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# ANTONIO ABRAMO

## CURRICULUM VITAE E PUBBLICAZIONI

Il sottoscritto Antonio Abramo autorizza il trattamento di tutti dati personali qui di seguito riportati ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

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**CRONOLOGIA ESSENZIALE**

2020 - Membro del Comitato Tecnico Spin-off dell'Università di Udine  
 2017 - 2019 Delegato del Rettore al Tavolo Tecnico per la creazione del Competence Center Triveneto di I4.0  
 2017 - 2018 Delegato del Rettore per il Trasferimento della Conoscenza  
 2017 - 2019 Membro designato del Comitato di Gestione della Fondazione Rino Snaidero  
 2017 - Membro del Comitato Tecnico di Valutazione Regione Friuli-Venezia Giulia  
 2016 - 2017 Delegato del Rettore per i Brevetti  
 2013 - 2016 Membro della Commissione Tecnica Brevetti dell'Università degli Studi di Udine  
 2008 - 2018 Direttore di Ricerca - ETH Lab, Eurotech Group (<http://www.eurotech.com>)  
 2008 - 2013 Direttore Scientifico - PTLab, Agemont, (<http://www.pervasivelab.agemont.it>)  
 2000 - Professore Associato di Elettronica, Università degli Studi di Udine  
 1997 - 2000 Ricercatore di Elettronica, Università degli Studi di Udine  
 1995 - 1997 PostDoc - Dipartimento di Fisica - Università degli Studi di Modena  
 1995 Ph.D. in Ingegneria Elettronica - Università degli Studi di Bologna  
 1990 Inizio attività scientifica - DEIS, Università degli Studi di Bologna  
 1987 Laurea in Ingegneria Elettronica (magna cum laude) - Università degli Studi di Bologna  
 1962 Nato a Bologna il 16 agosto 1962

**ESPERIENZE INTERNAZIONALI**

2000 Visiting Professor, Center for Integrated Systems, Stanford University, Palo Alto (CA), USA  
 1993 - 1994 Visiting Scholar, Technology Research Department, AT&T Bell Labs, Murray Hill (NJ), USA  
 1992 Summer Job, Technology CAD Group, Intel Corporation, Santa Clara (CA), USA  
 1991 Visiting Scholar, Technology Research Department, AT&T Bell Labs, Murray Hill (NJ), USA

**ATTIVITÀ DIDATTICA**

Sistemi Immersi, Architetture a Microprocessore, Architetture Parallele, Elettronica, Reti Neurali.

**NOTE**

Antonio Abramo è Senior Member dell'IEEE.

ICST 2011 - International Conference on Sensing Technology, Palmerston North, NZ, Nov. 2011:

Membro del Comitato Scientifico Internazionale.

IEDM 2003 - International Electron Device Meeting, Washington, D.C., USA, Dic. 2003:

Chairman del Comitato Tecnico "Modeling and Simulation".

IEDM 2002 - International Electron Device Meeting, S. Francisco (CA), USA - Dic. 2002:

Membro del Comitato Tecnico "Modeling and Simulation".

IEDM 2001 - International Electron Device Meeting, Washington, D.C., USA, Dic. 2001:

Membro del Comitato Tecnico "Modeling and Simulation".

**FUND RISING**

- Cluster Italiano su "Assisted Living" - Azione di Ricerca su "Smart Cities / Smart Environments"  
 Progetto D4All; Finanziamento di Progetto: 11 MEuro; Finanziamento di Unità: 580 kEuro; Durata: tre anni)
- Piattaforma Tecnologica Europea ARTEMIS  
 Progetto nSHIELD; Finanziamento di Progetto: 13 MEuro; Finanziamento di Unità: 360 kEuro; Durata: tre anni)
- Piattaforma Tecnologica Europea ENIAC  
 Progetto E2SG; Finanziamento di Progetto: 36 MEuro; Finanziamento di Unità: 1.2 MEuro; Finanziamento di Gruppo: 40 kEuro; Durata: tre anni)
- Piattaforma Tecnologica Europea ENIAC  
 Progetto END; Finanziamento di Progetto: 12 MEuro; Finanziamento di Unità: 50 kEuro; Durata: tre anni)
- Progetto POR-FESR "Easyhome"  
 Finanziamento di Progetto: 1,5 MEuro; Finanziamento di Unità: 190 kEuro; Durata: tre anni)
- Fondi Regionali su Legge Innovazione per la creazione di un Laboratorio di Tecnologie Pervasive  
 (Finanziamento totale: 650 kEuro; Durata: tre anni)
- Progetto Nazionale PRIN su Autonomic Computing  
 Finanziamento di Progetto: 132 kEuro; Finanziamento di Unità: 51 kEuro; Durata: due anni)

