

International Chairs : future radio  
communication systems developed in Bretagne  
by Professor Honggang Zhang



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Press statement for immediate release

*In the context of the “International Chairs” program set up by the European University of Brittany (Université Européenne de Bretagne – UEB) with the support of the Région Bretagne and of the ERDF program, the CominLabs Excellence Center welcomes Honggang Zhang. The 46 year-old Chinese researcher’s work focuses on “smart radio” concepts, with the aim of improving the environmental impact of 4G, Wifi or Bluetooth technology.*

Honggang Zhang joins a smart and green radio project which aims to optimize the energy efficiency of radio communication systems. He will be welcomed by Supélec in the CominLabs laboratory. Yves Louet, professor at Supélec and deputy head of the “Signal, communication and embedded electronics” team praises Honggang Zhang’s first-class scientific research which has made him one of the world’s most renowned researchers in the field of “smart radio”. He describes him as being extremely open-minded, with a transversal vision which enables him to apprehend and bring together all of CominLabs’s skills and approaches, from hardware to software and from signal treatment through to electronics and energy efficiency.

Radio communication systems concern our mobile phones (3G, 4G), our laptops (wifi), as well as all short or medium distance wireless electronic equipment (Bluetooth etc.) and, of course, our radios – from radio transmitters to maritime and aeronautic communication systems or systems for emergency services. The volume of data exchanged via these systems, in particular mobile telephone systems, is considerable and involves high levels of energy consumption. The next generation of mobile phones (5G) will need to be smarter, i.e. capable of adapting to its environment, as well as less energy intensive (green technology). Such innovations will imply in particular the optimization of data coding algorithms as well as improved usage of available frequency bandwidths. Orange, Thalès and the telecom industry as a whole take a very keen interest in these developments which they follow closely.

For Arnaud Devillez, head of research and innovation at UEB, “International Chairs represents an important framework through which to promote the research activities of UEB abroad. It allows us to build long-term, durable relationships with other universities, with experienced researchers who are invited for a period of three years”. Two other International Chairs have been created to support research on the adaptation of oceans to climate change and on the impact of pesticides on health.

Each Chair receives 200 000 euros from the Région Bretagne, in the context of the objectives and means contract signed with UEB and the European Regional Development Fund (ERDF). Scientific research in Brittany will thus be able to radiate at an international level, its level of attractiveness will increase and it will reach international standards.

Honggang Zhang, who arrived in Brittany in January 2013, has joined researchers whom he already knew for having collaborated with them previously, and whose scientific and human qualities he values highly. Together with his colleagues, he will be initiating new areas of research and attracting young researchers with high potential. UEB researchers will be able to take research trips to Zhejiang University and vice versa, thus reinforcing a strategic partnership between Brittany and China. While perhaps awaiting the creation of a single laboratory common to both institutions?

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**About the Université Européenne de Bretagne** [www.ueb.eu](http://www.ueb.eu)

The Université Européenne de Bretagne (UEB) brings together 28 higher education and research establishments (universities, grandes écoles, research bodies, and university teaching hospitals) from all over Bretagne. As the umbrella organisation of higher education and research establishments in Bretagne, the UEB is responsible for the development of joint strategy. This regional hub is also the sponsor of joint projects which are international in scope to increase the international standing of research and to permanently establish Bretagne as a region of knowledge and innovation

In order to achieve this, the UEB has equipped itself with additional tools so as to strengthen the structuring of its networked research departments and to enhance their participation in European and international programmes, such as international chairs and Technosciences, a search engine for scientific and technical expertise in Bretagne’s laboratories.

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