

Santina Rocchi

INTERNATIONAL REVIEWS (from 2006)

- 1) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**A Variability-Tolerant Feedback Technique For Throughput Maximization of TRBGs with predefined entropy**' (pubblicazione su rivista, 2010) *Journal of Circuit, Systems, and Computers* ; in corso di stampa (lettera di accettazione del 02-04-2009)
- 2) M. B. C. ALIOTO, M. POLI, S. ROCCHI - '**A general power model of Differential Power Analysis attacks to static logic circuits**' (pubblicazione su rivista, 2010) *IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS*; in corso di stampa (lettera di accettazione del 21-10-2009)
- 3) M. B. C. ALIOTO, M. POLI, S. ROCCHI - '**Differential Power Analysis Attacks to Precharged Busses: a General Analysis for Symmetric-Key Cryptographic Algorithms**' (pubblicazione su rivista, 2010) *IEEE Transactions on Dependable and Secure Computing* ; in corso di stampa (lettera di accettazione del 19-09-2009)
- 4) T. ADDABBO, A. FORT, S. ROCCHI, V. VIGNOLI - '**Exploiting Chaotic Dynamics For A-D Converter Testing**' (pubblicazione su rivista, 2010) *INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS*; in corso di stampa (lettera di accettazione del 29-07-2009)
- 5) E. COMINI, G. FAGLIA, A. FORT, M. MUGNAINI, A. PONZONI, S. ROCCHI, V. VIGNOLI - '**Metal-Oxide nanowire sensors for CO detection: Characterization and Modeling**' (pubblicazione su rivista, 2010) *SENSOR ACTUAT B-CHEM*, Vol.148, 283 – 291
- 6) FORT, C. LOTTI, M. MUGNAINI, R. PALOMBARI, S. ROCCHI, V. VIGNOLI - '**A Two Electrode C - NiO Nafion Amperometric Sensor for NO2 Detection**' (pubblicazione su rivista, 2009) *MICROELECTRONICS JOURNAL*, Vol.40, 1308 - 1312
- 7) T. ADDABBO, A. FORT, D. PAPINI, S. ROCCHI, V. VIGNOLI - '**An efficient and accurate method for the estimation of entropy and other dynamical invariants for piecewise affine chaotic maps**' (pubblicazione su rivista, 2009) *INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS*; in corso di stampa (lettera di accettazione del 09-06-2009)
- 8) T. ADDABBO, A. FORT, D. PAPINI, S. ROCCHI, V. VIGNOLI - '**Invariant Measures of Tunable Chaotic Sources: Robustness Analysis and Efficient Estimation**' (pubblicazione su rivista, 2009) *IEEE Transactions on circuits and systems -I*, Vol.56, 806 - 819
- 9) S. BICELLI, A. DEPARI, G. FAGLIA, A. FLAMMINI, A. FORT, M. MUGNAINI, A. PONZONI, S. ROCCHI, V. VIGNOLI - '**Model and experimental characterization of dynamic behavior of low power Carbon Monoxide MOX sensors operated with pulsed temperature profiles**' (pubblicazione su rivista, 2009) *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, Vol.58, 1324 - 1332
- 10) T. ADDABBO, M. B. C. ALIOTO, A. FORT, A. PASINI, S. ROCCHI, V. VIGNOLI - '**A Class of Maximum-Period Nonlinear Congruential Generators Derived From The Rényi Chaotic Map**' (pubblicazione su rivista, 2007) *IEEE Transactions on Circuits and Systems-I: Regular Papers*, Vol.54, 816 - 828
- 11) M. B. C. ALIOTO, L. PANCIONI, S. ROCCHI, V. VIGNOLI - '**Power-Delay-Area-Noise Margin Tradeoffs in Positive-Feedback MOS Current-Mode Logic.**' (pubblicazione su rivista, 2007) *IEEE Transactions on circuits and systems -I*, Vol.54, 1170 – 1174
- 12) FORT, M. MUGNAINI, S. ROCCHI, B. SERRANO-SANTOS, V. VIGNOLI, R. SPINICCI - '**Simplified**

models for SnO₂ sensors during chemical and thermal transients in mixtures of inert, oxidizing and reducing gases ' (pubblicazione su rivista, 2007) SENSORS AND ACTUATORS B-CHEMICAL, Vol.124, 245 - 259