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- [IJ08] P. Bordone, A. Abramo, R. Brunetti, M. Pascoli, C. Jacoboni, "Wigner-function for open systems with electron-phonon interaction", *Physica Status Solidi B*, 204, 303 (1997).
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- [IJ10] C. Fiegna, A. Abramo, "Analysis of quantum effects in non-uniformly doped MOS structure", *IEEE Transaction Electron Devices*, 45, 877 (1998).
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- [IJ21] A. Abramo, "Modeling electron transport in MOSFET devices: evolution and state of the art", *International Journal of High Speed Electronics and Systems*, 13, 701 (2003). (Invited paper)
- [IJ22] D. Esseni, A. Abramo, "Modeling of electron mobility degradation by remote Coulomb scattering in ultra-thin oxide MOSFETs", *IEEE Transaction Electron Devices*, 50, 1665 (2003).
- [IJ23] D. Esseni, A. Abramo, L. Selmi, E. Sangiorgi, "Physically based modeling of low field electron transport in ultra-thin single- and double-gate SOI n-MOSFETs", *IEEE Transaction Electron Devices*, 50, 2445 (2003).
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- [IC10]** P. Vitanov, M. Nedjalkov, C. Jacoboni, F. Rossi, A. Abramo,  
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- [IC11]** E. Sangiorgi, C. Fiegna, A. Abramo,  
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- [IC14]** A. Ghetti, L. Selmi, E. Sangiorgi, A. Abramo, F. Venturi,  
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- [IC15]** A. Abramo, J. Bude, F. Venturi, M.R. Pinto,  
“Mobility simulation in Si/SiGe heterostructure FETs”,  
IEDM Technical Digest, 731, S. Francisco, CA (USA), Dec. 1994.
- [IC16]** A. Abramo, J. Bude, F. Venturi, M.R. Pinto, E. Sangiorgi,  
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- [IC17]** A. Abramo, C. Fiegna, F. Venturi,  
“Hot carrier effects in short MOSFETs at low applied voltages”,  
IEDM Technical Digest, 301, Washington, DC (USA), Dec. 1995.
- [IC18]** A. Abramo, P. Casarini, C. Jacoboni,  
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HCIS Technical Digest, 509, Chicago, IL (USA), Aug. 1996.
- [IC19]** C. Fiegna, A. Abramo,  
“Optimization of channel profiles for ultra-short MOSFETs by quantum simulation”,  
IEDM Technical Digest, 815, S. Francisco, CA (USA), Dec. 1996.
- [IC20]** A. Abramo,  
“A general purpose 2D Schrödinger solver with open/closed boundary conditions for quantum device analysis”,  
SISPAD Technical Digest, 105, Boston, MA (USA), Sep. 1997.

