

**INDIAN NATIONAL ACADEMY OF ENGINEERING**

Nomination Form for Election of Fellows from Academia / R&D / Industry and Engineering Services

**(Please use soft copy of this form in case nomination in not being made through INAE Digital Platform)**

We propose the name of:

.....  
*(in block letters as used for correspondence) for election as a Fellow of the Academy*

Category in which the nomination is to be considered *(please tick only one box)*

Academic Institutions       Research & Development       Industry & Engineering Services

<p><b>Name of the Proposer:</b></p> <p><b>Affiliation of the Proposer:</b></p> <p><b>Fellow from the Section:</b></p> <p>...../...../.....      .....</p> <p><b>Date</b>                                  <b>Signature (If scanned)</b></p>	<p><b>Brief remarks by the proposer about the most outstanding contribution of the nominee based on personal knowledge:</b></p>
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<p><b>Name of the Seconder:</b></p> <p><b>Affiliation of the Seconder:</b></p> <p><b>Fellow from the Section:</b></p> <p>...../...../.....      .....</p> <p><b>Date</b>                                  <b>Signature (If scanned)</b></p>	<p><b>Brief remarks by the seconder about suitability based on personal knowledge:</b></p>
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**To be filled in by the office**  
**Check-List**

- |   |          |
|---|----------|
| 1. Has the nomination been proposed and seconded correctly?   | Yes / No |
| 2. Has the text under each head been put up within the spaces provided?   | Yes / No |
| 3. Has the nominee been sponsored for only one specific engineering section?  | Yes / No |
| 4. Has the nominee been nominated to INAE earlier?  | Yes / No |
| [If answer to # 4 is 'Yes', please ensure that <b>one year</b> has elapsed since the expiry of the validity of the earlier nomination. The validity of a nomination is three years and a fresh nomination can be made only after <b>1 year</b> .] |          |
| 5. Number of appendices (supporting documents) submitted along with this nomination:  |          |

Registration No:

Acknowledged on:

Executive Director

Vice-President (Fellowship and Awards)



9. **Please mention SPECIFIC ENGINEERING CONTRIBUTIONS and ACCOMPLISHMENTS meriting nomination to INAE (< 300 words as paragraph or bulleted statements):**
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10. **Summary of Relevant Contributions: (Please attach lists only)**

**(A) Publication Record** (*please attach full list in separate sheets with title of paper, list of authors, journal/proceeding/book, volume, year, editor, publisher, place, as applicable*):

- I. Total number of papers published (in refereed journals/proceedings):
- II. Number of papers published during the last 10 years in refereed journals/proceedings:
- III. List of TEN most significant refereed papers with corresponding IF & citation record:
- IV. State total citation record and h-index (state the database used):
- V. Number of published technical reports including handbook, manual, flow sheet, design/drawing, if any.
- VI. Number of books / monographs / chapters / review articles / new courses / study aids authored.

**(B) Technology/Products/Patents** (*with established or demonstrated record*):

- I. Number of innovative technologies (products or processes) developed and implemented:
- II. Number of technology transfer agreements concluded:
- III. Number of national or international patents filed /granted / commercialized:
- IV. Number of model / prototype / pilot plant / demonstration units created for display/deployment:

**(C) Number of Major Sponsored/Consultancy Projects completed or in-progress:**

11.

## CITATION

<b>First:</b>	<b>Middle:</b>	<b>Surname:</b>	
<b>Designation:</b>	<b>Affiliation:</b>	<b>Year of birth:</b>	
<b>Engineering discipline/specialization:</b>			
<b>Academic Degrees and Professional Fellowships of Academies/Professional Bodies (use abbreviated form only):</b>			
<b>Citation statement (in 50 words):</b>			

12. Overall (career wide) engineering contribution of the Nominee (up to 500 words) that reflects the Nominee's cumulative engineering innovation and leadership contributions (please refer to para 3 of Instruction Sheet)

Proposer

Seconder

## INSTRUCTION SHEET TO SUBMIT NOMINATION TO INAE

Persons for election as a Fellow (FNAE) shall be: (i) Indian Nationals who have worked and/or maintained a regular position in India for the last five or more years and have significantly contributed to the engineering and technological field in India. (ii) Person of Indian origin holding Foreign Passport and OCI Card and is currently working in India continuously for the last 10 years or more (in the same or multiple organizations or be self-employed). (iii) Foreign national holding Foreign Passport must be presently working in India continuously for last 10 years or more (in the same or multiple organizations or be self-employed) and has made significant contribution to Engineering and Technology in India.

