INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS, NEW DELHI – 110 016

Rolling Advertisement No.IITD/2021/PROF-1

(for faculty positions at Professor and Associate Professor levels)

IIT Delhi invites applications from well qualified Ph.D Degree holders[1] for the following faculty positions at the level of **Professor** and **Associate Professor** in its various academic Units.

This is a rolling advertisement. There is no last date. However, the processing of the applications by the Academic Unit will be done in two cycles every year and the deadlines are respectively First Cycle – 31st December and Second Cycle – 30th June of the respective year.

Table-A: Academic Units

Post	Pay Level
Professor	**Rs.1,59,100 – 2,20,200/- (minimum pay of Rs.1,59,100/-) in Academic Level 14A**
Associate Professor	**Rs.1,39,600 – 2,11,300/- (minimum pay of Rs.1,39,600/-) in Academic Level 13A2**

Table-B: Computer Services Centre

Post	Pay Level
Sr. System Manager (SG)	**Rs.1,59,100 – 2,20,200/- (minimum pay of Rs1,59,100/-) in Academic Level 14A**
System Manager	**Rs.1,39,600 – 2,11,300 /- (minimum pay of Rs1,39,600/-) in Academic Level 13A2**

- ***HRA and other allowances will be as per the Central Government Rules.***
- ***Institute specifically encourages applicants from SC/ST/OBC category as well as persons with disability to apply for these positions***

[1] Joining of Foreign Nationals, if selected, will be conditional to work visa from GOI and be on 5 years renewable contract basis.

The areas below mentioned against each Academic Units are only indicative and not exhaustive. The Institute is open to receiving applications from outstanding candidates with specialization in these and other related areas.

ACADEMIC UNITS:-

1. **APPLIED MECHANICS:** Design Engineering, Solid Mechanics, Fluid Mechanics and interdisciplinary areas of Mechanics including but not restricted to Biomechanics, Nano-mechanics, Multifunctional materials, Solid-Fluid interactions, Naval Architecture, etc.

2. **BIOCHEMICAL ENGG. & BIOTECHNOLOGY:** Bioprocess and metabolic Engineering (Mammalian Cell Technology, Enzyme bioreactors, Bio-separation Engg with specialization in Chromatography and Nano-filtration, Genome Engineering), Systems and Computational biology (Quantitative biology, Synthetic biology) and Molecular biology of disease, Diagnostics and Bio-nanotechnology (Nano-biosensors, Therapeutics/drug delivery)

3. **CHEMICAL ENGG:** All areas of Chemical Engineering, the candidate should have undergraduate education in chemical or allied engineering disciplines.

4. **CHEMISTRY: Professor:** Asymmetric Synthesis, **Associate Professor**: Total synthesis of natural products, Inorganic heterogeneous catalysis, nucleic acid biochemistry.

5. **CIVIL ENGG : Environmental:** Water and Waste Water Engg., Air Pollution Control Engg., Solid and Hazardous Waste Engg., **Geotechnical:** Geotechnical Engg., Geo-environmental Engg., Rock Mechanics, Rock Engg., **Structures:** Structural Engg., Construction Materials, Construction Management, **Transportation:** Transportation and Traffic Planning, Transportation and Traffic Engg., Pavement Engg., **Water Resources:** Water Resources Engg. and related Areas.
   NOTE: *The candidate should have B.E./B.Tech. or equivalent degree in Engineering with Ph.D. in the relevant area.*

6. **COMPUTER SCIENCE & ENGG :** High Performance Computing and Visualization, Machine Learning and Artificial Intelligence, Wired and Wireless Networks, Mobile Computing, Cyber-physical Systems & Internet of Things (IoT), Algorithms & Complexity, Logic & Verification, Information Management, Information Retrieval, Data Analytics and Data Sciences, Computer Vision, Graphics & Robotics, Programming Languages, Semantics, Analysis & Language Implementation, Distributed & Multicore Computing, Operating Systems and Cloud Computing, Cryptography and Cryptosystems, Systems and Information Security, Human-Computer Interaction, Embedded Systems, Computer Architecture, VLSI and Design Automation.

7. **DESIGN:** Industrial Design, Product Design, Engineering Design, Creativity and innovation, Design Theory & Methodology, Applied Ergonomics and Human Factors in Design, Universal and Inclusive Design, Design for UX/UI, HCI; Graphic Design, Communication Design, Computer Aided Design and Manufacturing, Design Automation and Design Optimization, Design Computing and Design Informatics, Materials & Design, Design for Product Life-Cycle, Art & Design, Product Aesthetics,

Digital Media & Design, Social and Cultural aspects of Design, Design Policy, Design Strategy, Design Management.

8. **ELECTRICAL ENGG:** In all areas of Electrical Engineering including Electronics & Circuits, Control & Automation, Communication, Computer Engineering, Power Systems, Power Electronics, Machines & Drives.