- [IC21] C. Fiegna, A. Abramo,  
"Solution of 1-D Schrödinger and Poisson equations in single and double gate SOI MOS",  
SISPAD Technical Digest, 93, Boston, MA (USA), Sep. 1997.
- [IC22] A. Abramo, C. Fiegna, P. Casarini,  
"Quantum effects in the simulation of conventional devices",  
SISPAD Technical Digest, 121, Leuven, (Belgium), Sep. 1998. (Invited paper)
- [IC23] C. Fiegna, A. Abramo, E. Sangiorgi,  
"Simulation study of the impact of channel doping profiles on MOSFET analog performance",  
ESSDERC Technical Digest, 688, Leuven, (Belgium), Sep. 1999.
- [IC24] A. Abramo, A. Cardin, L. Selmi, E. Sangiorgi,  
"Two-dimensional quantum simulation of silicon MOSFETs",  
ISDRS Technical Digest, 77, Charlottesville, VA (USA), Dec. 1999.
- [IC25] A. Todon, L. Selmi, A. Abramo, E. Sangiorgi,  
"On the optimization of HALOs for 0.1 mm MOSFETs and below",  
ISDRS Technical Digest, 41, Charlottesville, VA (USA), Dec. 1999.
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"Two-dimensional quantum mechanical aspects in the charge distribution of ULSI silicon MOSFETs",  
ULIS 2000 Technical Digest, 107, Grenoble, (FR), Jan 2000.
- [IC27] A. Todon, L. Selmi, A. Abramo, E. Sangiorgi,  
"Short channel and hot carrier performance of ULSI MOSFETs with halo structures",  
ULIS 2000 Technical Digest, 111, Grenoble, (FR), Jan. 2000.
- [IC28] A. Abramo, L. Selmi, Z. Yu, R. W. Dutton,  
"Well-Tempered MOSFETs: 1D versus 2D quantum analysis",  
SISPAD Technical Digest, 188, Seattle, WA (USA), Sep. 2000.
- [IC29] A. Dalla Serra, A. Abramo, P. Palestri, L. Selmi,  
"A comparison between semi-classical and quantum-mechanical escape-times for gate current calculations",  
ESSDERC Technical Digest, 340, Cork, (IR), Sep. 2000.
- [IC30] P. Palestri, M. Pavesi, P. Rigolli,  
L. Selmi, A. Dalla Serra, A. Abramo, F. Widdershoven, E. Sangiorgi,  
"Impact ionization and photon emission in MOS capacitors and FETs",  
IEDM Technical Digest, 97, S. Francisco, CA (USA), Dec. 2000.
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"Simulation of tunneling gate currents in ultra-thin SOI MOSFETs",  
ISDRS Technical Digest, 110, Washington DC (USA), Dec. 2001.
- [IC32] D. Esseni, A. Abramo,  
"An improved model for electron mobility degradation by remote Coulomb scattering in ultra-thin oxide MOSFETs",  
ESSDERC Technical Digest, 183, Florence, (IT), Sep. 2002.
- [IC33] R. Clerc, P. Palestri, A. Abramo,  
"Investigation on convergence and stability of self-consistent Monte Carlo device simulations",  
ESSDERC Technical Digest, 191, Florence, (IT), Sep. 2002.
- [IC34] D. Esseni, A. Abramo, L. Selmi, E. Sangiorgi,  
"Study of low field electron transport in ultra-thin single and double gate SOI MOSFETs",  
IEDM Technical Digest, 719, S. Francisco, CA (USA), Dec. 2002.
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"Carrier quantization in SOI MOSFETs using an effective potential based Monte Carlo tool",  
ESSDERC Technical Digest, 407, Lisbona, Sept. 2003.
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IEDM Technical Digest, 463, Washington, DC (USA), Dec. 2003.
- [IC37] M. Martincigh, A. Abramo,  
"A new stochastic neuron architecture for efficient FPGA implementation",  
Austrochip Technical Digest, 95, Villach (Austria), Oct. 2004.
- [IC38] A. Abramo, F. Blanchini, L. Geretti, C. Savorgnan,  
"Mixed convex/non-convex distributed localization algorithm for the deployment of indoor positioning services",  
American Control Conference Technical Digest, 3967 (2007).
- [IC39] C. Cavallotti, P. Merlino, E. Susilo, M. Vatteroni, P. Valdastrì, A. Abramo, A. Menciassi, P. Dario,  
"An FPGA-based flexible demo-board for endoscopic capsule design optimization",  
EuroSensors XXIV Technical Digest - Elsevier Procedia Engineering, 70 (2010).
- [IC40] M. Vatteroni, C. Cavallotti, P. Valdastrì, A. Menciassi, P. Dario, P. Merlino, A. Abramo,  
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IEEE Sensors 2011 Technical Digest, 809 (2011).
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**CONTRIBUTI IN LIBRI**

- [IB01] A. Abramo, R. Brunetti, C. Fiegna, C. Jacoboni, B. Riccò, E. Sangiorgi, F. Venturi,  
In "Monte Carlo simulation of silicon devices",  
Elsevier Science Publishers B.V., Amsterdam, G. Baccarani Ed., 155 (1993).
- [IB02] C. Jacoboni, A. Abramo, R. Brunetti,  
"Monte Carlo simulation of hot electrons in semiconductor devices",  
In "Hot electrons in semiconductors: physics and devices",  
Oxford University Press, N. Balkan Ed., 429 (1998). (Invited contribution)
- [IB03] C. Fiegna, A. Abramo, E. Sangiorgi,  
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In "Future trends in microelectronics", Wiley,  
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- [IB06] L. Geretti, A. Abramo,  
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- [IB07] P. Merlino, A. Abramo,  
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- [IB08] P. Azzoni, K. Rantos, L. Geretti, A. Abramo, S. Gosetti,  
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**RAPPORTI DI RICERCA**

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