Job Opportunity: Skilled Researcher and/or Programmer with System-Level Modeling and Wi-Fi Expertise

ARSENIO – Advances in the Research of Electronic Systems and New Wireless Options

Are you a skilled researcher and/or programmer with a strong understanding of Wi-Fi technologies? Join the iTEAM at Universitat Politècnica de València in the exciting 2-year project, ARSENIO, where you'll contribute to the development and testing of Wi-Fi 7 functionalities, aiming for IEEE 802.11bn (UHR) standards in collaboration with MaxLinear. Be at the forefront of wireless systems research and make an impact in the field.

Objectives:

The iTEAM at UPV, in partnership with MaxLinear, will measure and model the performance of Wi-Fi 7, testing new functionalities proposed for the IEEE 802.11bn (UHR) standard.

Responsibilities

- **Development of High-Level Models:**

Contribute to the research of new functionalities for the upcoming version of the IEEE 802.11 standard, with a focus on residential wireless systems. Develop high-level models in C++ to reduce latency and improve system reliability. Collaborate in the implementation of various transmission and reception sequences, transmission types with different frame sizes and latencies, and new coordination schemes in frequency and time. Participate in the implementation of simplified link adaptation functionalities.

- **Field Measurements and Data-Driven Modeling:**

Take field measurements of Wi-Fi networks using devices provided by MaxLinear and commercially available ones. Develop a data-driven modeling framework for accurately estimating spectral efficiency and energy consumption of Wi-Fi devices. Use stochastic expert models to statistically infer user experience and energy consumption under various network configurations. Aim to model user experience and network energy consumption with the highest precision using this new data-driven paradigm.

Requirements:

- Engineering degree or above

- Expertise in programming, preferably in C++ and Python.

- Understanding of IEEE 802.11 standards.

- Knowledge of network modeling and optimization.

- Familiarity with machine learning.

Embark on this innovative 2-year journey with us, where your expertise in C++ and Wi-Fi will shape the future of wireless connectivity. Contact me to be part of this cutting-edge research at iTEAM, UPV, in collaboration with MaxLinear!