9. **HUMANITIES & SOCIAL SCIENCES:** Economics (specialization in Macroeconomics is desired. However, exceptionally good candidates in any other specializations in Economics are also encouraged to apply) English Literature, Linguistics, Philosophy, Psychology, Sociology.

10. **MANAGEMENT STUDIES:** Operations & Supply Chain Management, Marketing Management, Strategic Management, Technology Management, Telecom Systems Management, Human Resource Management, Corporate Law, Finance, Economics, Information Systems, Business Analytics, **Entrepreneurship**.

11. **MATERIAL SCIENCE AND ENGINEERING:** Material processing and characterization, Materials modeling, polymeric materials, Alloys, composites and structural materials, Functional materials, Nanostructured materials, Materials for sustainable technology, Fracture Mechanics and process Metallurgy and Corrosion Science and Engineering.

12. **MATHEMATICS:** All areas of Pure and Applied Mathematics, Theoretical Computer Science, Probability and Statistics.

13. **MECHANICAL ENGG:** All areas of Design and Production and Industrial Engineering (including Operations Research and Analytics), Energy, Transportation motive power, Mirco and Nano – scale fluid mechanics and heat transfer, Thermal Engineering of processes. Applicants in the areas of Production and Industrial Engineering specializations are especially sought.

14. **PHYSICS:** Quantum materials, Quantum information and Quantum Photonics and other areas of Physics.

15. **TEXTILE TECHNOLOGY:** Textile Engineering, Textile Technology, Textile Chemistry, Fibre Technology, Polymer Science & Engineering and other Engineering and Sciences with demonstrated research experience in areas relevant to textiles.

16. **APPLIED RESEARCH IN ELECTRONICS (CARE) : Microwaves and RF**: RFIC and RFMEMS, Imaging and Surveillance, RF Digital Co-design, Active and Reconfigurable Antennas and Arrays, High Power Solid-State Systems, Non-linear Modeling and Measurements, Components & Systems up to THz; **Microelectronics**: MEMS and Microsystems, Micro sensors development for defense and space applications, mm-wave and THZ electronic devices, Quantum Electronic devices for Quantum Information Technology; **Signal Processing**: Acoustic Signal Processing, Underwater and Air Acoustics, Speech and Audio Processing, Signal Processing for Communications, Sensor Array Signal Processing, Multi-sensor Data Fusion, Machine Learning for Signal Processing, Signal Processing for Internet-of-Things; **Multi-disciplinary**: Modern Radar Systems.

17. **ATMOSPHERIC SCIENCES (CAS):** Ocean Modelling, Climate Modelling, Mesoscale Studies, Atmospheric dispersion.

18. **AUTOMOTIVE RESEARCH AND TRIBOLOGY (CART)** : Power Electronics, Electric drive train and controls for EVs, Battery, Battery management systems and other storage technologies for EVs, EV charging infrastructure and smart charging solutions, Ancillary services and Demand Side Management (DSM) with EVs. Standards, policies and regulations for EVs, Connected and Autonomous EVs, Development of Tribo-materials and smart materials for EVs, Tribo-dynamics, Lubrication and lubricants, friction and wear control, studies of bulk material handling, NVH and condition monitoring, reliability and maintenance.

19. **BIOMEDICAL ENGG. (CBME) : Bio-Instrumentation:** Electrical Engg., Electronics, Medical Sensors**, Biomechanics:** Medical Implants, Mechanical Engg., Design Engg., Production Engg., Material Science & Engg.**, Bio-Imaging:** Electrical, Electronics, Optical**, Biomaterials:** Manufacturing, Processing, Characterization**.**

20. **ENERGY STUDIES (CES): For Professor:** Plasma Science and Technology. **For Associate Professor:** Experimental Plasma Science and Technology, Solar Photovoltaic Devices, Solar Thermal Technology.

21. **RURAL DEVELOPMENT AND TECHNOLOGY (CRDT) :** Rural Resources, Energy Systems & Infrastructure; Resilience & Climate Change; Disruptive Technologies; Engineering Design, Artisanal/ Agricultural Tools & Crafts; Skill Development & Entrepreneurship; Water, Sanitation & Soil Health; Microbial & Biomass Technologies; Food Technology, Health & Nutrition.

22. **SENSORS, INSTRUMENTATION AND CYBER-PHYSICAL SYSTEM ENGINEERING (SeNSE):** Candidates must have an ability to build world-class research facilities, and a proven/ demonstrated history of hands-on product and prototype development at the individual/ team level in- Optical Engineering (optical fabrication, laser systems and optical instrumentation), Precision mechanics, electronics systems and instrumentation, sensors, smart systems, cyber-physical systems. (more details at http://bit.ly/SENSE-faculty-advertisement)

23. **BHARTI SCHOOL OF TELECOMMUNICATION TECHNOLOGY AND MANAGEMENT:** All areas of telecom technology and management.

