

Séminaire ICI : Hagit Messer

13 Juin 2014, 14:00 – 15:30

Titre du séminaire et oratrice

Commercial wireless communication system as an opportunistic sensor network for environmental monitoring, Part II – Advanced topics.

Professeur Hagit Messer, School of Electrical Engineering, Tel Aviv University, Israël.

Date et lieu

Vendredi 13 juin 2014, 14h.

ENSEA, salle 384.

Abstract

Existing measurements of the received signal level (RSL) in a commercial communication microwave network (MCN) go through non-linear preprocessing, matched to the needs of the cellular providers. Typically, the signals are roughly quantized, and in most protocols the min/max RSL values over each period of 15 minutes is stored, instead of instantaneous samples of the RSL. In this talk I will show how we adopt statistical signal processing tools to deal with such limitations for optimally detect precipitation, estimate the accumulated rainfall, and constructing instantaneous rain maps by estimating the parameters of the rain fields. I will also point out on existing challenges and opportunities, mainly in the fields of source separation and vector sensors, as well as in sampling theory and application.

Biography

HAGIT MESSER, Fellow of the IEEE, has joined the faculty of Engineering at Tel Aviv University (TAU) in 1986, after post-doctorate at Yale University, where she is a professor of Electrical Engineering. On 2000-2003 she has been on leave from TAU, serving as the Chief Scientist at the Ministry of Science, ISRAEL. After returning to TAU she was the head of the Porter school of environmental studies (2004-6), and the Vice President for Research and Development 2006-8. On October 2008 she has started a 5 years term as the President of the Open University in Israel. She is now back to Tel Aviv University, also serving as the Vice-Chair of the council for Higher Education, ISRAEL.