



ERS POSITIONS AND INDIVIDUAL RESEARCH PROJECTS (IRP)

Fellow <i>ESR9</i>	Host institution AU	PhD enrolment Y	Duration 36 months
<p>Project Title: Architectures and Supporting Algorithms for Spectrum and CA for Small Cells and Ultradense Deployments.</p>			
<p>Objectives: The ESR will define reference scenarios, KPIs, use cases and system requirements for SCs deployments. Then, the goal of this project is to design and evaluate architectures and supporting energy-efficient algorithms for spectrum and carrier aggregation to support energy-efficient communications in the defined reference scenarios and according to the identified usage and system requirements. It is sought to design clever, versatile and non-complex architectures that can easily be deployed, and would support plug-and-play capabilities that would not add to costs of cell dimensioning and planning. The supporting algorithms should allow for seamless handover between radio (RF) and non-radio (e.g., VLC) technologies, whenever required to offload the unlicensed spectrum.</p>			
<p>Expected Results: Logical and physical functionalities and entities for spectrum and carrier aggregation and the required protocols and mechanisms to enable their operation within the architectural concepts. Their performance will be analysed in terms of achievable user throughput, delays, capacity enhancement by link and system-level simulations and a selected set of techniques will be prototyped for a proof of concept</p>			
<p>Enrolment in Doctoral degree(s): Aarhus University</p>			
<p>Main (host) supervisor/Contact: Dr. Albena Dimitrova Mihovska (AU)</p>			