaches that can be commercialized or integrated into existing technologies.

7. Enhance India's Global Standing in Mechanical Engineering Research:

Hosting an event of this scale at Jadavpur University-an Institution of Eminenceunderscores India's growing prominence in global research networks. It reflects the country's robust academic capacity, innovative spirit, and willingness to address global engineering challenges with indigenous solutions.

INCOM 2026 will not only serve as a platform for presenting original research but also as a catalyst for interdisciplinary collaboration, innovation, and policy-oriented dialogue in mechanical engineering. Its broad technical scope, strategic national relevance, and international outlook make it a vital event for shaping the future of engineering education, research, and practice in India and across the globe.

In the earlier editions of the conference, INCOM 2018 and INCOM 2024, each witnessed the participation of over 250 delegates. The papers presented at INCOM 2024 were published in three Springer book series: Advances in Energy and Sustainability, Advances in Materials, Manufacturing and Design, and Advances in Thermo-Fluid Engineering. Similarly, selected papers from INCOM 2018 were published in reputed volumes, including the Advances in Materials, Mechanical and Industrial Engineering book series and a special issue of Sādhanā – Indian Academy of Sciences Conference Series (Springer).

6. Name, Designation, Postal Address, mobile no. and e-mail id of the (only one) Programme Co-ordinator (PC)/ Convenor (attach separate sheet, if necessary):

Name: Dr. Ranjib Biswas

Designation: Associate Professor

Postal Address: Mechanical Engineering Department, Jadavpur University, 188 Raja S C Mallick

Road, Jadavpur, Kolkata 700032, West Bengal.

Mobile No.: 9830086991

E-mail ID: ranjibbiswas.mech@jadavpuruniversity.in

7. Legal status of the Institute (College/ University/ Institute/ Polytechnic/ ITI/ Autonomous body/ registered NGO/ Trust etc.): University

8. Date wise detail Programme Schedule* (attach separate sheet, if necessary):

| | Time | Session | Venue |
|------------------------|---------------|---------------------------------------|--|
| 76 | 09:00 - 10:00 | Registration | |
| | 10:00 - 11:00 | Inaugural Session | |
| | 11:00 - 11:20 | High Tea | MLSirkar Hall, IACS |
| | 11:20 - 12:10 | Plenary Lecture 1 | |
| , 20 | 12:10 - 01:00 | Plenary Lecture 2 | |
| lary | 01:00 - 02:00 | Light Refreshment | GH/TEQIP, JU |
| anı | 02:00 - 02:30 | Keynote Lecture 1A | T-208, JU |
| | | Keynote Lecture 1B | T-209, JU |
| Day 1: 08 January 2026 | 02:30 - 03:45 | Technical Session 1 | 403, 404, 405, 406, 407, 208, 209, JU |
| | 03:45 - 04:00 | Tea | TEQIP, JU |
| | 04:00 - 04:30 | Keynote Lecture 2A | T-208, JU |
| | 04.00 - 04.30 | Keynote Lecture 2B | T-209, JU |
| | 04:30 - 06:00 | Technical Session 2 | 403, 404, 405, 406, 407, 208, 209, JU |
| | 10:00 - 11:15 | Technical Session 3 | 403, 404, 405, 406, 407, 208, 209, JU |
| | 11:15 - 11:30 | Tea | TEQIP, JU |
| | 11:30 - 12:00 | Keynote Lecture 3A | T-208, JU |
| 9 | 11.30 - 12.00 | Keynote Lecture 3B | T-209, JU |
| 20% | 12:00 - 01:00 | Plenary Lecture 3 | T-208/T-209, JU |
| ary | 01:00 - 02:00 | Light Refreshment | GH/TEQIP, JU |
| nue l | 00.00 00.00 | Keynote Lecture 4A | T-208, JU |
| ິກິດ | 02:00 - 02:30 | Keynote Lecture 4B | T-209, JU |
| Day 2: 09 January 2026 | 02:30 - 03:45 | Technical Session 4 | 403, 404, 405, 406, 407, 208, 209, JU |
| Da | 03:45 - 04:00 | Tea | TEQIP, JU |
| | 04:00 00:00 | Industry Session | T-201, JU |
| | 04:00 - 06:00 | B2B Meet | T-206, JU |
| | 06:00 - 07:00 | Industry-Academia Panel Discussion | T-208, JU |
| 26 | 10:00 - 11:15 | Technical Session 5 | 403, 404, 405, 406, 407, JU |
| 7 20 | 11:15 - 11:30 | Tea | TEQIP, JU |
| Day 3: 10 January 2026 | 11:30 - 12:00 | Keynote Lecture 5A | T-208, JU |
| | | Keynote Lecture 5B | T-209, JU |
| | 12:00 - 01:00 | Technical Session 6 | 403, 404, 405, 406, 407, JU |
| .: | 01:00 - 02:00 | Light Refreshment | GH/TEQIP, JU |
| ay | 02:00 - 03:00 | Valedictory | T-208 |
| | | in the schedule to accommodate speal | |

