IWCE 2014 Program

June 3

12:30 – 14:00 ***Registration***

Short Course: Computational Electronics, from atoms to circuits

S1 14:00 – 15:00
Eric Polizzi (University of Massachussets Amherst)
FEAST Framework for first-principle DFT and real-time TDDFT calculations

S2 15:00 – 16:00
Xavier Waintal (CEA Grenoble)
Recent progresses in the simulation of time-resolved quantum nanoelectronics

16:00 – 16:30 *Coffe Break*

S3 16:30 – 17:30
Irena Knezevic (University of Wisconsin Madison)
Coupling Electrons, Phonons, and Photons – Challenges in Multiphysics Transport Simulation

S4 17:30 – 18:30
Yuriy Pershin (University of South Carolina)
Memcomputing: a Computing Paradigm to Store and Process Information on the Same Physical Platform

18:30 – 20:00 ***Registration and Welcome Reception***

June 4

8:45 – 9:00 Opening and Welcome Remarks

Session A

Invited Talk

A1 9:00 – 9:30
Gerald Bastard (Ecole Normale Supérieure, Paris)
Carrier dynamics in imperfect Quantum Cascade Structures

Quantum Transport

A2 9:30 – 9:45
L. Filipović, O. Baumgartner, Z. Stanojević, H. Kosina (Vienna University of Technology)
Band-to-Band Tunneling in 3D Devices

A3 9:45 – 10:00
Y. Tan, M. Povolotskyi, T. Kubis, T. B. Boykin and G. Klimeck (Purdue University, University of Alabama in Huntsville)
Tight Binding analysis of Si/GaAs UTBs with subatomic resolution

A4 10:00 – 10:15
E. Colomés, D. Marian and X. Oriols (Università di Genova, Universitat Autònoma de Barcelona)
Understandable algorithm for exchange interaction: quantum noise in nanoelectronic devices

A5 10:15 – 10:30
P. Ellinghaus, M. Nedjalkov and S. Selberherr (Vienna University of Technology)
Efficient Calculation of the Two-Dimensional Wigner Potential

10:30 – 11:00 *Coffe Break*

Session B

Invited Talk

B1 11:00 – 11:30
Nobuya Mori (Osaka University)
R-matrix theory and equivalent model for nanoscale device simulation

Photonics I

B2 11:30 – 11:45
A. Gagliardi, M. Auf der Maur, F. Di Fonzo, A. Abrusci, H. Snaith, G. Divitini, C. Ducati, A. Di Carlo (University of Rome Tor Vergata, Technische Universität München, CNST-IIT Milano, University of Oxford, University of Cambridge)
Morphology Effects in Dye Solar Cells

B3 11:45 – 12:00
A. Raba, Y. Leroy and A.-S. Cordan (Université de Strasbourg, CNRS)
Reliable extraction procedure of parameters for the modeling of organic photovoltaic cells

B4 12:00 – 12:15
S. Tomic, T. Sogabe and Y. Okada (University of Salford, University of Tokyo)
Theoretical model of quantum dot array based intermediate band solar cell

B5 12:15 – 12:30
D. O. Winge, M. Lindskog and A. Wacker (Lund University)
Microscopic modeling of second harmonic generation in quantum cascade lasers

12:30 – 14:00 *Lunch*

Session C

Invited Talk

C1 14:00 – 14:30
Christian Flindt (University of Geneva)
Electron Waiting Times in Mesoscopic Conductors

Circuits

C2 14:30 – 14:45
G. Csaba, A. Papp and W. Porod (University of Notre Dame)
Holographic Algorithms for On-Chip, Non-Boolean Computing

C3 14:45 – 15:00
A. F. Vincent, W. S. Zhao, J.-O. Klein, S. Galdin-Retailleau and D. Querlioz (Université Paris-Sud Orsay, CNRS)
Monte-Carlo Simulations of Magnetic Tunnel Junctions: from Physics to Application

C4 15:00 – 15:15
B. G. Vasallo, J. F. Millithaler, I. Íñiguez-de-la-Torre, T. González and J. Mateos (Universidad de Salamanca)
Time-domain Monte Carlo simulation of GaN planar Gunn nanodiodes in resonant circuits

