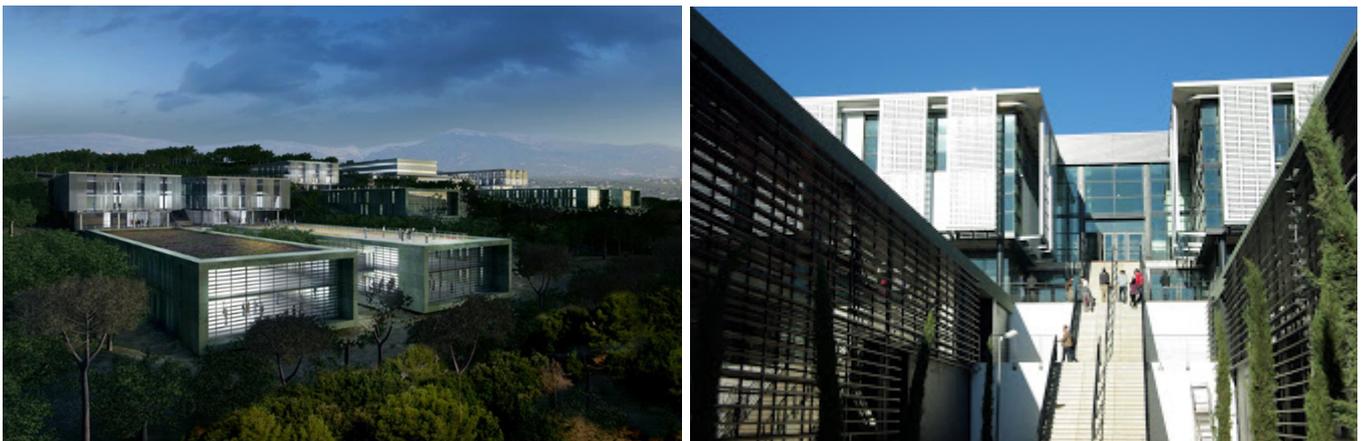


Indian Summer School on Spectrum Aggregation and Sharing for 5G Networks (SSSAS5G)

EURECOM, Campus SophiaTech, Sophia Antipolis, France, Oct. 17-19, 2016

Spectrum is the key resource for all wireless communications. This workshop will bring together experts from the field of Spectrum Aggregation and Sharing to give an overview of the state-of-the art, to disseminate their latest developments, and to discuss the future of these two technologies and in particular their potential impact on the coming 5G systems. This workshop is supported and organized by the 3 most important EU-funded projects (ADEL and SOLDER from FP7 and SPEED-5G from H2020) currently working on different aspects of spectrum management, aggregation and sharing technologies.



Spectrum is the key resource for all wireless communications. This (Indian) Summer School addresses the topic of “how spectrum will be shared in 5G networks”. Spectrum for cellular communications up to 4G is owned almost exclusively by operators or incumbents, or is unlicensed. This model is likely to change in 5G, where new spectrum band and types will be added to the game and new sharing paradigms will come into play. Already 3GPP release 13 foresees the aggregation of licensed with unlicensed bands (also known as licensed assisted access (LAA) or LTE-WLAN aggregation (LWA)). Moreover several trials are currently ongoing in different areas of the world to evaluate the feasibility and acceptance of licensed shared access (LSA). These new paradigms require new multi-band transmission techniques, new cooperative approaches to resource sharing and allocation, spectrum sensing and information exchange, control and data planes, fairness and revenue schemes

The School follows the success of a previous EURACON school (WaveNAT5) organized at EURECOM in September 2015; attendees will be exposed both to theoretical and demo sessions. Furthermore, standardization aspects will be highlighted in an industry talk. This School brings together experts from the field of Spectrum Aggregation and Sharing. The presenters are partners from 3 ongoing European projects:

ADEL <http://www.fp7-adel.eu/>
SPEED5G <https://speed-5g.eu/>
SOLDER <http://ict-solder.eu/>

and invited guest speakers. This Summer School is also an outgrowth of the SAS5G workshop that was organized at ISWCS2016: <http://iswcs2016.org/welcome/menu/workshops>.