- 13) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**A Feedback Strategy to Improve the Entropy of a Chaos-Based Random Bit Generator**' (pubblicazione su rivista, 2006) IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS I-FUNDAMENTAL THEORY AND APPLICAT, Vol.53, 326 – 337
- 14) FORT, S. ROCCHI, B. SERRANO-SANTOS, M. MUGNAINI, V. VIGNOLI, A. ATREI, R. SPINICCI - '**CO sensing with SnO₂-based thick film sensors: Surface state model for conductance responses during thermal-modulation**' (pubblicazione su rivista, 2006) SENSOR ACTUAT B-CHEM, Vol.116, 43 - 48
- 15) M. B. C. ALIOTO, L. PANCIONI, S. ROCCHI, V. VIGNOLI - '**Exploiting Hysteresis in MCML Circuits**' (pubblicazione su rivista, 2006) IEEE Transactions on Circuits and Systems II, Vol.53, 1170 - 1174
- 16) N. ULIVIERI, C. DISTANTE, L. TONDI, S. ROCCHI, P. SICILIANO - '**IEEE1451.4: A way to standardize gas sensors**' (pubblicazione su rivista, 2006) SENSORS AND ACTUATORS B-CHEMICAL, Vol.114, 141 - 151
- 17) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**Low-hardware complexity PRBGs based on a piecewise-linear chaotic map**' (pubblicazione su rivista, 2006) IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS II-ANALOG AND DIGITAL SIGNAL PROC, Vol.53, 329 - 333
- 18) T. SCHAEFER, M. B. SERRANO SANTOS, S. ROCCHI, R. FUOCO - '**Pervaporation membrane separation process for enhancing the selectivity of an artificial olfactory system ("electronic nose")**' (pubblicazione su rivista, 2006) Analytical and Bioanalytical Chemistry, Vol.384, 860 – 866
- 19) FORT, M. MUGNAINI, S. ROCCHI, M. B. SERRANO SANTOS, R. SPINICCI, V. VIGNOLI - '**Surface State Model for Conductance Responses During Thermal-Modulation of SnO₂-Based Thick Film Sensors: Part II—Experimental Verification**' (pubblicazione su rivista, 2006) IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, Vol.55, 2107 - 2117
- 20) FORT, S. ROCCHI, M. B. SERRANO SANTOS, R. SPINICCI, V. VIGNOLI - '**Surface State Model for Conductance Responses During Thermal-Modulation of SnO₂-Based Thick Film Sensors: Part I—Model Derivation**' (pubblicazione su rivista, 2006) IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, Vol.55, 2102 – 2106
- 21) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**The Digital Tent Map: Performance Analysis and Optimized Design as a Source of Pseudo-random Bits**' (pubblicazione su rivista, 2006) IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, Vol.55, 1451 – 1458

INTERNATIONAL CONFERENCES (from 2006)

- 1) A. FORT, F. FIOCCHI, M. MUGNAINI, J. MONARI, F. PERINI, S. ROCCHI, M. SCHIAFFINO, V. VIGNOLI - '**A low power measurement system for the atmospheric electric field**' (atto di convegno, 2010), 1290 - 1294, IEEE I2MTC, Austin (USA) dal 3/5/2010 al 6/5/2010
- 2) A. FORT, M. MUGNAINI, S. ROCCHI, E. SIMONI, V. VIGNOLI - '**Accuracy Evaluation of a Grid Islanding Impedance Detection System**' (atto di convegno, 2010), 1295 - 1298, IEEE I2MTC, Austin (USA) dal 3/5/2010 al 6/5/2010
- 3) A. FORT, M. MUGNAINI, I. PASQUINI, S. ROCCHI, R. SPINICCI, V. VIGNOLI - '**Characterization of YCoO₃ film used for CO gas detection**' (atto di convegno, 2010), 153 - 158, Nose, Firenze (Italia) dal 24/9/2010 al 25/9/2010