Graphene I

C5 15:15 – 15:30
M. V. Fischetti and S. J. Aboud (University of Texas at Dallas, Stanford University)
Depression of the Normal-Superfluid Transition Temperature in Gated Bilayer Graphene

C6 15:30 – 15:45
P. Marconcini and M. Macucci (Università di Pisa)
Simplified evaluation of the electrostatic effect of gate voltages on a graphene layer

C7 15:45 – 16:00
V. Hung Nguyen, M. Chung Nguyen, H. Viet Nguyen and P. Dollfus (University of Paris-Sud Orsay, CNRS, CEA Grenoble, Institute of Physics Hanoi)
Strain-induced improvement of graphene transistors

16:00 – 16:30 *Coffe Break*

Session D

Invited Talk

D1 16:30 – 17:00
Irene Gamba (University of Texas at Austin)
Alternative computational methods for Boltzmann and Wigner models in charged transport systems

Semiclassical Transport

D2 17:00 – 17:15
J.-L. Thobel, F. Dessenne and C. Dalle (Université de Lille 1, CNRS)
Monte Carlo study of low and high-field electron transport in GaN-based heterostructures

D3 17:15 – 17:30
Z. Stanojević, L. Filipović, O. Baumgartner, H. Kosina (Vienna University of Technology)
Fast Methods for Full-Band Mobility Calculation

D4 17:30 – 17:45
D. Nagy, M. A. Elmessary, M. Aldegunde, J. Lindberg, W. Dettmer, D. Peric, A. Loureiro, and K. Kalna (Swansea University, Mansoura University, Universidade de Santiago de Compostela)
3D Finite Element Schrodinger Equation Corrected Monte Carlo Simulations of Nanoscale FinFETs

D5 17:45 – 18:00
K. Yoshida and N. Sano (University of Tsukuba)
Monte Carlo Study of the long-range Coulomb interaction in Junctionless Transistors

Demo

18:00 – 18:45
K. Stokbro (Quantum Wise)
Demo of software for simulating semiconductor systems and devices at the atomic-scale

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June 5

Session E

Invited Talk

E1 8:45 – 9:15
François Triozon (CEA Grenoble)
Modeling of FDSOI and Trigate devices: What can we learn from Non-Equilibrium Green's Functions?

Spin effects

E2 9:15 – 9:30
D. Osintsev, V. Sverdlov, N. Neophytou and S. Selberherr (Vienna University of Technology, University of Warwick)
Valley Splitting and Spin Lifetime Enhancement in Ultra-Scaled MOSFETs

E3 9:30 – 9:45
R. Rahman, Y. Wang, Y. Hsueh, Y. M. Tan and G. Klimeck (Purdue University)
Atomistic modeling of STM patterned donor devices for Si quantum computing

E4 9:45 – 10:00
J. Ghosh, V. Sverdlov and S. Selberherr (TU Wien)
Spin Injection in Silicon: The Role of Screening Effects

Thermal Transport I

E5 10:00 – 10:15
R. Rhyner and M. Luisier (ETH Zurich)
Influence of anharmonic phonon decay on self-heating in Si nanowire transistors

E6 10:15 – 10:30
M.G. Pala and A. Cresti (CNRS, INP Grenoble)
Quantum simulation of self-heating effects in rough Si nanowire FETs

10:30 – 12:30 **Poster Session**

12:30 – 14:00 *Lunch*

Session F

Invited Talk

F1 14:00 – 14:30
Nicola Marzari (Ecole Polytechnique Fédérale de Lausanne)
Electronic transport from first-principles: electrons, phonons, and Wannier functions

First Principles

F2 14:30 – 14:45
E. Chen, Y. T. Tung, Z. R. Xiao, T. M. Shen, J. Wu, and C. H. Diaz (TSMC)
Ab Initio Study of Dipole-induced Threshold Voltage Shift in HfO_2/Al_2O_3/(100)Si

