# Publications of David Bol

## PAPERS IN SCIENTIFIC JOURNALS

- C. Gimeno, D. Flandre, M. Schramme, C. Frenkel and D. Bol, "A 2.24-pJ/bit 2.5-Gb/s UWB receiver in 28-nm FDSOI CMOS for low-energy chip-to-chip communications", in *AEU International Journal of Electronics and Communications*, vol. 114, 8 p., 2020.
- P. Xu, D. Flandre and D. Bol, "Analysis, Modeling, and Design of a 2.45-GHz RF Energy Harvester for SWIPT IoT Smart Sensors", in *IEEE J. Solid-State Circuits,* vol. 54, pp. 2717-2729, 2019.
- C. Frenkel, J.-D. Legat and D. Bol, "MorphIC: A 65-nm 738k-Synapse/mm2 Quad-Core Binary-Weight Digital Neuromorphic Processor with Stochastic Spike-Driven Online Learning", in *IEEE Trans. Biomedical Circuits and Systems*, vol 13, pp. 999-1010, 2019.
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## BOOK CHAPTER

- D. Bol, "Ultra-low-voltage design of nanometer CMOS circuits for smart energy-autonomous systems", in *Advanced Circuits for Emerging Technologies*, K. Iniewski (Ed.), pp. 57-83, Wiley, 2012.
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## INVITED TUTORIALS AND KEYNOTES

- D. Bol, "The Rising Energy Footprint of the Internet", invited talk at DataBeer Brussels, 2019.
- D. Bol, R. Dekimpe, P. Xu, M. Schramme and D. Flandre, "Can we supply IoT smart sensors wirelessly through simultaneous wireless and power transfer ?", invited talk at FETCH, 2019.

- D. Bol, “Ultra-low-power wireless communications for IoT smart sensors”, invited talk in the “Sensors and Energy Harvesting” tutorial of IEEE European Solid-State Circuits Conf., 2018.
- D. Bol, “Electrical power consumption of the Internet: use cases and sustainability challenges”, in Sustainable IoT Workshop of the European Nanoelectronics COnsortium for Sustainability (ENCOS), 2018.
- D. Bol, “Ultra-Low-Power SoCs for Local Sensor Data Processing”, invited talk in the forum “Intelligent Energy-Efficient Systems at the Edge of IoT” of IEEE Int. Solid-State Circuits Conf., 2018.
- D. Flandre, V. Kilchytska, C. Gimeno, D. Bol, B. Kazemi, J.-P. Raskin, “Measurement and modelling of specific behaviors in 28nm FDSOI UTBB MOSFETs of importance for analog / RF amplifiers”, in MOS-AK workshop, 2017.
- D. Bol, “Notre usage d’Internet: écologiquement irresponsable?”, in *Midis de l’Éthique*, UCL, 2017.
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- D. Bol, “Green SoCs for a Sustainable Internet-of-Things World”, at ST Microelectronics Crolles and at CSEM Neuchâtel, 2012.
- D. Bol, “Electronics and the Environment – An Introduction”, at Université catholique de Louvain, 2011.
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