



भारतीय प्रौद्योगिकी संस्थान इंदौर

खंडवा रोड, इंदौर 453 552

Office: +91 731 2438 733

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Date: 4th June 2025

Interview for Research Scientist Position

Applications are invited from motivated and eligible candidates for the positions of **(01) Research Scientist (RS)** in the following project:

TTDF/6G/194: DARPAN - An AI-assisted reliable indigenous digital twin for sixth sense 6G Networks

Duration: Initial appointment is for one year, which is extendable for two more years based on performance. The appointment is co-terminus with the project.

Emolument: RS positions will be entitled to a minimum of INR 55000 as per project norms subject to qualification and experience

Eligibility:

Essential Qualification (RS): M.E./M.Tech/M.S. or equivalent in relevant branches of Engineering/Technology with 01 or more years of experience relevant to the project. PhD in relevant research area is desirable but not essential.

Aim of the project: To develop new communication protocols and best practice principles for creating reliable AI-assisted digital twin systems using 6G networks.

Desirable Skills and Expertise: Strong background in **wireless communication systems**, particularly 5G/6G and O-RAN/3GPP standards.

- Proficiency in **network simulators** like **ns-3**, **Simu5G**, or **OMNeT++** with emphasis on 5G/6G protocol stack emulation.
- Familiarity with **radarsimpy** or similar radar/environment simulators for sensing and object tracking.
- Knowledge of **reinforcement learning** and **generative AI techniques**, including LLMs, for adaptive protocol design and semantic communication modeling.
- Proficiency in **Python/C++** and experience in **discrete-event simulation frameworks**.
- Exposure to **cloud-edge integration** (e.g., AWS IoT TwinMaker) and handling real-time data pipelines.
- Experience with **optimization techniques** (e.g., game theory, convex/non-convex optimization) for QoS-aware protocol design.
- Prior experience in **AR/VR content generation** or **visualization** using Unity3D, Unreal Engine, or WebXR is a plus.



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- Demonstrated ability to publish in top-tier conferences/journals and participate in standardization efforts (e.g., 3GPP, ITU).

Application Form (Google form link): <https://forms.gle/ge1MGYu1XEgh9vhJ6>

Last Date for Submitting the Application form: **16th June 2025**

Tentative Interview Date: **18th June 2025**

Google Meet link for the online interview will be sent to all the shortlisted candidates prior to interview date.

In case of any queries related to the project please email to Dr. Dibbendu Roy (droy@iiti.ac.in).