F3 14:45 – 15:00
H. Nakamura, T. Miyazaki, K. Nishio, H. Shima, H. Akinaga, and Y. Asai (National Institute of Advanced Industrial Science and Technology)
Design of ReRAM Cell Structure by Metal Buffer and Contact Engineering via First-Principles Transport Calculation

F4 15:00 – 15:15
W. G. Vandenberghe and M. V. Fischetti (University of Texas at Dallas)
Calculation of Electron-Phonon Interaction Strength from First Principles in Graphene and Silicon

F5 15:15 – 15:30
S. Brück, M. Calderara, M. H. Bani-Hashemian, J. VandeVondele, M. Luisier (ETH Zurich)
Towards ab-initio simulations of nanowire Field-effect transistors

Devices and TCAD

F6 15:30 – 15:45
M. Claus, D. Teich, S. Mothes, G. Seifert, M. Schröter (Technische Universität Dresden, University of California San Diego)
Impact of functionalization patterns on the performance of CNTFETs

F7 15:45 – 16:00
Z. Lun, S. Liu, K. Zhao, G. Du, Y. Wang, X. Liu (Peking University, Beijing)
Two-Dimensional Self-Consistent Simulation on Program/Retention Operation of Charge Trapping Memory

16:00 – 16:30 *Coffe Break*

Session G

Invited Talk

G1 16:30 – 17:00
Andreas Wacker (Lund University)
Modelling of Quantum Cascade Lasers by nonequilibrium Green's functions

Photonics II

G2 17:00 – 17:15
F. Carosella, C. Ndebeka-Bandou, A.Wacker, R. Ferreira and G. Bastard (Ecole Normale Supérieure Paris, Université Paris Diderot, Lund University)
Absorption in disordered heterostructures: contributions from intra- and inter-subband scattering and impact of localised states

G3 17:15 – 17:30
N. Cavassilas, F. Michelini and M. Bescond (Université Aix-Marseille, CNRS)
Transport modeling of InGaN/GaN multiple quantum well solar cells

G4 17:30 – 17:45
F. Sacconi, M. Auf der Maur, A. Pecchia, A. Di Carlo (Tiberlab Srl, University of Rome Tor Vergata, CNR-ISMN Rome)
Atomistic simulation of random alloy fluctuations in InGaN/GaN nanowires

Multiscale Simulation

G5 17:45 – 18:00
M. Aldegunde, S. P. Hepplestone, P. V. Sushko and K. Kalna (Swansea University)
Multi-scale simulations of metal-semiconductor contacts for nano-MOSFETs

G6 18:00 – 18:15
M. Claus, A. Fediai, S. Mothes, J. Knoch, D. Ryndyk, S. Blawid, G. Cuniberti and M. Schröter (Technische Universität Dresden, Universidade de Brasilia, RWTH Aachen)
Towards a multiscale modeling framework for metal-CNT interfaces

G7 18:15 – 18:30
M. Auf der Maur, A. Pecchia and A. Di Carlo (University of Rome Tor Vergata)
Coupling Drift-Diffusion/NEGF for the Simulation of InGaN/GaN LEDs

19:30 – 23:00 **Conference Dinner**

June 6

Session H

Invited Talk

H1 8:45 – 9:15
Hasan Sahin (University of Antwerp)
Engineering Silicene by Defects

Graphene II and 2D Materials

H2 9:15 – 9:30
H. Ilatikhameneh, B. Novakovic, Y. Tan, T. Kubis, M. Povolotskyi, R. Rahman and G. Klimeck (Purdue University)
Transport properties of 2D material transistors

H3 9:30 – 9:45
S. B. Touski, Z. Chaghazardi, M. Pourfath, M. Moradinasab, R. Faez and H. Kosina (University of Tehran, Sharif University of Technology, Vienna University of Technology)
Spin Transport in Graphene Nanoribbons: The Role of Surface-Corrugation

H4 9:45 – 10:00
M. Park and M. J. Gilbert (University of Illinois at Urbana Champaign)
Metastable Dynamics of Graphene Excitonic Condensates

H5 10:00 – 10:15
D. Logoteta, G. Fiori and G. Iannaccone (University of Pisa)
Optimization and benchmarking of graphene-based heterostructure FETs