- **When**

17-19 October 2016

- **Where**

[EURECOM](#) Sophia Antipolis (France)

- **Keynote Speakers**

David Gesbert and **Paul de Kerret** (EURECOM)

“Device-Centric Cooperation in Wireless Networks”

Yang Yang (INTEL)

“Centralized and Distributed Optimization for Resource Allocation”

Christian Steffens (Technical University of Darmstadt)

“Sparse Spectrum Modeling and Estimation”

Luiz da Silva (Trinity College Dublin)

“Introduction to Game Theory applied to Dynamic Spectrum Access”

Christophe Moy (CentraleSupélec/IETR)

“Bayesian Multi-armed Bandit Algorithms”

“Proof-of-Concept for Opportunistic Spectrum Access in Decentralized Networks”

Markus Mueck (INTEL)

“Spectrum Sharing Technology in Europe and the US”

Klaus Moessner (University of Surrey)

“Licensed Spectrum Sharing Schemes for Mobile Operators”

Shahid Mumtaz (Instituto de Telecomunicações Aveiro)

“WiFi in Licensed Band (WiFi-Lic)”

Florian Kaltenberger (EURECOM)

“Carrier Aggregation and License Assisted Access (LAA)”

- **Programme**

Monday, October 17th

9:30-12:30 David Gesbert & Paul de Kerret

14:00-16:00 Yang Yang

16:30-17:30 Christian Steffens

Tuesday, October 18th

9:30-11:00 Luiz da Silva

11:30-12:30 Christophe Moy (presentation)

14:00-15:00 Christophe Moy (demo)

15:30-16:30 Markus Mueck

16:30-17:30 Poster Session

Wednesday, October 19th

9:30-10:30 Florian Kaltenberger (presentation)

11:00-12:30 Florian Kaltenberger (demo)

14:00-15:30 Klaus Moessner

16:00-17:00 Shahid Mumtaz

- **Local information**

[Regarding Eurecom](#)

[Regarding hotels](#)

- **Organising Committee**

- o Dirk Slock (EURECOM) – primary contact.
<http://www.eurecom.fr/en/people/slock-dirk>
- o Valerio Frascolla (Intel Deutschland GmbH)
<https://www.linkedin.com/in/valeriofrascolla>

dirk.slock@eurecom.fr

valerio.frascolla@intel.com

- **Local (Logistic) Organisers**

[Dirk Slock](#), EURECOM

- **Supporting Institutions**

EURACON - European Association of Communications and Networking

ADEL - "Advanced Dynamic spectrum 5g mobile networks Employing Licensed shared access" fp7 project

- **Registration**

A full registration form will be made available soon on <http://www.euracon.org/>. In the meantime you may pre-register here: <https://goo.gl/forms/pCn7hNRuUADRPLwH3> to receive email updates.

- **Registration fee and payment**

Registration fee: to be announced

Early registration fee, before October 1: to be announced

Euracon members: to be announced

- **Poster session**

In order to participate in the poster session, participants in the Summer School should send a 1-page abstract to [dirk.slock\(at\)eurecom.fr](mailto:dirk.slock@eurecom.fr) before October 5. Notification of acceptance will be sent out no later than October 10, in order to let early submitters get an early decision.

- **ECTS credits**

The Summer School participants will be provided with an attendance certificate.

Students requiring validation of the ECTS credits following their attendance of the summer school (possibly including the poster session participation) should check with their home institution about the required validation criteria ahead of the event and get in touch with the organizers to arrange a more formal type of examination if needed. Attendees requiring a certificate for ECTS credits will have to take a written test after the school. The test will consist in writing a report of the courses. This document (3 to 5 pages) should contain:

- a summary of two of the 10 lectures (the choice is left to the student);

- a short discussion about how these results can be used or applied by the student in the context of his/her own research work, if applicable.

The report should be submitted by email within the two weeks following the school, and will be given a grade (pass/fail) by the TPC members.