Personal Information Tibault Reveyrand Limoges, France

www.microwave.fr

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in www.linkedin.com/in/reveyrand

www.youtube.com/c/tibaultreveyrand



# Professional Objective

Improve the efficiency of the microwave and RF designers and structures. I focus on nonlinear devices at circuits level (such as HEMTs transistors) and at system level (HPA, Switches). That purpose requires an original use of an advanced RF instrumentation associated to a strong knowledge in terms of measured devices modeling.

SKILLS

Operating systems: DOS, Windows, Unix and Linux.

Programming languages: Pascal, 80x86 Assembler, C, C++, TCL/TK, JAVA, PHP, mySQL.

Office softwares: Microsoft Office, Open Office, LaTeX, DocBook.

Scientific softwares Comsys, Maple, Matlab, Mathematica, Scilab, Keysight's VEE and ADS, NI LabVIEW.

Characterization tools: Spectrum analyzers, scopes, AWG, VNA, LSNA, probe stations, high impedance probes. I have developed calibration procedures and automated calibration and measurements processes.

**System Level Modeling:** Amplifiers, modulators and mixers with splines, neural networks or Volterra expansions. Bilateral Modeling by PhD model.

Circuit Level Modeling: Linear, nonlinear and electrothermal models of HEMTs.

Languages: French, English.

#### CERTIFICATIONS

National Instruments Certified LabVIEW Associate Developer (CLAD) July 2014-July 2016

Awards

- Best Paper Award, European Microwave Week Galium Arsenide Application Symposium (GAAS), 2002
  - T. Reveyrand, C. Maziere, J.M. Nébus, R. Quéré, A. Mallet, L. Lapierre, J. Sombrin, "A calibrated time domain envelope measurement system for the behavioral modeling of power amplifiers", European Microwave Week, GAAS 2002, pp. 237-240, Milano, September 2002
- Best Student Paper Award, Journées Nationales Micro-ondes (JNM), 2007
  O. Jardel, F. De Groote, T. Reveyrand, C. Charbonniaud, J.P. Teyssier, R. Quéré, D. Floriot, "Modélisation du drain-lag dans les modèles électriques grand-signaux de transistors HEMTs AlGaN/GaN", 15eme Journées Nationales Micro-ondes (JNM),3C1, Toulouse, Mai 2007.

Up to 130 other refrences are available here: http://www.microwave.fr/publications.html

# Professional Organizations

# The Institute of Electrical and Electronics Engineers (IEEE)

Member of:

• "Microwave Theory and Techniques" society	2007-present
• "Instrumentation and Measurement" society	2007-present
• MTT-11 "Microwave Measurements" technical committee	2009-present
• IEEE MTT-S Technical Program Review Committee (TPRC) for IMS	2013-present
• Judge for IEEE MTT-S Graduate Fellowships	2014-present
• Chair for IEEE Denver Section Jt. Chapter, AP03/MTT17	2015-2016

The European Microwave Association (EuMA)

2009-2015

### Measurement Engineer (CNRS) XLIM

June 2016-Present

**Lecturer** University of Colorado, Boulder

January 2016-May 2016

ECEN 5014-003, "Microwave Measurements and Calibration Fundamentals'

#### Research Associate University of Colorado at Boulder

June 2013-May 2016

Achievements:

- LabVIEW software for a "Do-it-yourself" Large-Signal Network Analyzer (LSNA)
- Time domain measurement setup in Scilab (VTD-SWAP)
- Outphasing PA characterizations
- Load-pull in time-domain

#### Measurement Engineer (CNRS) XLIM

December 2007-May 2013

Achievements:

- Korrigan European Project activities (RTP N°102.052 funded within the EUROPA framework in the CEPA2 priority area ends early 2009): GaN HEMTs circuits level modeling from european foundries (Thales / QinetiQ) for HPA, LNA and Switches
- Time domain measurement setup (LSNA) development on Scilab-TCL/TK (GUI, calibration and measurement automation)
- Development of HEMTs modeling tools (Scilab)
- Contractual measurements such as load-pull, linearity, high impedance probe in both frequency (VNA) and time domain (LSNA)

Research Associate - Visiting Scholar University of Colorado at Boulder February 2012-July 2012 GaN HEMTs based rectifiers characterizations and analysis

#### Research Engineer (CNRS) XLIM

 $May\ 2005$ -November 2007

Achievements:

- Frequency domain load-pull measurement setup (VNA in receiver mode with pulse capabilities) developpement with Scilab (calibration procedures, measurement automation, data processing)
- Large signal caracterization of transistor (mainly european GaN in the framework of Korrigan
- Korrigan WP3.3 workpackage leader in Korrigan. Developpement of a internet database (Php / mySQL) to let partners share data and informations
- GaN HEMTs "spice-like" nonlinear models

#### Research Engineer NMDG Engineering byba

November 2004-February 2005

Implementation of the High Impedance Probe module (calibration and measurements) in the commercial LSNA Software (based on Mathematica)

### Postdoctoral scientist CNES (French Space Agency)

October 2003-September 2004

Development of characterization tools interfaces within the free open-source scientific package Scilab

## Postdoctoral scientist CNES (French Space Agency)

October 2002-September 2003

Achievements:

- Large Signal Network Analysis (LSNA) characterizations in time-domain
- Development of a new LSNA module in order to investigate time domain waveforms at internal nodes of MMICs with high impedance probes (HIP) to validate circuits designs and to analyze nonlinear parametric stability
- Large Signal Network Analysis (LSNA) characterizations in time-domain

#### Researcher IRCOM / University of Limoges

October 1998-September 2002

Achievements:

- Development of the RF time-domain envelope measurement setup (hardware and software)
- Development of the calibration procedure of the time-domain envelope measurement setup
- Power amplifiers characterizations : Load-pull, IM3, NPR
- Behavioral modeling of nonlinear devices with memory effects for system level
- Development of a dynamic complex gain model with neural networks

#### Lecturer University of Limoges

October 1998-September 2002

 $RF\ devices,\ analog/digital\ communication\ systems,\ signal\ processing,\ propagation\ waves...$ 

#### Postgraduate student IRCOM / University of Limoges

February 1998-July 1998

Circuits level simulations of IM3 and NPR in order to optimize the trade-off between linearity and efficiency

Ph.D in High Frequency Devices and Circuits - Electronic and Optoelectronic, April 2002 University of Limoges (France)