H6 10:15 – 10:30
S. Berrada, Q. Wilmart, V. Hung Nguyen, D. Torrin, G. Fève, J.-M. Berroir, P. Dollfus and B. Plaçais (Université Paris-Sud Orsay, CNRS, Ecole Normale Supérieure Paris)
Graphene-based Klein tunneling transistor

10:30 – 11:00 *Coffe Break*

Session I

Invited Talk

I1 11:00 – 11:30
Evan Reed (Stanford University)
Emergent electromechanical properties of monolayer and few-layer materials

Thermal Transport II

I2 11:30 – 11:45
K. Raleva, E. Bury, D. Vasileska, and B. Kaczer (Sts. Cyril and Methodius University Skopje, IMEC Leuven, Arizona State University)
Uncovering the Temperature of the Hotspot in Nanoscale Devices

I3 11:45 – 12:00
K. Miao, H. Ilatikhameneh, Y. He, M. Povolotskyi, G. Klimeck, T. Kubis and T. S. Fisher (Purdue University)
Thermal transport across strain relaxed Si/Ge interfaces

I4 12:00 – 12:15
L. N. Maurer and I. Knezevic (University of Wisconsin Madison)
Modeling Thermal Transport in Rough Silicon Nanowires with Phonon Monte Carlo

I5 12:15 – 12:30
Z. Aksamija (University of Massachusetts Amherst)
Full Band Monte Carlo Simulation of Phonon Transport in Semiconductor Nanostructures

12:30 – 14:00 *Lunch*

Session J

Invited Talk

J1 14:00 – 14:30
Jean-Michel Sellier (Bulgarian Academy of Sciences, Sofia)
The Multi-Dimensional Transient Challenge: The Wigner Particle Approach

Quantum Transport II

J2 14:30 – 14:45
D. Areshkin and M. Luisier (ETH Zurich)
System-Dependent Modified Becke-Johnson Exchange for Quantum Transport Simulations

J3 14:45 – 15:00
E. R. Hedin and Y. S. Joe (Ball State University)
Serially-connected Aharonov-Bohm rings with embedded quantum dots

J4 15:00 – 15:15
O. Jonasson and I. Knezevic (University of Wisconsin Madison)
Current Oscillations in a DC-Biased Resonant Tunneling Diode at Room Temperature

J5 15:15 – 15:30
E. Dib, N. Cavassilas, H. Carrillo-Nuñez, M. Bescond and M. Lannoo (Université Aix-Marseille, CNRS)
Comparison between double-gate p-type junctionless and inversion-mode transistors

J6 15:30 – 15:45
V. Talbo, J. Mateos, S. Retailleau, P. Dollfus, and T. González (Universidad de Salamanca, Université Paris-Sud Orsay, CNRS)
Frequency-dependent shot noise in single-electron devices

J7 15:45 – 16:00
D. Marian, X. Oriols and N. Zanghì (Università di Genova, Universitat Autònoma de Barcelona)
On the back-action of THz measurement on the total current of quantum devices

16:00 – 16:30 *Closing Remarks*

Posters

P1 K. Stokbro and S. Smidstrup (QuantumWise)
Atomic-scale modelling of electron transport across metal-organic interfaces

P2 H.M. Rafferty, A.D. Burnett, Z. Ikonic and R.W. Kelsall (University of Leeds)
DFT Calculation and Spectral Analysis of Electronic Structure of Dislocations in Germanium

P3 P. Chang, X. Liu, L. Zeng, K. Wei, and G. Du (Peking University)
An Adaptive Grid Algorithm for Self-Consistent k.p Schrödinger and Poisson Equations in UTB InSb-Based pMOSFETs

P4 J. Fang, W. Vandenberghe and M. V. Fischetti (University of Texas at Dallas)
Full-band Ballistic Quantum Transport in Nanostructures using Empirical Pseudopotential

P5 R. Rosati and F. Rossi (Politecnico di Torino)
Phonon-induced quantum diffusion in semiconductors