24. **AMAR NATH & SHASHI KHOSLA SCHOOL OF INFORMATION TECHNOLOGY:** Computational Neuroscience, Medical Applications of Information Technologies, Computational & Systems Biology, Embedded Systems & Sensors, Computer Security, Internet of Things (IoT).

25. **KUSUMA SCHOOL OF BIOLOGICAL SCIENCES: For Professor:** Protein Engineering & Protein Aggregation, **For Associate Professor**: Basic Fundamental Research in Biological Sciences in the areas of Structural Biology, Infectious Diseases & Non-communicable Disorders, Cognitive & Computational Neurosciences.

26. **PUBLIC POLICY**: The applicants must have a demonstrated track record of research in the area of public policy with broad focus on Science, Technology & Innovation (STI)

and Development, and expertise in one or more of the specific areas of (1) Energy & Environment (2) Health innovations & systems (3) Sustainable Habitats (4) Agriculture, Food & Water (5) Industry & Economy (6) Internet, Digital Information & Society (7) Innovation Systems & Processes, and (8) Technical Higher Education. For further details, please see http://ssp.iitd.ac.in/

27. **SCHOOL OF ARTIFICIAL INTELLIGENCE (ScAI)** : In all areas of artificial intelligence, machine learning and data science, Subareas of interest include (but are not limited to) deep learning, reinforcement learning, probabilistic models, data mining, information retrieval, multi-agent systems, knowledge representation and reasoning, mathematical foundations of AI, ethics of AI, applied AI such as NLP, computer vision, robotics, AI on the edge, etc., and applications of AI to domain areas such as healthcare, agriculture, education, industry 4.0, etc. ScAI strongly encourages applicants with demonstrated track-record of working at the intersection of an application area and the AI fields. More details are found at http://www.scai.iitd.ac.in

MINIMUM QUALIFICATION AND EXPERIENCE FOR POSITIONS LISTED IN TABLE-A:

Ph.D. with First class or equivalent grade at the preceding degree in an appropriate branch/discipline with a good academic record throughout.

EXPERIENCE (Required on the date of application):

PROFESSOR:
Minimum 10 years Teaching/Research/Industrial experience of which at least 4 years should be at the level of Associate Professor in IITs or in similar institutes of national importance or at an equivalent level in any other Indian or foreign institutions /institutions of comparable standards.

ASSOCIATE PROFESSOR:
Minimum 6 years Teaching/Research/Industrial experience of which at least 3 years should be at the level of Assistant Professor or equivalent in IITs or similar institutes of national importance or at an equivalent level in any other Indian or foreign institutions /institutions of comparable standards.

The following are applicable for the posts mentioned in Table-A:

- A start-up seed grant of up to ₹ 20,00,000 is available to develop research capability in the area of expertise of the faculty member to set research goals for oneself. The Institute also provides an additional grant of ₹ 30,00,000 as matching equipment grant to build new capability / high-value research facility in emerging areas via special project funding from external agencies. These grants are to be availed within 3 years of joining. The strategic goal of this fund is to aim for bigger projects.
- A cumulative Professional Development Allowance **(PDA)** of ₹ 3,00,000 for every block period of 3 years is available to every member of the faculty to meet the expenses for participating in conferences, membership fee of various professional bodies, procurement of books and periodicals and contingent expenses.
- Reimbursement of telephone bills up to a ceiling of Rs.2700/- per month.
- Relocation allowance, as a reimbursement of expenses incurred by a faculty member on travel by him/her and his/her family and for transportation of household goods, limited to ₹2,50,000 for faculty joining the Institute from abroad and ₹ 1,25,000 for faculty joining theInstitute from India.

- Faculty are eligible for Chair Positions that entitle faculty members to a grant of ₹ 5,00,000 per annum for a period of 3 years, extendable up to 5 years.
- Institute bestows Faculty Research Awards to faculty members, across designations, in recognition of their significant research contributions.
- Other than above some more additional benefits and incentives are available in the institute. For further details, please see at https://home.iitd.ac.in/uploads/Benefits_and_incentives_to_faculty.pdf

MINIMUM QUALIFICATION AND EXPERIENCE FOR POSITIONS LISTED IN TABLE-B:

COMPUTER SERVICES CENTRE Specializations:

Systems: Virtualization, AD and LDAP, Kerberos, Network Storage Management Systems, NFS and CIFS Shares, Shell, Scripting, CGI, Perl Scripting, Python, Systems Programming for Windows, Linux, MAC, Security Infrastructure Security, Apache, Cloud Computing, Parallel Computing, HPC.