- 4) E. COMINI, G. FAGLIA, A. FORT, M. MUGNAINI, A. PONZONI, S. ROCCHI, V. VIGNOLI - **'Metal-oxide nanowire sensors for CO detection: Characterization and modeling'** (atto di convegno, 2010) , 25 - 29, SAS 2010, Limerick (Irlanda) dal 24/2/2010 al 26/2/2010
- 5) A. FORT, M. L. FOREST, M. INNOCENTI, M. MUGNAINI, I. PASQUINI, L. PIGANI, S. ROCCHI, V. VIGNOLI - **'Preparation of Poly(3,4-ethylenedioxythiophene) Films on Piezoelectric Quartz Crystal and their Gas Sensitivities'** (atto di convegno, 2010) , 125 - 131, 216th ECS Meeting, Vienna (Austria) dal 4/10/2010 al 9/10/2010
- 6) F. CHIAVAIOLI, A. FORT, C. LOTTI, M. MUGNAINI, S. ROCCHI, V. VIGNOLI - **'A Laboratory Impedance Meter for Electrochemical Sensors'** (atto di convegno, 2009) , 303 - 305, 13th International Symposium on Olfaction and Electronic Nose (ISOEN 2009), Brescia (Italia) dal 15/4/2009 al 17/4/2009
- 7) A. FORT, M. MUGNAINI, V. VIGNOLI, S. ROCCHI, E. COMINI, G. FAGLIA, A. PONZONI - **'Characterization and modelling of SnO₂ nanowires sensors for CO detection'** (atto di convegno, 2009) , 41 - 45, 3rd IEEE International Workshop on Advances in Sensors and Interfaces, Bari (Italia) dal 26/6/2009 al 26/6/2009
- 8) M. B. C. ALIOTO, M. POLI, S. ROCCHI - **'Low-Overhead Countermeasures to protect Pre-charged Busses against Power Analysis Attacks'** (atto di convegno, 2009) , 159 - 162, ICM 2009, Marrakech (Marocco) dal 19/12/2009 al 22/12/2009
- 9) A. FORT, M. MUGNAINI, I. PASQUINI, S. ROCCHI, V. VIGNOLI - **'Modeling of the Influence of H₂O on Metal Oxide Sensor Responses to CO'** (atto di convegno, 2009) , 365 - 368, 13th International Symposium on Olfaction and Electronic Nose (ISOEN 2009), Brescia (Italia) dal 15/4/2009 al 17/4/2009
- 10) M. L. FORESTI, A. FORT, M. INNOCENTI, M. MUGNAINI, L. PIGANI, I. PASQUINI, S. ROCCHI, V. VIGNOLI - **'NO₂ QCM gas sensor based on electrochemical deposition of PEDOT'** (atto di convegno, 2009) , 184 - 187, 3rd IEEE International Workshop on Advances in Sensors and Interfaces, Bari (Italia) dal 26/6/2009 al 26/6/2009
- 11) M. B. C. ALIOTO, M. POLI, S. ROCCHI - **'A General Model for Differential Power Analysis Attacks to Static Logic Circuits'** (atto di convegno, 2008) , 3346 - 3349, 2008 IEEE International Symposium on Circuits and Systems (ISCAS 2008), Seattle (USA) dal 18/5/2008 al 21/5/2008
- 12) A. FORT, C. LOTTI, M. MUGNAINI, R. PALOMBARI, S. ROCCHI, V. VIGNOLI - **'Amperometric Sensors Based on Nafion Proton Conductor: A Comparison between Two Different Structures'** (atto di convegno, 2008) , 517 - 521, 16th IMEKO TC4 Symposium & 13th Workshop on ADC Modelling and Testing, Firenze (Italia) dal 22/9/2008 al 24/9/2008
- 13) T. ADDABBO, A. FORT, S. ROCCHI, V. VIGNOLI - **'An Efficient and Accurate Method for Computing the Invariant Measure of Piecewise Affine Chaotic Maps'** (atto di convegno, 2008) , 2008 IEEE International Symposium on Circuits and Systems (ISCAS 2008), Seattle (USA) dal 18/5/2008 al 21/5/2008;
- 14) M. B. C. ALIOTO, L. FONDELLI, S. ROCCHI - **'Analysis and Performance Evaluation of Area-Efficient True Random Bit Generators on FPGAs'** (atto di convegno, 2008) , 1572 - 1575, 2008 IEEE International Symposium on Circuits and Systems (ISCAS 2008), Seattle (USA) dal 18/5/2008 al 21/5/2008
- 15) A. DEPARI, G. FAGLIA, A. FLAMMINI, A. FORT, M. MUGNAINI, A. PONZONI, S. ROCCHI, E. SISINNI, V. VIGNOLI - **'CO Detection by Mox Sensors Exploiting their Dynamic Behavior'** (atto di convegno, 2008) , 1070 - 1073, 22nd International Conference Eurosensors 2008, Dresden (Germany) dal 7/9/2008 al 10/9/2008
- 16) T. ADDABBO, A. FORT, S. ROCCHI, V. VIGNOLI - **'On the Efficient Digital Implementation of Nonlinear Congruential Generators derived from the Rényi Chaotic Map'** (atto di convegno, 2008) , 2008 IEEE International Instrumentation and Measurement Technology Conference, Vancouver Island