P6 R. Rosati, R. C. Iotti and F. Rossi (Politecnico di Torino)
Microscopic modeling of quantum devices at high carrier densities via Lindblad-like scattering superoperators

P7 W. Rodrigues, A. Pecchia, M. Auf der Maur and A. Di Carlo (University of Rome Tor Vergata)
A multi-GPU based approach for atomistic calculations of quantum energy eigenstates

P8 F. Buscemi, M. Rudan, E. Piccinini and R. Brunetti (University of Bologna, University of Modena and Reggio Emilia)
A 5th-Order Method for 1D-Device Solution

P9 Z. Zhan, F. L. Traversa and X. Oriols (Universitat Autònoma de Barcelona)
The shortest simulation-box for time-dependent computation of (Bohmian) wave packets

P10 P. Sarangapani, Y. Tan, J. Charles, T. A. Ameen, M. Povolotskyi, T. Kubis and G. Klimeck (Purdue University)
Atomistic Tight Binding Simulations with Real Space Basis Functions: Optical Properties of Multi Million Atom Systems

P11 J. R. Barker and A. Martinez (University of Glasgow, University of Swansea)
Remote soft-optical phonon scattering in Si nanowire FETs

P12 P. Ellinghaus, M. Nedjalkov and S. Selberherr (TU Wien)
Implications of the Coherence Length on the Discrete Wigner Potential

P13 H. Carrillo-Nuñez, M. Bescond, N. Cavassilas, E. Dib and M. Lannoo (CNRS, Université d'Aix-Marseille)
Phonon scattering influence in single dopant nanowire transistors

P14 M. Van de Put, M. Thewissen, W. Magnus, B. Sorée and J.M. Sellier (University of Antwerp, IMEC, Bulgarian Academy of Sciences)
Spectral force approach to solve the time-dependent Wigner-Liouville equation

P15 S. M. Amoroso, V. P. Georgiev, E. Towie and A. Asenov (University of Glasgow, Gold Standard Simulations Ltd)
Metamorphosis of a nanowire: A 3-D coupled mode space NEGF study

P16 M.S. Choi, M. Dutta and M.A. Stroscio (University of Illinois at Chicago)
Numerial analysis of local density of states of plasmons in Si-SiO_2-silver nanocavity system

P17 M.S. Choi, N. Zhang, M. Dutta, and M.A. Stroscio, C.O. Aspetti and R. Agarwal (University of Illinois at Chicago, University of Pennsylvania)
Plasmon Excitation of Coherent Interface Phonons in Si-SiO_2 Systems

P18 L. Yan, N. Zhang, J. Shi, M. Dutta and M. A. Stroscio (University of Illinois at Chicago)
Enhanced Signal-to-Noise in Photodetectors due to Interface Phonon-assisted Transitions

P19 A. Satou, V. Ryzhii, V. Mitin, F. T. Vasko and T. Otsuji (Tohoku University, University at Buffalo, NASA Ames Research Center)
Kinetic Transport Model with Carrier-Carrier Scattering for Graphene Terahertz/Photonic Device Simulation

P20 Y. B. Shi and I. Knezevic (University of Wisconsin Madison)
Nonequilibrium phonon effects on electron transport in GaAs-based mid-infrared quantum cascade lasers

P21 A. Berbezier and F. Michelini (CNRS, Université d'Aix-Marseille)
Interlinked impacts of tunneling and optical couplings in a QD-based photovoltaic nanocell

P22 S. Karishy, J. Ajaka, C. Palermo and L. Varani (Université Montpellier 2; Lebanese University)
Vertical Diodes Response to Optical and Electrical THz Excitations

P23 A. Mahi, A. Belghachi, H. Marinchio, C. Palermo and L. Varani (Université Montpellier 2)
Simulation of plasma oscillation response to THz radiation applied upon high electron mobility transistors

P24 C. Ndebeka-Bandou, F. Carosella, R. Ferreira and G. Bastard (Ecole Normale Supérieure de Paris)
Importance of localization for scattering rates in heterostructures

P25 D. Guo, D. Vasileska, C. Ringhofer, R. Akis, I. Sankin and T. Fang (Arizona State University, First Solar)
CdTe Solar Cells: The Role of Copper

