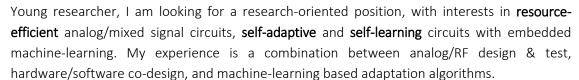
## Martin Andraud, personal statement

10<sup>th</sup> of October 1988, Clermont-Ferrand, France | Nationality: French Current address: Pastoor Dergentlaan 39/002, 3200 Aarschot - BELGUIM +32 (0) 493.30.29.39

martin.andraud@esat.kuleuven.be

**BACKGROUND** 









Researcher ID: <u>X-7681-2018</u>



#### **EDUCATION** (current) Post-doctoral Ph.D. degree in micro and nano electronics – Grenoble-Alpes University, TIMA researcher 2016 Laboratory (France). Title of the manuscript: "Solutions for the Self-Adaptation of Wireless Systems" (Defense in June 2016) KU Leuven -TU Eindhoven Double diploma: master of science and engineering school diploma, respectively from 2012 Strasbourg University (France) and Telecom Physics Strasbourg engineering school, Project management :

specialty micro and nano electronics. system integration 2008 **Technician diploma in electronic systems** (Clermont-Ferrand, France) Research: hardware-**Technical high-school diploma in electronics** – (Clermont-Ferrand, France) 2006 efficient adaptation

# **APPOINTMENTS**

Since Jan.	Post-doctoral researcher, in the context of the NORMA project, ESAT
2019	MICAS group ( <b>KU Leuven</b> , Belgium)

Tasks: scientific development (machine-learning based test of integrated circuits, algorithms and circuits for adaptation of resource-scarce devices)

Jan. 2016 to Dec. 2018	Post-doctoral researcher, in the context of the H2020 FET-open European
	project PHOENIX, shared between ESAT-MICAS group (KU Leuven,
	Belgium) and MSM group ( <b>TU Eindhoven</b> , The Netherlands)

Tasks: Project management (responsible for hardware integration), scientific development (proof of concept of adaptation algorithms), scientific communication (publications, conferences), student supervision

Oct. 2012	<b>Ph.D. student</b> – dissertation subject: "Solutions for the self-adaptation of
	wireless systems". Advisors: E. Simeu and HG. Stratigopoulos
To Dec. 2015	TIMA Laboratory, RMS team (Grenoble Alpes University, France)

Tasks: Scientific development (proof of concept, fabrication and test of RF integrated circuits), scientific communication (publications, conferences)

Feb. 2012 To Sept. 2012	CEA-LETI (Grenoble, France)
	Research assistant (in internship), in an energy harvesting project
	Knowledge: low-power analog circuit design, energy-harvesting devices

Tasks: Scientific support (conception of integrated circuits), scientific communication (publication).

# Selected papers: ITC2018

algorithms

JETCAS 2018 ESSCRIC 2018

SSCL 2018

#### (2012-2015)

PhD Student

TIMA Grenoble

Design and test of RF circuits

Machine-learning

based calibration algorithms

Selected papers:

TCAS-I 2016 DAC 2014

# (2012)

Intern CEA-LETI

Low-power analog design

#### **TEACHING**

148 hours

Exercise sessions, projects, analog and digital IC design

#### **SUPERVISION**

Master student

# TALKS &

Invited talks

IOLTS 2018

NEWCAS 2015

Workshops coorganization
ITC 2018
GECCO 2017

Reviewing activities

### **EXPERTISE**

Analog and RF design

System design and integration

Resource-efficient Machine-learning algorithms

#### **OTHER**

Music (drums)

Sport (rugby, football)

### TEACHING AND SUPERVISION EXPERIENCE

Polytech' Grenoble engineering school, Saint-Martin d'Hères, FRANCE (2014, 2015):

Analog and digital electronics (32 hours - exercises), Electronics and instrumentation (48 hours - lab works), « Physical computing » project (48 hours - lab works, advisor)

KU Leuven, Master of Electrical engineering, Electronics and Integrated Circuits (2018):

• DCF77 project (20 hours): fabrication of a receiver for DCF77 signals, as a mixed mode integrated circuit (analog & digital flows with Cadence software)

**Student supervision:** D. Rivera "Efficient on-chip machine learning applied to self-learning analog and mixed signal circuits" master thesis, Madrid University (carried out in KU Leuven)

#### INVITED TALKS AND COMMUNICATION ACTIVITIES

### Invited talks in conferences

- M.Andraud, M.Verhelst, "From self-healing to self-adaptive analog and RF ICs: challenges and opportunities", IEEE International On-line Testing Symposium, invited talk in special session, 2018.
- M.Andraud, H.-G. Stratigopoulos and E.Simeu, "Self-healing of RF circuits using built-in non-intrusive sensors", 13th IEEE International New Circuits and Systems Conference, Invited Talk in Special Session, June 2015.

## Workshop (co-)organization

- Co-organization of the workshop "Exploration of inaccessible environments through hardware/software co-evolution", the Genetic and Evolutionary Computation Conference, July 2017.
- Vice program Chair of the "Test and Validation of High Speed Analog Circuits" TVHSAC workshop, held with the IEEE International Test Conference, 2018.

## Reviewing activities

- Conferences: International Symposium on Circuits And Systems (ISCAS)
- Journals: Transactions on circuits and systems-I (TCAS-1), Journal of Electronic Testing (JETTA)

# SCIENTIFIC KNOWLEDGE

- Languages French: native English: fluent Dutch: basic (currently learning)
- Programming: C/C++, Matlab, Latex, LabVIEW, java.
- Complete microelectronic design flow for analog and RF circuits in advanced CMOS technologies (65nm) schematic design, layout, pad ring design
- Use of Cadence suite and ADS software
- Machine-learning algorithms (neural networks, Bayesian networks), reinforcement learning techniques (Q learning)

### **MISCELLANEOUS**

*Music:* I play the drums for 15 years, in different bands (organization of concerts, tours, band promotion...). I also write in a web musical blog since 2014.

Sport: I regularly practice different sports, as football or touch rugby (Belgian champion 2018)

# CONTACT LIST OF REFEREES

- **Prof. Marian Verhelst**, KU Leuven (marian.verhelst@kuleuven.be, +32 16 32861)
- Prof. Peter Baltus, TU Eindhoven (p.g.m.baltus@tue.nl, + 31 40 247 3393)
- Dr. Haralampos-G. Stratigopoulos, LIP6, Paris (haralampos.stratigopoulos@lip6.fr, +33 1 44 27 71 20)