Curriculum Vitae



Personal information

First name(s) / Surname(s) **ALESSANDRO GROSSI**

Nationality

Date of birth February 05th 1988

> Gender Male

Education and training

Dates January 2014 - Onward

Title of qualification awarding Ph.D. Degree in Engineering Sciences

Emerging Nonvolatile Memories characterization and modeling: Charge Trap NAND FLASH, RRAM, Principal subjects/occupational skills

MRAM. covered

Name and type of organisation University of Ferrara, Ferrara, Italy

providing education and training

Level in national or international

Dates October 2010 - October 2013

Master Degree in Electronic and Telecommunications Engineering Title of qualification awarded

(INGEGNERIA ELETTRONICA E DELLE TELECOMUNICAZIONI)

classification

Final Degree Mark 110 (out of 110) with merit

Graduation Date 7.10.2013

Dissertation/thesis subject Digital systems electronics

Dissertation/thesis title Electric characterization of ReRAM and Charge Trapping NAND Flash nonvolatile memories for Solid

LM-29 Class of Master degree in Electronic and Telecommunication Engineering

State Drives applications.

Thesis Supervisor Chiar.mo. Prof. Piero Olivo

Months needed to complete the thesis

Place of internship Engineering Department, University of Ferrara, Ferrara, Italy

Thesis Description Experimental characterization of Charge Trap NAND Flash and RRAM arrays has been executed on

Active Technologies RIFLE Automated-Test-Equipment, performing program/erase/read algorithm development and testing, reliability analysis and statistical modeling. In collaboration with IHP (Frankfurt Oder, Germany), Active Technologies (Ferrara, Italy), NplusT (Perugia, Italy).

Principal subjects/occupational skills

Memory devices, semiconductor device modeling, reliability analysis, statistical modeling, covered

electrical characterization, MATLAB simulation, semiconductor device physics, microelectronics

Name and type of organisation University of Ferrara, Ferrara, Italy

providing education and training

Dates October 2007 - October 2010

Title of qualification awarded | 1st level degree in INGEGNERIA DELL'INFORMAZIONE (AUTOMAZIONE, ELETTRONICA,

INFORMATICA, TELECOMUNICAZIONI) – Specific field of the degree course: Electronics

Final Degree Mark 110 (out of 110)

Graduation Date | 12.10.2010

Dissertation/thesis subject | Electronic Instruments and Measures

Dissertation/thesis title | Definition and implementation of a load-pull system control algorithm oriented to the characterization

of microwave devices

Thesis Supervisor | Prof. Antonio Raffo

Months needed to complete the thesis | 6

Place of internship Engineering Department, University of Ferrara, Ferrara, Italy Thesis Description Load-pull system control software development on Labview

Name and type of organisation providing education and training

University of Ferrara, Ferrara, Italy

Mother tongue

Other language(s)

Self-assessment
European level (*)

English French

Italian

Understanding			Speaking					Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2		B2		B2		B2		B2	
A1		A1		A1		A1		A1	

^(*) Common European Framework of Reference for Languages

Technical skills and competences

Matlab, Labview, PSpice, LTspice, Latex, Automated Test Equipment, Oscilloscope, Temperature Chamber, Simulink, Mathematica, AWR Design Environment, ADS-Agilent, Microsoft Visual Studio.

Programming languages known

C, C++, Java, Assembler, VHDL, SFC, Labview, Spice

Driving licence

B - Italian driving licence

Additional information

Certificates owned:

FCE (First Certificate in English, Grade B, date of issue: 29.12.14) CLAD (Certified Labview Associate Developer, date of issue: 30.3.10) ECDL (European Computer Driving License, date of issue: 23.2.07)

Journal Referee of IEEE Transactions on Device and Materials Reliability (TDMR)

April 2015 - Onward

Awards

Grant: Borsa di studio per la mobilità all'estero – lUSS Unife

May 2015

Research Articles

"Statistical analysis of resistive switching characteristics in ReRAM test arrays".

Cristian Zambelli, Alessandro Grossi, Damian Walckzyk, Thomas Bertaud, Bernard Tillack, Thomas Schroeder, Valeriy Stikanov, Christian Walckzyk.

In: IEEE International Conference on Microelectronic Test Structures (ICMTS), 2014.

• "Bit Error Rate Analysis in Charge Trapping Memories for SSD applications".

Alessandro Grossi, Cristian Zambelli, and Piero Olivo.

In: IEEE International Reliability Physics Symposium (IRPS), 2014.

• "Electrical characterization of read window in ReRAM arrays under different SET/RESET cycling conditions".

Cristian Zambelli, Alessandro Grossi, Piero Olivo, Damian Walczyk, Jarek Dabrowski, Bernard Tillack, Thomas Schroeder, Rolf Kraemer ,Valeriy Stikanov and Christian Walczyk.

In: IEEE International Memory Workshop (IMW), 2014.

"Automated characterization of TAS-MRAM test arrays"

Alessandro Grossi, Cristian Zambelli, Piero Olivo, Paolo Pellati, Michele Ramponi, Jérémy Alvarez-Hérault and Ken Makay.

In: IEEE International Conference On Design and Technology of Integrated Systems In Nanoscale Era (DTIS), 2015

 "Relationship among current fluctuations during forming, cell-to-cell variability and reliability in RRAM arrays"

Alessandro Grossi, Cristian Zambelli, Piero Olivo, Enrique Miranda, Valeriy Stikanov, Thomas Schroeder, Christian Walczyk, and Christian Wenger.

In: IEEE International Memory Workshop (IMW), 2015.

 "RRAM Reliability and Performance Characterization through Array Architectures investigations"

Cristian Zambelli, Alessandro Grossi, Piero Olivo, Christian Walczyk, and Christian Wenger.

In: IEEE Computer Society Annual Symposium on VLSI (ISVLSI), 2015

 "Impact of inter-cell and intra-cell variability on forming and switching parameters in RRAM arrays"

Alessandro Grossi, Damian Walczyk, Cristian Zambelli, Enrique Miranda, Piero Olivo, Valeriy Stikanov, Alessandro Feriani, Jordi Suñé, Gunter Schoof, Rolf Kraemer, Bernd Tillack, Alexander Fox, Thomas Schroeder, Christian Wenger, and Christian Walczyk

In: IEEE Transactions on Electron Devices (TED), 2015