RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

INSTITUT FRANÇAIS

SIQI WANG

From France to Sweden

Project: **Wireless communication systems design**

Research topic: **Engineering**

Swedish Institution: **Chalmers University of Technology**

French Institution: **Sorbonne University**

Dates of mobility: **13/06/2023** to **18/09/2023**

Program: **SFVE-A**

PRESENTATION

Siqi Wang is Associate Professor at Sorbonne University. He obtained his PhD in Electronics and Telecommunication from the Ecole Supérieure d'Ingénieur en Electronique et Electrotechnique (ESIEE) at University Paris-Est in 2018. He is interested in spiking neural networks, neuromorphic circuits modelling, RF-PA modelling and linearization (DPD) and I/Q modulator modelling.

ACTIVITIES IN SWEDEN

Siqi Wang is involved in a collaboration with Prof. Thomas Eriksson's group at the Department of Electronical Engineering at Chalmers University of Technology. Eriksson is an expert in the domain of signal processing and telecommunication systems. They jointly supervise PhD student Nima Hajiabdolrahim, who is working on radiofrequency modulator modelling. Eriksson and Wang are developing a new collaborative research project on power amplifier linearization and signal processing, involving a detailed exploration of the joint crest factor reduction (CFR) and digital predistortion (DPD), based on the clipping-and-bank-filtering (CABF) method, published by Wang in 2019. Eriksson's PhD student, Björn Langborn, is working on the project. The performance improvements in MIMO scenarios with CABF compared to conventional techniques will be assessed, with a special focus on achieving enhanced linearity without sacrificing power efficiency. The research will include a systematic study of the selection of filter bank windows, aiming at contributing to the field of wireless communication system design. They also envisaged joint funding applications and future exchanges.