(Canada) dal 12/5/2008 al 15/5/2008;

- 17) M. B. C. ALIOTO, M. POLI, S. ROCCHI - **'Power Analysis Attacks to Cryptographic Circuits: a Comparative Analysis of DPA and CPA'** (atto di convegno, 2008), 308 - 311, ICM 2008, Sharjah (Emirati Arabi) dal 14/12/2008 al 17/12/2008
- 18) T. ADDABBO, A. FORT, M. MUGNAINI, S. ROCCHI, V. VIGNOLI - **'Statistical Characterization of a Chaotic Piecewise Linear Map for Uniform-Distributed Analog Noise Generation'** (atto di convegno, 2008), 688 - 693, 16th IMEKO TC4 Symposium & 13th Workshop on ADC Modelling and Testing, Firenze (Italia) dal 22/9/2008 al 24/9/2008
- 19) M. B. C. ALIOTO, M. POLI, S. ROCCHI, V. VIGNOLI - **'A General Model of DPA Attacks to Precharged Busses in Symmetric-Key Cryptographic Algorithms'** (atto di convegno, 2007), 368 - 371, 18th European Conference on Circuit Theory and Design (ECCTD 2007), Sevilla (Spain) dal 26/8/2007 al 30/8/2007
- 20) A. FORT, C. LOTTI, M. MUGNAINI, R. PALOMBARI, S. ROCCHI, L. TONDI, V. VIGNOLI - **'A Two Electrode Amperometric Sensor for NO₂ Detection'** (atto di convegno, 2007), 53 - 58, the XV IMEKO TC-4 International Symposium on Novelities in Electrical Measurements and Instrumentation, Iasi (Romania) dal 19/9/2007 al 21/9/2007
- 21) A. FORT, M. MUGNAINI, S. ROCCHI, M. B. SERRANO SANTOS, L. TONDI, V. VIGNOLI - **'Characterization of Heaters for Tin-Oxide Sensors Used in Artificial Olfactory System'** (atto di convegno, 2007), 221 - 222, 12th International Symposium on Olfaction and Electronic Nose (ISOEN 2007), St. Petersburg (Russia) dal 3/5/2007 al 5/5/2007
- 22) A. FORT, C. LOTTI, M. MUGNAINI, C. PALMERINI, R. PALOMBARI, S. ROCCHI, L. TONDI, V. VIGNOLI - **'Characterization of a Two Electrode C - NiO Nafion® Amperometric Sensor for NO₂ Detection'** (atto di convegno, 2007), 47 - 51, 2nd IEEE International Workshop on Advances in Sensors and Interfaces (IWASI), Bari (Italia) dal 26/6/2007 al 27/6/2007
- 23) T. ADDABBO, M. B. C. ALIOTO, A. FORT, M. MUGNAINI, S. ROCCHI, V. VIGNOLI - **'Implementation-Efficient Maximum-Period Nonlinear Congruential Generators'** (atto di convegno, 2007), 1 - 4, 2007 IEEE Instrumentation and Measurement Technology Conference (IMTC 2007), Warsaw (Poland) dal 1/5/2007 al 3/5/2007
- 24) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - **'Maximum-Period PRNGs Derived From A Piecewise Linear One-Dimensional Map'** (atto di convegno, 2007), 693 - 696, 2007 IEEE International Symposium on Circuits and Systems (ISCAS 2007), New Orleans (USA) dal 27/5/2007 al 30/5/2007
- 25) M. B. C. ALIOTO, M. POLI, S. ROCCHI, V. VIGNOLI - **'Mixed Techniques to Protect Precharged Busses against Differential Power Analysis Attacks'** (atto di convegno, 2007), 861 - 864, 2007 IEEE International Symposium on Circuits and Systems (ISCAS 2007), New Orleans (USA) dal 27/5/2007 al 30/5/2007
- 26) T. ADDABBO, A. FORT, S. ROCCHI, V. VIGNOLI - **'On the Generation of Pseudo-Random Sequences exploiting Digitized Chaotic Systems'** (atto di convegno, 2007), 639 - 642, 18th European Conference on Circuit Theory and Design (ECCTD 2007), Sevilla (Spain) dal 26/8/2007 al 30/8/2007
- 27) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - **'A Technique to Design High Entropy Chaos-Based True Random Bit Generators'** (atto di convegno, 2006), 1183 - 1186, IEEE ISCAS 2006, Kos (Greece) dal 21/5/2006 al 24/5/2006
- 28) M. B. C. ALIOTO, L. PANCIONI, S. ROCCHI, V. VIGNOLI - **'Analysis and design of MCML gates with hysteresis.'** (pubblicazione su volume collettaneo, 2006), 1263 - 1266 Volume: Proceedings of International Symposium on Circuits and Systems (ISCAS 2006), Casa Editrice: The Institute of Electrical and Electronics Engineers (IEEE), Piscataway, New Jersey, USA