- 1. It is preferable to submit nominations for Fellowship online through INAE Digital Platform using log in facility of Fellows, however in case of difficulties, you may submit the nomination form as soft copy through email to [inaehq@inae.in](mailto:inaehq@inae.in) for which, below mentioned instructions may be followed.**
- 2. Nomination to INAE must be submitted using this form, complete in all respect with the relevant information, typed in the designated area.**
3. Each Nominee shall be proposed and seconded only by **INAE Fellows, preferably of the same subject domain/discipline**, having personal knowledge of the contribution and accomplishment of the Nominee.
4. To identify Engineering Excellence, the criterion for election to the Fellowship may be one or more of the following (but not limited to):
  - (i). Notable engineering achievements and novel contributions in design, production, research, innovation, intellectual property generation, project implementation, consultancy and technology development
  - (ii). Indigenous technology development leading to commercialization or pilot scale implementation
  - (iii). Engineering innovation for new technology (product or process) development and project implementation
  - (iv). Technical assistance, consultancy, testing/calibration, demonstration or training provided to industry
  - (v). Responsibility for management and professional growth of engineering industry, educational institutions and/or R&D organizations
  - (vi). Specific engineering contributions of an individual if involved in a team effort
  - (vii). Recognition by “peers” (organizations, scientific/engineering bodies, societies, etc)
  - (viii). Facilitation of growth of R&D or industry in the country
  - (ix). Proven leadership in capacity development of an engineering field or an allied area leading to innovative applications of engineering for the betterment of society or environment
  - (x). Recognition of exceptional merit and eminence in new and emerging fields of engineering and technology
- 5. The nomination should be accompanied by up to date lists of peer reviewed publications, patents or engineering innovations during the last ten years enlisted in public domain database in reverse chronological order. It may please be noted that reprints of publications are not required to be submitted.**
6. The nomination should clearly mention only one specific **Engineering Section**, as listed below, to which the nominee should be referred to.
7. All materials for nomination including the nomination form in prescribed format must be submitted as soft copy through email at ID: [inaehq@inae.in](mailto:inaehq@inae.in).
8. As supporting materials, the nominator may submit (as appendices) a resume, complete list of peer reviewed intellectual contributions (publications, patents, etc), evidences of technology development or engineering innovation, and brief account of any other important contribution/achievement of the nominee as digital copies. Reprints of papers are **not required** to be submitted.
- 9. Canvassing/lobbying for election to the Fellowship may lead to disqualification.**

# Engineering Sections with Indicative Specializations

## Section I: Civil Engineering

Structural Engineering; Construction Engineering; Water Resources Engineering/Hydrology Hydrodynamics; Irrigation & Drainage Engineering; Coastal Engineering; Ocean Structures; Port & Harbour Engineering; Earthquake Engineering; Wind Engineering and Flood Control; Geotechnical Engineering; Transportation Engineering including Railways; Architecture & Planning; Surveying including Remote Sensing & Other Techniques; Agricultural Engineering; Environmental Engineering

## Section II: Computer Engineering and Information Technology

Computer Software & Hardware including Algorithms and Data Structures; Programming Methodology and Languages; Database Systems, Parallel Processing; Operating Systems; Artificial Intelligence & Soft Computing including Neural Networks, Genetic Algorithm & Quantum Computing; Speech and Language Recognition; Computer Vision, Image Processing and Pattern Recognition; Automata Theory & Applications

## Section III: Mechanical Engineering

Manufacturing and Forming Technologies including Advanced Processing Methods; Production Engineering; Industrial Engineering; Precision Engineering; Foundry and Casting Technology; Welding and Joining; Metrology; Machining; Thermal Science and Engineering including Thermodynamics, Combustion, Heat Transfer, Air-Conditioning & Climatic Control; Design and Analysis of Solids; Thermal and Fluid Mechanical Systems; Machines, Structures and Devices including Kinematics, Mechatronics & Robotics, Micro-Mechanical Systems (MEMS); Tribology; Automobile Engineering; Naval Architecture & Marine Engineering; Vibration Engineering, Acoustics and Noise Prime Movers; Experimental and Computational Stress Analysis for Solids & Fluids; CAD/CAM, CIM; Non-destructive evaluation

## Section IV: Chemical Engineering

Product/Process Development; Unit Operations and Processes; Heat/Mass Transfer and Transport Phenomena; Process Control & automation; Process Modelling & Simulation; Reaction Engineering and Catalysis; Microfluid and Fluid Dynamics; Property Evaluation; Chemical and Process Safety Analysis; Manufacturing Practices; Corrosion and Electrochemical Engineering; Chemical Technology including Oils, Paper, Petroleum, Leather, Pharmaceuticals, Textiles, Ceramics, Cement and allied fields; Environmental Engineering of Chemical Systems; Nanotechnology in Chemical Engineering

## Section V: Electrical Engineering

Power Systems including Generation, Transmission, Distribution and Control; Electrical Machines and Devices; Power Electronics, Drives & Control Systems; High Voltage & Insulation Engineering; Electrical Energy Storage including Super Capacitors; Electrical Traction

