

Short Report on Participation

## LAPC 2018

### Loughborough Antennas and Propagation Conference 2018, UK

Karim Akhter

#### **Journey to Loughborough, UK (11 November, 2018)**

The long journey was started from Aachen towards Loughborough through Brussels and London as planned. During the journey due to some technical issues and construction on the tracks, the trains were delayed. After checking in the hotel, I got some time to visit the Loughborough city.



#### **Day 01 (Monday - 12 November, 2018)**

The registration and welcome refreshment were already started at 8:30 in the morning. After the registration of the delegates the conference is officially started with the welcome speech by Conference Co-Chair Dr. Nelson Fonseca. He also briefly elaborated conference format and discussed topics of different session for coming two days of conference.

The very first session was about “New enabling antenna solution for future space systems”. Keynote speakers Prof Geoge Goussetis gave a presentation on Antennas and propagation for mm-wave satellite communication; he discussed how to achieve a reduction in antenna farm to provide the required coverage with less reflectors and re-use of the reflectors between different missions.

The session is continued by four more speakers and they explained their research work and trends in the space industry and the importance of enabling new techniques in antenna and wave propagation. After the presentations of the invited speaker first poster session was started, the authors presented their research work it was very interactive where we can easily and freely discuss the topics and results.



After the lunch, the second session on the topic of “Propagation measurement, modeling and spectrum usage for 5G” is started. This session comprises of five lectures in which the invited speakers explained about the effect of the solar corona and weather on radio propagation. It also includes the presentation about measurement and modeling of 5G propagation and

beyond. Followed by lectures the authors presented their papers during the poster session. In this way, the first day is ended after the conference dinner.

## Day 02 (Tuesday - 13 November, 2018)

The first session of day 02 was started at 9.30 am with a short welcome by conference Co-Chair Dr Rebecca Walton. The topic of this session was “Antennas and propagation: Error and uncertainty” The Keynote speaker Dr. Erik Jørgensen gave a lecture on Uncertainty quantification in antenna design tools for space applications. The second presentation was given by Prof Tian Loh on the effects of the antenna-to-rang interface on antenna characterization and wireless system link performance assessments. My slot for presenting my paper was in the third poster session, it gave me the opportunity to explain my work and discuss the outcomes with the audience.





Main focus of the last session was “Vehicular Propagation” in this session three lectures were given on the topic of the implications of antenna placement in vehicles for 5G mm-Wave communications, Orbital angular momentum modes: boosting the performance of line-of-sight backhaul links for vehicles on the move and Exploration of 5G heterogeneous wireless technologies for vehicular communications by Dr. Matthew D Higgins, Dr. Timothy Drysdale, and Dr. Falah Ali respectively. After the lectures, the authors presented their research papers in the form of posters. The conference was ended by Conference Co-Chairs with closing remarks and announcement of the best paper award.

On next day 14 November 2018 started the journey back to Aachen from Loughborough.

Overall my experience to attend the conference was good; it was a good opportunity to interact with other students in the field of antenna and propagation. Some sessions were very lengthy and lots of content within a short time. On the other hand, the interaction with authors during poster sessions was very informative.