^{*} Minor modifications may be made in the schedule to accommodate speakers and sessions, if required.

- 9. Collaborating Institutions/ Organizations, if any, with their specific contribution: NA
- 10. Expected number of participants and list of Resource Persons/ Invited Speakers:

Expected number of participants: 300

| | T | | |
|-----------|---|---|--|
| S. No. | Name & Designation | Research / Expertise Area | Affiliated Department and Institute (with full address) |
| 1. | Dr. Sanjoy Paul, Executive Director of Nexus and Al Houston at Rice University, Lecturer in the Department of Computer Science, and former Managing Director at Accenture LLC | Artificial Intelligence/ Machine Learning (AI & ML) | Department of Computer Science, Rice University, 6100 Main St., Houston, TX 77005- 1827, USA. |
| 2. | Prof. Pradip Dutta, Professor | Thermofluids, Energy | Department of Mechanical Engineering, Indian Institute of Science Bangalore (Mechanical Engineering Department), CV Raman Rd, Bengaluru, Karnataka 560012 |
| 3. | Shri Dinesh Kumar Singh, Distinguished Scientist, Director, Human Space Flight Centre (HSFC) | Circuits & System Design and Development for Satellite Communications & Navigation, Payload System Design | ' ' |
| 4. | Prof. Sunghwan (Sunny) Jung, Professor and Director of Graduate Studies | Interdisciplinary & Other Emerging Trends in Mech. Engg, Thermofluids, Solid Mechanics & Structural Engg | Biological and Environmental Engineering Department, Cornell University, 302 Riley-Robb Ithaca, NY 14853, USA. |
| 5. | Vagesh D Narasimhamurthy, | Thermo-fluids | Fluid Mechanics Group, Department of Applied Mechanics & Biomedical Engineering, IIT Madras, Chennai 600 036, India |
| 6. | Shri Subodha Kumar Navak Scientist 'G' and Director, Proof & Experimental Establishment (PXE) | Engineering Design | Proof & Experimental Establishment, Defence Research and Development Organisation (DRDO) Office Address: DRDO Bhawan, Rajaji Marg, New Delhi-110011 |
| 7. | Debajyoti Bhaduri, Senior Lecturer | Production Engineering and Management | School of Engineering, Univ. of Cardiff, Queen's Buildings - West Building, Room/2.21, 5 The Parade, Newport Road, Cardiff, CF24 3AA, UK |
| 8. | Sheeju Chandran, Group Director, TDMG | Solid Mechanics and Structural Engineering | Vikram Sarabhai Space Centre, Indian Space Research Organisation (ISRO), Thiruvananthapuram 695022, India |
| 9. | Soumitra Tarafdar, Retired Chief Scientist | Material Science and Engineering | CSIR- National Metallurgical Laboratory, NML Gate1 Rd, Burma Mines Colony, Burma Mines, Susnigerya, Jamshedpur, Jharkhand 831007 |
| 10. | Subir Kumar Saha, Professor | Mechatronics, Control and Robotics | Department of Mechanical Engineering, Indian Institute of |