## Section VI: Electronics and Communication Engineering

Semiconductor Devices including Nanoelectronics, Microelectronics, Infotonics; Communications including Analog, Digital, Wireless, Mobile, Underwater & Space Communication; Optoelectronics & Optical Communications including Lasers & Holography; VLSI and Embedded Systems; Electromagnetics & Microwave Engineering; Consumer Electronics; Electronic Components

## Section VII: Aerospace Engineering

Aero & Space Dynamics; Navigation Guidance & Control; Aerospace Structures (Rocket Design, Missile Design, Satellite Design, Aircraft Design and Non-Destructive Evaluation/Testing (NDE/NDT), Composite Structures); Space Transportation Systems including Launch Vehicle Design; Space Engineering; Avionic Systems and Instrumentation; Helicopter Engineering including Design & Analysis; Airworthiness and Safety of Aircraft / Helicopters / Missiles; Flight Simulation & Flight Control; Flight Operation & Maintenance.

## **Section VIII: Mining, Metallurgical and Materials Engineering**

Mineral Exploration; Metallurgical Engineering (Physical / Extractive / Mechanical / Powder Metallurgy); Mineral Processing; Engineering Materials (Metallic, Non-Metallic, Composites and Nanomaterials); Materials Characterization and Evaluation; Joining of materials; Design and development of new materials and techniques; Modeling and simulation of materials and processes; Mining Engineering

## **Section IX: Energy Engineering**

Conventional Energy; Non-Conventional Energy; Nuclear Engineering; Renewable Energy (including Solar, Wind, Tidal; Hydrogen, Fuel Cells, Biomass, Biofuels, Geothermal, etc.); Non-Renewable Energy including Fossil Fuels; Energy Audit & Management

## **Section X: Interdisciplinary and Special Engineering Fields and Leadership in Academia, R&D and Industry**

Mission mode engineering covering more than one section of Engineering as under Section I to IX; Bioengineering/Technology relevant to Chemical Synthesis; Agriculture; Energy; Atmosphere; Food; Medicine and Medical Devices; Biophysics/Mechanics; Marine Resources; Molecular Biology; Ergonomics; Informatics; Forensics; Biomedical Engineering; Environmental Engineering; Climate Change and Global Warming; Waste Management; Recycling; Quality, Reliability & Safety Engineering; Educational Technology; Remote Sensing; Industrial Management

**Note: A nomination may be submitted in One Engineering Section only**

### **Parameters and Criteria for Nomination and Assessment in 3 Categories**

#### ***Academic profession:***

1. Publication (peer reviewed publication, monograph, manual)
2. Teaching, training, supervision (course, book, lecture, thesis, report)
3. Patent and prototype development (design/demonstration/deployment)
4. Peer recognition (awards, prizes, fellowships) and academic distinctions
5. Sponsored research, creation of facility, consultancy, industrial collaboration

#### ***Research and Development:***

1. Contribution (individual/group) to R&D projects/innovation
2. Industrial collaboration (projects, consultancy, development)
3. Sponsored/industry funded research, Patent, Translational research
4. Publication (paper, manual, handbook, report), Prototype/pilot operation
5. Peer and professional recognition (awards, prizes, fellowships, certification)

#### ***Industry and Engineering Services:***

1. Technology development (individual/group contribution)
2. Innovation and leadership in technology development activity
3. Individual contribution in innovation, consultancy and development
4. Patent, publication, supervision, report, manual, handbook, lectures
5. Peer recognition, career achievement, professional distinction and awards

## Additional Norms for Submitting Nominations for Fellowship

- With respect to choosing the Category in which the nomination is to be submitted and considered viz Academic Institutions / Research & Development /Industry & Engineering Services, it may please be noted that there is a Policy on ‘**organizational affiliation**’ versus ‘**field of contribution**’ of the nominee; in practice wherein the ‘**organizational affiliation**’ would be given preference over ‘**field of contribution**’. A nomination may be submitted in **one category only** viz **Academic Institutions** OR **Research & Development** OR **Industry & Engineering Services**  
  
***For example:*** A nominee working in R&D field in Industry should be nominated in ‘Industry’ category **only** and a nominee working in an Academic Institution in R&D field should be nominated in ‘Academic Institutions’ category **only**.
- There is an Affirmative Policy for increasing the number of women Fellows in INAE by scouting and improving eco-system which should be encouraged.
- A Strategy is adopted to increase suitable nominees from industry.
- Quality of nominee’s engineering contributions is of paramount importance.
- The nominee should be above board in terms of ethical and professional conduct.
- If the nominee been nominated to INAE earlier, please ensure that **One Year** has elapsed since the expiry of the validity of the earlier nomination. The validity of a nomination is three years and a fresh nomination can be made only after **One Year**.
- **Reprints of papers are Not required to be submitted.**