

Séminaire ICI : Anne Savard

31 Octobre 2018, 11:00

Titre du séminaire et oratrice

IF Neuron : theoretical study and application to digital communication.

Anne Savard (Université de Lille)

Date et lieu

Mercredi 31 octobre 2018, 11h

ENSEA, salle 384

Abstract

In the context of digital communication, one main mechanism proposed in the literature to overcome the large consumption of MAC layers when establishing communications is called wake-up radio: The main processor is only waking up when receiving a specific signal, as for instance the node ID in the network. Unfortunately, since most of the wake-up receivers rely on standard micro-controller, they suffer a large decrease of energy efficiency. Nevertheless, if the wake-up receivers was designed with neuromorphic circuits, one could achieve high energy efficiency for IoT and ad hoc networks. The main question that is tackled in this presentation is whether a neuro-inspired detection scheme using an Integrate-and-Fire neuron is reliable enough when one needs to detect a weak signal surrounded by noise.

Bio

Anne Savard received the Eng. degree in Electrical Engineering with specialization in Multimedia Systems from the Ecole Nationale Supérieure de l'Electronique et de ses Applications (ENSEA), Cergy-Pontoise, France, and the M.Sc. degree in Intelligent and Communicating Systems from Université Cergy-Pontoise, both in 2012. From October 2012 to September 2015, she was a PhD student at ETIS Laboratory/ENSEA, under the supervision of Claudio Weidmann and David Declercq. Her research interests include modern channel coding, cooperative communication and multi-user information theory. She defended her PhD entitled 'Coding for cooperative communications: Topics in distributed source coding and relay channels' on September, 22th, 2015. From October 2015 to August 2016, she was a postdoctoral researcher working with Matthieu Bloch on physical layer security and covert communications. Since September 2016, she is an associate professor (enseignant chercheur) at IMT Lille Douai (ex Telecom Lille) in the Department of Communications' Systems.

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