P26 R. Akis, D. Brinkman, I. Sankin, T. Fang, D. Guo, D. Vasileska and C. Ringhofer (Arizona State University, First Solar)
Modeling Copper Diffusion in Polycrystalline CdTe Solar Cells

P27 A. García-Rivera, R. Valin, E. Comesaña, A.J. García-Loureiro and A. Martinez (University of Santiago de Compostela, Swansea University)
Influence of textured interfaces in the performance of a--Si:H double-junction solar cell

P28 J. Miloszewski, T. Walsh, D. J. Binks and S. Tomic (University of Salford, University of Manchester)
Exciton binding in type II CdSe/CdTe quantum dots

P29 A. Davoody and I. Knezevic (University of Wisconsin Madison)
Exciton dynamics in a film of carbon nanotubes for photovoltaic applications

P30 C. Dalle, F. Dessenne and J-L Thobel (CNRS, Université Lille 1)
2D Maxwell/Transport time domain modeling of THz GaN distributed transferred electron device

P31 T. Windbacher, A. Makarov, H. Mahmoudi, V. Sverdlov and S. Selberherr (TU Wien)
Frequency Dependence Study of a Bias Field-Free Nano-Scale Oscillator

P32 D. Persano Adorno, N. Pizzolato, C. Graceffa (University of Palermo)
Phonon-induced spin depolarization of conduction electrons in silicon crystals

P33 N. Neophytou and H. Kosina (University of Warwick, Technical University of Vienna)
Thermoelectric properties of gated Si nanowires

P34 J. H. Oh, W. Choi, M. Jang and M. Shin (Korea Advanced Institute of Science and Technology)
Thermal conductivity of ultrathin Si films with a periodic pore pattern

P35 T. Markussen and K. Stokbro (QuantumWise)
Mobilities and thermal conductivity from transport combined with molecular dynamics

P36 I. N. Adisusilo, K. Kukita, Y. Kamakura (Osaka University)
Monte Carlo Simulation of Thermoelectric Properties in Si Nanostructures

P37 M. Mohamed, Z. Aksamija, W. Vitale, F. Ismail and U. Ravaioli (University of Illinois at Urbana-Champaign)
Self-Heating Effects in nanowire Depletion Mode Junctionless Transistor

P38 K. H. Park, Z. Aksamija and U. Ravaioli (University of Illinois at Urbana-Champaign)
Improved accuracy on empirical lattice thermal conductivity model of Bi2Te3

P39 J. Larroque, J. Saint-Martin and P. Dollfus (Université Paris-Sud Orsay, CNRS)
Phonon transport in silicon nanowires using a Full-Band Monte Carlo approach

P40 V. Ryzhii, I. Semenikhin, M. Ryzhii, A. Satou, D. Svintsov, V. Vyurkov and T. Otsuji (Tohoku University, Russian Academy of Sciences Moscow, University of Aizu)
Hydrodynamic Model for Double Injection of Electrons and Holes in Graphene p-i-Structures

P41 P. Marconcini and M. Macucci (Università di Pisa)
Transport analysis of graphene-based devices with width discontinuities

P42 G. Mascali and V. Romano (University of Catania)
A comprehensive hydrodynamical model for charge transport in graphene nano-ribbons

P43 N. Sule, S. C. Hagness and I. Knezevic (University of Wisconsin-Madison)
Substrate-dependent THz conductivity and Drude weight in graphene

P44 S. M. Yaro and X. Oriols (Universitat Autònoma de Barcelona)
Electron injection model for graphene: Is it much different from parabolic-band ones?

