

# Information and Communication Technologies

H2020 research project interests and expertise



## ABOUT

IS-Wireless is a globally operating Polish software developer and IP provider specializing in advanced solutions for wireless systems. IS-Wireless develops 4G and 5G algorithms, protocols and tools. Our clients are primarily early technology adopters including ODMs, OEMs, chip vendors, and operators. We deliver our services to companies and organizations from Europe, USA, Africa and Asia.

Innovation is at the heart of IS-Wireless. The company is actively participating in EU-funded projects on 5G. IS-Wireless has also rich history of publications on the biggest scientific conferences on wireless technologies.

## EXPERTISE

Radio resource management algorithms for LTE, LTE-A and 5G UE and eNB L1-L3 protocols  
Link-level and system-level simulations of wireless systems  
Embedded implementation (FPGA, DSP, GPP)  
Great dissemination capabilities

## RESEARCH FOCUS

**eNB:** small cells, radio resource management, C-RAN, lean protocol stack, new frame structures, massive MIMO

**UE:** M2M modem design, new waveforms for M2M, low power implementation

## RESEARCH INTERESTS

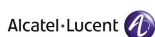
### A new generation of components and systems

- ICT-01-2016: Smart Cyber-Physical Systems
- ICT-03-2016: SSI – Smart System Integration
- ICT-04-2017: Smart Anything Everywhere Initiative

### Future Internet

- ICT-07-2017: 5G PPP Research and Validation of critical technologies and systems
- ICT-08-2017: 5G PPP Convergent Technologies
- ICT-09-2017: Networking research beyond 5G
- ICT-10-2016: Software Technologies
- ICT-12-2016: Net Innovation Initiative
- ICT-13-2016: Future Internet Experimentation

## PARTNERS



## COMPANY FACTS

**Founder and CEO:** Dr. Slawomir Pietrzyk

**Ownership:** Privately held SME

**Location:** Piaseczno near Warsaw, Poland, EU

**Industry:** Wireless communications

**Products:** Software: protocols and tools, IP: algorithms and know-how

**Services:** Technical courses, wireless systems design

## EU-FUNDED PROJECTS

### 5GNOW

FP7 5GNOW

5GNOW stands for 5th Generation Non-Orthogonal Waveforms for Asynchronous Signalling. 5GNOW questions the design targets of LTE and LTE-Advanced such as strict synchronism and orthogonality. 5GNOW develops new PHY and MAC layer concepts being better suited to meet the upcoming needs with respect to service variety and heterogeneous transmission setups.

Within 5GNOW, IS-Wireless is responsible for MAC layer design and system-level simulations.



FP7 SOLDER

SOLDER stands for Spectrum OverLay through aggregation of heterogeneous DisPERsed Bands. The goal of SOLDER is to develop a new spectrum overlay technology, which will provide the efficient aggregation of non-continuous dispersed spectrum bands licensed to heterogeneous networks (HetNets) and heterogeneous Radio Access Technology (h-RATs).

Within SOLDER IS-Wireless is responsible for research on radio resource management within eNB, scheduler implementation and system-level experiments.



H2020 eWINE

eWINE stands for Elastic Wireless Networking Experimentation. The main goal of eWINE is to realize elastic networks that can scale to a high number of users in a short timespan through the use of an agile infrastructure (intelligent software and flexible hardware).

Within eWINE IS-Wireless will contribute to benchmarking and coexistence verification between LTE and proposed 5G waveforms.