



Titre Thèse	Metasurfaces and Smart Antennas for 5G, 6G and THz wireless communications	
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Financement prévu	Contrat Doctoral Etablissement	ULille <input checked="" type="checkbox"/> UPHF <input type="checkbox"/> Centrale Lille <input type="checkbox"/> Yncrea <input type="checkbox"/>
	Région – Autre <input checked="" type="checkbox"/> I-Site ULNE UKent- ULille ou autre	Contrat de recherche <input type="checkbox"/> Préciser :
Financement acquis ? <input type="checkbox"/>	Contrats de Recherche <input type="checkbox"/> Préciser	Autre <input type="checkbox"/> Préciser

Résumé du sujet :

In the framework of an **international collaboration** between **France and UK**, the future PhD candidate will be involved in highly motivating research topics. The main objectives of this project is to explore disruptive approaches in the design and the fabrication of **original metasurfaces and smart antennas**. The targetted applications are the **5G, 6G and Terahertz wireless communications**. The supervisors of the future PhD candidate are experts in their fields and have a strong experience in the development of original topologies for the control of electromagnetics waves at millimeter and terahertz frequencies. The PhD candidate will be involved in international collaborative projects like Horizon Europe and between the University of Kent and the University of Lille.

The expected profile of the candidate who will have to face several well identified challenges is a strong background in the field of electromagnetics waves (antennas and also on metasurfaces but it is not mandatory). Any experience in the use of **electromagnetic simulation tools** and the **clean room fabrication** skills will be highly appreciated. **3D printing** techniques will be applied for the fabrication of different kind of **antennas** and **intelligent surfaces** at **terahertz frequencies**.

Steven Gao is a Professor and Chair of RF and Microwave Engineering at the **University of Kent**. He is a Fellow Member of IEEE. He is an expert in the field of **microwave smart antennas**, photonics and wireless communications (5G, 6G and beyond). (h-index=43 and more than 10 000 citations).

<https://scholar.google.com/citations?user=R8mVLdoAAAAJ&hl=en>

Tahsin Akalin is an Associate Professor at the **University of Lille**. He is an expert in the field of **terahertz** electromagnetic waves, photonics, plasmonics, Planar Goubau Lines, antennas, metasurfaces including for biosensing applications and wireless communications (5G, 6G and beyond). (h-index=22 and more than 2 000 citations).

https://scholar.google.fr/citations?user=YFx_xtsAAAAJ&hl=fr&oi=ao