

Marie Devulder, PhD  
**RFIC Engineer**  
Design and Characterization

Lille, France  
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## Objectives

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To perform research in Analog/Mixed-Signal and RF IC design and characterization in a dynamic team.  
Currently living in France and willing to relocate worldwide.

## Work Experience

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- 2008 - Present      **Principal RF Test Engineer**
- MC2-Technologies*  
Lille, France
- High frequency characterization (Small and Large Signal up to 110GHz)
  - Hardware development of an active multiharmonic loadpull bench
  - Passive design (RF access, calibration kit, coupler)
  - Active circuit integration to develop module of low noise and power amplifier, phase shifter, attenuator
  - Non-linear device modeling (GaAs and GaN technologies)
  - Management team (two technicians)
- Technical skills:  
Vector Network Analyzer (mainly Agilent PNA-X), Power meter, Spectrum analyzer, Noise Figure Meter  
Agilent ADS, Empire XCcel (3D-Simulator), Matlab, Eagleware  
C Language, Visual Basic
- 2004 – 2007      **RFIC Design Engineer on Silicon Technology - PhD Student**
- STMicroelectronics*  
Crolles, France  
&  
*IEMN*  
*Research Institute*  
Lille, France
- Transceiver system analysis and specification definitions
  - Design, layout and characterization of millimeter wave circuits (switch, amplifier, oscillator, detector, single chip transmitter) at 60 GHz using silicon technology (BiCMOS/CMOS)
- Technical skills:  
Vector Network Analyzer (mainly HP-8510 [DC-110GHz]), 70GHz oscilloscope, Power meter, Spectrum analyzer, Frequency Synthesizer  
Agilent ADS, Ansoft HFSS  
Layout using Cadence environment, DRC and LVS verifications
- 2004      **Microwave Engineer - Waveguide limiter design**
- IEMN*  
*Research Institute*  
Lille, France
- Co-simulation using Ansoft HFSS and Agilent ADS to design a limiter
  - Diodes characterization
- Technical skills:  
Vector Network Analyzer (mainly HP-8510 [DC-50GHz])  
Agilent ADS, Ansoft HFSS
- 2003      **RF Engineer, Internship - S band Radar study**
- Thales Air Defence*  
Ymare, France
- MMIC packaging (RF access design) and characterization
  - PCB layout dedicated to drive MMIC (such as switch, attenuator, phase shifter)
- Technical skills:  
Vector Network Analyzer  
Agilent ADS, Orcad Pspice

## Education

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- 2008     **PhD Graduation** in Microwave and Microtechnologies (Lille I University)
- 2003     **Master degree** in Microwave and Microtechnologies  
Dual diploma : Engineer school Polytech'Lille and Lille I University
- 1998     Scientific "Baccalauréat" (French national high school diploma)  
Speciality : Physics and Chemistry

## Technical Knowledge

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Simulation and design softwares	Agilent ADS, Ansoft HFSS, Empire XCcel, CST Microwave Studio, Cadence, Matlab, Eagle, PSpice, Orcad Capture, Orcad Layout
Measurement equipments	Vector Network Analyzer, Spectrum analyzer, Oscilloscope, Noise Figure Meter, Power Meter
OS	Windows XP/Vista/Seven, Linux, Unix Sun Solaris
Languages	C, Visual Basic, HTML, PHP
Databases	MySQL 4.x and 5

## Awards

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- 2004   Jean-Pierre Noblanc Award (STMICROELECTRONICS award)
- 2007   Best Student Paper Award at ICUWB 2007

## Publications

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"Study and feasibility of an Ultra Wideband (UWB) system in millimeter wave range in advanced silicon technology", M. Devulder, PhD dissertation, Lille University, December 2008

"Conception de circuits 60 GHz pour système Ultra Large Bande en technologie BiCMOS SiGe", M. Devulder, I. Telliez, S. Pruvost, F. Danneville, N. Rolland, Journées Nationales Micro-ondes 2007

"60 GHz UWB Transmitter for Use in WLAN Communication", M. Devulder, N. Deparis, I. Telliez, S. Pruvost, N. Rolland, F. Danneville, P.A. Rolland, International Symposium on Signals, Systems and Electronics (ISSSE), August 2007

"UWB Transmitter in BiCMOS SiGe 0.13  $\mu\text{m}$  Technology for 60 GHz WLAN Communication", M. Devulder, N. Deparis, I. Telliez, S. Pruvost, F. Danneville, N. Rolland, P.A. Rolland, IEEE International Conference on Ultra-Wideband (ICUWB), September 2007

"40GHz Low Noise Receiver Circuits using BCB Above-Silicon Technology Optimized for Millimeter-wave Applications", S. Pruvost, R. Cuchet, D. Pellissier, I. Telliez, M. Devulder, X. Gagnard, P. Ancey, M. Aid, F. Danneville, G. Dambrine, N. Rolland, S. Lepilliet, IEEE Radio Frequency Integrated Circuits (RFIC) Symposium, June 2007

## Languages

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French : mother tongue fluency  
English : technical and conversational fluency  
German : basic knowledge

## Interests

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Swimming, Backpacking

## References

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References available upon request