| | | | Technology, Delhi Hauz Khas, New Delhi-110016 |
|-----|--|---|--|
| 11 | Prasanna Majumdar, Scientist Officer (SO/H) | Energy, Natural Resources and Sustainable Development | Reactor Safety Division (RSD), Reactor Design and Development Group (RDDG), Bhabha Atomic Research Centre, Trombay, Mumbai - 400 085 India |
| 12. | C. Balaji, Professor | Mechanical Engineering Education | Room No 205, Heat Transfer and Thermal Power Laboratory, Department of Mechanical Engineering, IIT Madras, Chennai 600036, India |
| 13. | Surya Kanta Pal, Professor | Machine Learning and Data Science | Mechanical Engineering Department, Indian Institute of Technology, Kharagpur, Kharagpur, India - 721302 |
| 14 | Manish K Tiwari, Professor | Interdisciplinary and Other Emerging Trends in Mechanical Engineering | Mechanical Engineering Department, University College London, Gower Street, London, WC1E 6BT, UK |
| 15 | Sushanta Mitra, Professor | Entrepreneurship and Start-up | Department of Mechanical & Mechatronics Engineering, University of Waterloo 200 University Avenue West, Waterloo, ON N2L 3G1, Canada |
| 16 | Pritam Chakraborty, Associate Professor | Meso-scale modeling of short fatigue crack growth, plasticity, damage and creep in metals | Department of Aerospace Engineering, Indian Institute of Technology Kanpur, Kalyanpur, Kanpur -208 016 |
| 17 | Plenary Speaker | Prof. Cameron Tropea Technical University <i>of</i> Darmstadt, Germany | Inflight transition and its control |

11. Give details of the grant received from DSTBT in last three Financial Years, if any alongwith the date of submission of UC, Audited SoE, Report etc.:

No grant received from DSTBT to organize Seminar/ Symposium/ Conference etc.in last three Financial Years (FY: 2023-24 to 2025-26)

12. Name and address of the authority to whom the allotted amount is to be credited (if sanctioned) who will also be responsible for submitting the UC, audited SoE, Programme Completion Report, Feedback, Still and Video photographs etc. of the grant:

Name: Dr. Indrajit Banerjee, **Designation:** Registrar (Acting), **Address:** Jadavpur University, 188 Raja S C Mallick Road, Jadavpur, Kolkata 700032, West Bengal.

13. Total Estimated Expenditure (A)/ Organisation's contribution (B)/ Contribution from any other sources (C) / Grant expected from DSTBT(D):

D: ₹215000 = (A: ₹1070000 - B: ₹455000 - C: ₹400000)

(provide detail Budget break-up as per Annexure-I and Bank details as per Annexure-II):

Check List (put tick) of attachments to be submitted with the application

- Proposed Total Budget with break-up (Annexure-I) and Bank Details (Annexure-II) in Institute/ Organization's letter head: YES (√) / NO
- For registered NGO/ Trust, filled in Application Format recommended by the appropriate Recommending Authority, viz., Jt.BDO/ BDO/ SDO/ DM/ Executive Officer- Municipality/ Commissioner-Municipal Corporation as the case may be (where the programme is actually going to be held): YES-/ NO (√)
- For registered NGO/ Trust, attested copies of the registration certificate, latest renewal certificate, Memorandum and Rules & Regulations of the Organization, last three years Audited Statement of Accounts, Annual Reports etc., List of recommended beneficiaries: YES-/ NO (√)

DECLARATION

Certified that the details furnished in the filled in format are correct to the best of our knowledge & belief and that the amount of financial assistance, if sanctioned, will be utilized for the purpose for which it is granted within the time as prescribed by DSTBT. We also undertake to abide by the General Guidelines and Terms & Condition prescribed by DSTBT and provide due coverage to DSTBT during the Programme and publications/ print and electronic media made from the Programme in future. We also declare that within one month after completion of the Programme we shall submit the Utilisation Certificate (UC), Audited Statement of Expenditure (Audited-SoE), Programme Completion Report, Feedbacks from the Participants, still and video photographs etc.

Signature:

Date: 28/11/2025

Name of Programme Coordinator: Dr.