P45 B. Dellabetta, C. Fang, A. Pecchia, A. Di Carlo, B.A. Bernevig and M.J. Gilbert (University of Illinois at Urbana-Champaign, University of Rome Tor Vergata, Princeton University)
Symmetry-Based Modeling of Topological Crystalline Devices

P46 M. Chung Nguyen, V. Hung Nguyen, H. Viet Nguyen and P. Dollfus (Université Paris-Sud Orsay, CNRS)
Conduction gap in unstrained/strained graphene junctions: direction dependence

P47 V. Truong Tran, J. Saint-Martin and P. Dollfus (Université Paris-Sud Orsay, CNRS)
Modulation of bandgap and current in Graphene/BN heterostructures by tuning the transverse electric field

P48 J. Li, C. Delerue, Y.M. Niquet, F. Triozon and L. Genovese (CEA Grenoble, Université Joseph Fourier Grenoble, CNRS)
A computational model for the investigation of phonon-limited charge transport in 2D systems

P49 P. Igic (Swansea University)
PiN Diode n-Base Ambipolar Diffusion Equation (ADE): Exponential Solution

P50 V. Gruzinskis, E. Starikov, P. Shiktorov, H. Marinchio, J. Torres, C. Palermo and L. Varani (Center for Sciences and Technology Vilnius, Université Montpellier 2)
Gunn Effect in n-InP MOSFET at Positive Gate Bias and Impact Ionization Conditions

P51 K. Fukuda, T. Mori, W. Mizubayashi, Y. Morita, A. Tanabe, M. Masahara, T. Yasuda, S. Migita and H. Ota (National Institute of Advanced Industrial Science and Technology)
Predictivity of the non-local BTBT model for structure dependencies of tunnel FETs

P52 D. Persano Adorno, P. Alaimo, N. Pizzolato and B. Spagnolo (University of Palermo)
Noise features in InP semiconductors operating under static or sub-TeraHertz electric fields

P53 J. A. Morales Escalante and I. M. Gamba (University of Texas at Austin)
Boundary conditions effects on EPM Full Band Boltzmann-Poisson models for Electronic Transport

P54 N. Seoane, G. Indalecio, E. Comesaña, M. Aldegunde, A. J. García-Loureiro and K. Kalna (Swansea University, University of Santiago de Compostela)
WN and TiN metal gate workfunction variability in a 10.4 nm gate length InGaAs FinFET

P55 R. Valin, M. Aldegunde, A. Martinez and J. R. Barker (Swansea University, University of Glasgow)
Impact of Lateral Doping Profiles on Ultra-scaled Trigate FinFETs

P56 D. Mamaluy, X. Gao, B. Tierney (Sandia National Laboratories Albuquerque)
How much time does FET scaling have left?

P57 N. M. Shrestha, Y.-C. Lin, H.-T. Chang, Y. Li and E. Y. Chang (National Chiao Tung University Hsinchu)
Device Simulation of P-InAlN-Gate AlGaN/GaN High Electron Mobility Transistor

P58 A. Abdikarimov, G. Indalecio, E. Comesaña, N. Seoane, K. Kalna, A.J. García-Loureiro, A.E. Atamuratov (Universidad de Santiago de Compostela, Swansea University, Urganch State University)
Influence of device geometry on electrical characteristics of a 10.7 nm SOI-FinFET

P59 R. Valin, A. García-Rivera, M. Aldegunde, A. Martinez, and J. R. Barker (Swansea University, University of Santiago de Compostela, University of Glasgow)
TiN Work Function Variability on Ultra-scaled FinFETs using a NEGF formalism

P60 A. Ueda, M. Luisier, S. Honda, K. Yoshida and N. Sano (University of Tsukuba, ETH Zurich)
Effect of Impurity Scattering on Mobility in Si Nanowire Junctionless FETs

P61 P.-H. Su and Y. Li (National Chiao Tung University Hsinchu)
Design Optimization of 14-nm Bulk FinFET Technology via Geometric Programming

P62 K. Haughan, M. T. Niemier, W. Porod and G. Csaba (University of Notre Dame)
Cellular Automata Designs for Out-of-Plane Nanomagnet Logic

P63 K. Xu, X. Meshik, M. Choi, T.-C. Wu, M. Rahman, M. Norton, M. Dutta and M. A. Stroscio (University of Illinois at Chicago, Marshall University Huntington)
Study of Electric Field Caused by Semiconductor Quantum Dots in Close Proximity to DNA Origami

P64 S. Malakooti, E. R. Hedin and Y. S. Joe (Ball State University)
The effects of molecular elongation on defective DNA electronics