

Job Title: Funded PhD Positions in Artificial Intelligence for Networks in the School of Electrical and Computer Engineering, University of Oklahoma (Tulsa Campus), USA.

Description: Applications are invited for fully funded PhD positions (Graduate Research Assistants) in the area of Artificial Intelligence for Networks. Successful candidate(s) will join the AI4Networks Research lab (www.ai4networks.com), directed by Dr. Ali Imran (www.ali-imran.org). AI4Networks Lab is home to one of kind end to end programmable AI enabled full scale cellular system testbed called **TurboRAN** (<http://bsonlab.com/TurboRAN/>) funded by a large NSF grant. TurboRAN is a game changing research platform as it provides an unprecedented opportunity for current and prospective members of the AI4Networks LAB for cutting edge and unprecedented experimental research on AI Enabled multi-band (including mmWave), multi- tier, control and data plane split networks of the future.

The desired start date is Spring /Fall-2019.

RESEARCH OUTLINE: The candidate is expected to pursue research on AI enabled heterogeneous wireless system deployed via terrestrial as well as aerial platforms. The objective is to investigate novel practical solutions that will help to enhance performance of wireless systems in terms of capacity, QoS, QoE, energy efficiency and economy of deployment and operation. The candidate will have the opportunity to be part of several national and international research projects sponsored by public funding bodies (NSF, QNRF...) and wireless industries (AT&T, Intel, Huawei, Google, Alcatel Lucent, Fujitsu, T-Mobile, US Cellular...). The international project consortiums consist of teams from 5G Innovations Center at the University of Surrey, UK, CTTC Spain, University of Leeds, England, and University of Glasgow, Scotland.

JOB QUALIFICATIONS: Applicants should hold a BSC or MSc degree in Electrical Engineering, Computer Science or Applied Mathematics, or similar fields by the time of joining. The candidates should have excellent grades and very good skills in oral and written communication. Key requirements that will be used as selection criteria include:

Essential:

- - Strong background and interest in at least one of the following disciplines:
 1. Artificial Intelligence & Machine Learning
 2. Mathematical Modeling & Optimization Theory
 3. Software Development (Python, Java, C++)
 4. Stochastic Processes
 5. Big Data Analytics
 6. SDR Based Hardware Implementation
- - Command on radio access architecture of cellular systems, notably LTE-A/5G.
- - Ability to work in self-motivated manner.

Desirable:

- Ability to develop and run sophisticated simulation models e.g. in MATLAB or C++

How to Apply:

The position is available as early as spring 2018. Interested candidates are requested to send following items:

1. A detailed CV
2. Transcript of records (stating the relevant taught courses taken)
3. 1-2-page research statement (summarizing how their past work provides them the background for research outlined above)
4. GRE scores (and TOEFL/IELTS scores if international).
5. Candidates with published/accepted articles should include up to three manuscripts of their choice in the application package.

All material should be sent to ali.imran@ou.edu with subject 'OU-GRA-2019'. Review of applications will begin immediately and will continue until the positions are filled.

ABOUT AI4Networks LAB: The Artificial Intelligence for Networks Laboratory at the University of Oklahoma, (AI4NetworksLab@OU) (<http://ai4networks.com>) is highly active research group focused on applied research for developing pragmatic solutions to make the future wireless networks more intelligent and self-organizing, low cost, and globally ubiquitous. We research, design and build networks for better human to human (H2H), human to machine (H2M), machine to machine (M2M), device to device (D2D) and Internet of things (IoT) connectivity. We are currently focused on following four main research thrusts:

- Artificial Intelligence (AI) based Self Organizing Networks for 5G and beyond.
- Big Data analytics for exploitation in wireless networks, using social and non-social data.
- Unconventional deployment architectures (aerial as well as terrestrial) to make connectivity globally affordable and ubiquitous for H2H, H2M, D2D and IoT.
- Health Informatics/Applications of mobile/wireless technology for health care

Our research tackles real world problems faced by wireless industry and is supported by a number of key players in wireless industry who continue to transition our research into practice. Example of employers for AI4Networks Lab graduates include Bell Labs, Amazon, AT&T, Samsung, Nokia, Sprint, Cisco, Google etc.

ABOUT OU: University of Oklahoma is ranked among the top 50 public universities in USA by U.S. News & World Report. It is the largest residential, research university in the state of Oklahoma, with approximately 30,000 student enrollment out of which 10000 post graduate students and 3000 staff. The university consists of fifteen colleges, including 152 majors. The OU is ranked first per capita in US among public universities in enrollment of National Merit Scholars and among the top ten in the graduation of Rhodes Scholars. PC Magazine and the Princeton Review rated it one of the "20 Most Wired Colleges" in both 2006 and 2008, while the Carnegie Foundation classifies it as a research university with "very high research activity".

ABOUT SECE at OU: The School of Electrical and Commuter Engineering at OU conducts research and education in the fields of electrical engineering, Telecommunications Engineering, Communications, Computer Systems, Bioengineering, Electric Power Systems, Electric Vehicle Research, Electromagnetics, Image Processing, Intelligent Systems, Instrumentation and Control Systems, Sensor Electronics, Signal Processing, Solid State Devices and Materials, Weather Radar.

About TCOM program at OU: The Graduate Program in Telecommunication Engineering (<http://www.ou.edu/coe/tcom.html>) is part of the School of Electrical and Computer Engineering and the College of Engineering and is offered at Tulsa campus of OU. The program has on average enrollment of 50 postgraduate students, half of which are PhD students. The program has averaged more than one patent every year over the last fifteen years of its existence. The research is funded by international, national and state funding agencies and private enterprises.