PhD Scholarship in Intelligent solutions for scalable, mission-critical 6G networks
Course Code: 9041 PhD Computing Science and Informatics

Description: 6G technologies target to support diverse applications by connecting heterogeneous devices and mobile terminals with violent improvements in terms of autonomous service, increased network capacity, and enhanced system throughput. The main vision of future 6G technologies is to provide customized and user-centric service, enabling connection of all aspects of human life to communication networks.

This project deal with wireless physical-layer technology for 6G, including but not limited to Terahertz communication, UAV enabled communications, large intelligent surfaces, user-centric and scalable cell-free massive MIMO; and many leading-edge technologies, such as artificial intelligence (AI), machine learning (ML) wireless communications applications.

The London South Bank University is seeking to recruit highly motivated and outstanding doctoral researcher to work on different enabling technologies for the next generation 6G wireless communications networks for its Research Centre for Cognitive Systems, within the Smart Internet Technologies (SuITE) research group. The PhD student will develop new mathematical tools and learning approaches to analysis and optimization the topology formation of wireless communication network.

The outcomes of this project for the PhD candidate are listed below:
- Excellent knowledge of wireless communications and/or signal processing;
- Prior experience in performance analysis and optimization theory;
- Novel communications technologies for 6G networks and services
- Machine learning/deep learning techniques and Artificial Intelligence for wireless communications
- Reconfigurable intelligent 6G wireless networks
- Good mathematical and programming skills;
- present the findings of the project in international conferences;
- perform high-quality research and publish it as journal articles.

This will be a 3-year fully funded studentship for an EU/UK and overseas applicants who are keen to conduct research in 6G wireless communication at LSBU in the School of Engineering. The studentship will join sponsored by LSBU and British Council. In addition to the studentship, we also welcome applications from self-funded students with relevant backgrounds. Informal enquiries about the vacancy can also be asked to the contact persons above.

Supervisory Team: The successful applicant will be working Dr. Yongxu Zhu (yongxu.zhu@lsbu.ac.uk) and the second supervisor is Prof. Tasos Dagiuklas (tdagiuklas@lsbu.ac.uk). As a PhD student, you will join the Smart Internet Technologies research group (https://www.suitelab.org/), led by Prof. Tasos Dagiuklas. Informal enquiries should be directed to Dr. Yongxu Zhu. Please send a copy of your CV to Dr. Yongxu Zhu before applying.

The SuITE research group at the carries out research activities in the areas of 5G technologies such as SDN, NFV, Edge, C-RAN and is rapidly expanding its research areas to various enabling technologies for beyond 5G wireless networks.

Requirements: Applicants must be of outstanding academic merit and should have (or be expected to gain) either a first class or an upper second class Honours degree (or the international equivalent), or an MSc/MRes with distinction. Enthusiastic and self-motivated candidates from all countries with a background in either Electrical Engineering, Computer Science or Mathematics or a related discipline are encouraged to apply.

Experience: The candidate should have some basic knowledge and experience in of the following topics:
Wireless Systems
Stochastic analysis
Linear algebra
Game Theory
Optimization theory
Programming skills: MATLAB, Python, C/C++

Applications should include:
- Full CV, including list of publications and names (and contact information including email addresses) of two references
- Transcript of all modules and results from university-level courses taken
- A research statement (max. 1 page)