In the Name of God

## Call for recruitment of postdoctoral researchers

## Institute for Convergence Science and Technology

In line with the research and technology goals of the Institute for Convergence Science and Technology, it is planned to accept a number of postdoctoral researchers for the following axes. Qualified applicants (possessing a doctorate degree in related fields and full-time attendance requirements) should send their application along with a copy of their resume, abstracts from the project or the field of research interest in the mentioned fields to icst@sharif.edu by **6 December 2022** or the office of the institute (phone: +982166164123).

**Research axes in the field of Nanoscience and Nanotechnology:**

- Application of two-dimensional advanced materials and polymer nanocomposites in the fields of energy, water, environment and health
- Manufacturing and application of nanodevices including nanosensors in the above fields
- Interdisciplinary fields of nano and cognitive sciences, biotechnology, data science and quantum sciences and technologies

**Research axes in the field of Biosciences and Technology:**

- Fields related to smart drugs and drug release systems in the fields of diagnosis and treatment
- Fabrication of micro and nano motors, microfluidic systems and biosensors
- Applications of tissue engineering in the field of health
- Personalized medicine and improved imaging and tracking methods
- Isolation of proteins, identification of important analides in biological samples

**Research axes in the field of Information Systems and Data Science:**

- Data science in systems and synthetic biology, precision medicine and drug design
- Analysis of neural, economic, audio, text and video data
- Security, confidentiality and anonymization
- Analysis of telecommunication networks and blockchain
- Autonomous and connected cars

**Research axes in the field of Cognitive Sciences:**

- Development of neuroscience imaging and data processing methodology
- Social robots and virtual reality systems in education and rehabilitation
- Circuits and brain processes of memory and reward learning and attention in primates
- Making tools and electrodes for recording nerve signals
- Cognitive robotics, the neural mechanism of decision-making and object and face recognition

**Research axes in the field of Quantum Science and Technology:**

- Quantum communications and telecommunications
- Sensors and quantum networks
- Quantum signal processing
- Optical quantum computing
- Quantum biology
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