Network Programming: Firewalls, Network Management, Mail Configuration and Management, Webhosting, VPN, Proxies, https, Programming and Monitoring of Switches, Routers, Hubs, etc.

Applications: Web Application Development, Database Management, and Administration, Web Security, Scripting, CMS, Java, Spring, Hibernate, Reporting Tools like Jasper, Framework knowledge of different Languages/Scripting Languages, SVN.

General requirement (Optional): CCNA, CDCP, PMBOX, Vmware, Java, ITIL , etc. certification will be optional at Senior and Middle-level positions (for Sr. System Manager(SG) and System Manager). Certification on any of the above at entry level (System Architect level) is mandatory.

Sr. SYSTEM MANAGER (SG):

- Ph.D. in Computer Science/Engineering/Applied Sciences with 10 years experience **OR**
- M.Tech. in Computer Science/Engineering/Applied Sciences with 12 years experience **OR**
- B.Tech. or M.Sc. in Computer Science/Engineering/Applied Sciences or M.C.A. with 14 years experience; and
- First class or equivalent grade in all university-level degrees in respective discipline, with a consistently good academic record;
- Strong academic background and work experience with computer systems or computer systems/applications software (including high-performance computing) or computer networks;
- Proven technical competence in managing a large complex of computer systems or computer systems/applications software or computer networks or computer/network services; and
- Proven managerial ability to manage a Center offering computer, software or network services, and interfacing with the user community.

SYSTEM MANAGER:

- Ph.D. in Computer Science/Engineering/Applied Sciences with 8 years experience **OR**
- M.Tech. in Computer Science/Engineering/Applied Sciences with 10 years experience **OR**
- B.Tech. or M.Sc. in Computer Science/Engineering/Applied Sciences or M.C.A. with 12 years experience; and
- First class or equivalent grade in all university-level degrees in respective discipline, with a consistently good academic record;

- Strong academic background and work experience with computer systems or computer systems/applications software (including high-performance computing) or computer networks; and

- Proven technical competence in managing a large complex of computer systems or computer systems/applications software or computer networks or computer/network services.

NOTES:

- Government of India policy on reservation of faculty positions/Computer Programming Staff as applicable to IITs, including that for persons with disability, will apply.
- The minimum requirement of qualifications and/or experience may be relaxed in respect of exceptionally outstanding candidates in certain areas.
- A mere fulfillment of required minimum qualifications and experience does not entitle a candidate to be called for an interview/discussion.
- The Institute reserves the right to fill or not to fill the posts advertised.
- No correspondence whatsoever will be entertained from the candidates regarding postal delays, conduct and result of the interview, and reasons for not being called for interview or selection.
- Depending upon the qualification and experience, a higher start/salary may be offered in deserving cases.
- Separate online applications must be filled, if a candidate is applying for a faculty position in more than one Academic Unit. Candidates having overlapping interests in more than one Academic Unit can be considered for joint appointment (if selected).
- The candidates called for interview will be paid AC2-Tier by Train/Economy Class by Air or actual expenditure and AC Taxi by road (from Airport/Railway Station/ISBT and back) fare from their place of residence/work and back by the shortest route within India.
- Persons employed in Government/Semi-Government Organization or Educational Institutions must apply through proper channel OR shall provide "**No Objection Certificate**" while applying or at the time of interview.

IIT Delhi makes every attempt to help faculty members settle in their academic role and to grow professionally.

ACCOMMODATION: Suitable residential accommodation as per Institute rules shall be provided on the Campus on joining the Institute (this is subject to availability). With the renovation of many apartments, almost all interested new faculty members would be able to get an apartment soon in the Campus. Faculty members can avail accommodation outside the campus on lease till regular accommodation is provided in the campus. Institute supports payment of monthly rental of up to Rs.35,000/- for the same.

ABOUT THE CAMPUS: Extending into an area of 320 acres, the campus is imaginatively laid out with a picturesque landscape with clean and wide roads. The campus provides all essential amenities for community living including Staff Club, Sports Complex (both indoor & outdoor) Hospital, Shopping Centre, Banks, ATMs, Post Office, numerous food courts, Community Centre, etc.

HOW TO APPLY:

It is a requirement that candidates visit the IIT Delhi website **(http://www.iitd.ac.in/jobs-iitd/index.html)** prepare and submit online the completed application for appointment against the above positions. The website also contains useful information on various aspects of

working and living at IIT Delhi and in the recruitment process.

As a precaution, after submitting the application through the website, please retain a printed copy of the application. Candidates employed with Government/Semi-Government Organizations or with Autonomous Bodies must print a copy of the electronic submission and submit the printed version through proper channel at the address given below.

Candidates who have applied online may please log in to our site https://ecampus.iitd.ac.in/IITDFR-0/login and check the status whether their application has been received or not.

Address for correspondence:

Joint Registrar (E-I)
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