Ranjib Biswas

Designation: Associate Professor

Address: Mechanical Engineering

Department, Jadavpur University, 188 Raja

S C Mallick Road, Jadavpur, Kolkata

700032. Kyest Bengal.

Dr. Ranjib Professor

Associate Professor

Associ

Signature:

Date:

Name of Head of the Institution: Dr.

Indrajit Banerjee

Designation: Registrar (Acting)

Address: Jadavpur University, 188 Raja S C Mallick Road, Jadavpur, Kolkata 700032,

West Bengal.

(Office Seal)

RECOMMENDATION

(only for registered NGO/ Trust)

Certified that the said Organisation is reputed in this field and I/ we recommend the said proposal for getting grant-in-aid from DSTBT, Govt of West Bengal for the benefit of the local College/University Students/ Community etc.

Signature:

Date:

Name of Recommending Authority:

Designation:

Address:

(Office Seal)

Proposed Total Budget with break-ups

A. Total Estimated Expenditure

| SI. No. | Items required with justification and rate | Total Expenditure (A) ₹ | |
|------------|--|----------------------------|--|
| 1. | Honorarium to Resource Persons/ Experts | 0 | |
| 2. | Study materials, Consumables expenses | 275000 | |
| 3. | Hall rent, if any | 60000 | |
| 4. | Publicity materials | 50000 | |
| 5. | Travel expenses | 100000 | |
| 6. | T.A. to the external Resource Persons/ Experts | 350000 | |
| 7. | Documentation expenses including audio-visual | 100000 | |
| 8. | Light refreshments | 100000 | |
| 9. | Auditors' fee | 10000 | |
| 10. | Other expenses, if any (please specify) | 25000 | |
| | Grand Total Expenditure (₹): | 1070000 | |

Please mention:

B. Institution/ Organization Contribution* in ₹455000

C. Contribution from any other sources (with name & Address) in ₹400000 [Board of Research in Nuclear Sciences (BRNS) sanctioned an amount of ₹250000 and Anusandhan National Research Foundation (ANRF) sanctioned an amount of ₹150000]

D. Grant expected from DSTBT (₹) = (A: ₹1070000 - B: ₹455000 - C: ₹400000)= ₹215000

Professor & Head

Dept. of Mechanical Engineering

Jadavpur University, Kolkata-32

Signature of Authorised Personnel with seal

Programme Chairman: Professor Swarnendu Sen

Designation: Head & Professor

Address: Mechanical Engineering Department, Jadavpur University, 188 Raja S C Mallick Road, Jadavpur, Kolkata 700032, West Bengal.

If C = 0

Undertaking: This organization/ institution is not receiving any kind of financial assistance from any other sources

Signature of Authorised Personnel with seal

^{*}At least 10% of the total budget contribution from the Institute/ Organization is desirable

Bank details of the Applicant Organisation

| Name of the Organisation | Jadavpur University | |
|--|--|--|
| Bank Account number & | 11079699404, Registrar/ Jadavpur | |
| name of the Account holder/ Organisation | University | |
| Type of Account (Savings or Current A/c) | Current | |
| Name of the Bank | State Bank of India | |
| Name of the Branch with Branch address | Jadavpur University, 188 Raja S C Mallik | |
| Traine of the Branch with Branch address | Road, Jadavpur, Kolkata 700032 | |
| IFSC of the Branch | SBIN0000093 | |
| Mobile Number of the Programme | 0930096004 6303339404 | |
| Coordinator/ Head of the Organisation | 9830086991, 6292328404 | |
| PAN / TAN of the Account holder/ | DANI AAA HOEOOF | |
| Organisation | PAN- AAAJJ0500E | |

Signature of Authorised Personnel with seal

Programme Chairman: Professor Swarnendu

Sen

Designation: Head & Professor

Address: Mechanical Engineering Department, Jadavpur University, 188 Raja S C Mallick Road,

Jadavpur, Kolkata 700032, West Bengal.

Professor & Head

Dept. of Mechanical Engineering

Jadavpur University, Kolkata-32