- 29) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**A Technique to Design High Entropy Chaos-Based True Random Bit Generators**' (atto di convegno, 2006) , 1183 - 1186, IEEE ISCAS 2006, Kos (Greece) dal 21/5/2006 al 24/5/2006
- 30) M. B. C. ALIOTO, L. PANCIONI, S. ROCCHI, V. VIGNOLI - '**Analysis and design of MCML gates with hysteresis.**' (pubblicazione su volume collettaneo, 2006) , 1263 - 1266 Volume: Proceedings of International Symposium on Circuits and Systems (ISCAS 2006) , Casa Editrice: The Institute of Electrical and Electronics Engineers (IEEE), Piscataway, New Jersey, USA
- 31) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**A Technique to Design High Entropy Chaos-Based True Random Bit Generators**' (atto di convegno, 2006) , 1183 - 1186, IEEE ISCAS 2006, Kos (Greece) dal 21/5/2006 al 24/5/2006
- 32) M. B. C. ALIOTO, L. PANCIONI, S. ROCCHI, V. VIGNOLI - '**Analysis and design of MCML gates with hysteresis.**' (pubblicazione su volume collettaneo, 2006) , 1263 - 1266 Volume: Proceedings of International Symposium on Circuits and Systems (ISCAS 2006) , Casa Editrice: The Institute of Electrical and Electronics Engineers (IEEE), Piscataway, New Jersey, USA
- 33) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**Efficient Post-Processing Module for a Chaos-based Random Bit Generator**' (atto di convegno, 2006) , 1224 - 1227, IEEE ICECS, Nice (France) dal 10/12/2006 al 13/12/2006
- 34) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**Entropy Enhancement in a Chaos-Based True Random Bit Generators**' (atto di convegno, 2006) , 372 - 378, Non Linear Theory and Applications (NOLTA 2006), Bologna (Italia) dal 11/9/2006 al 13/9/2006
- 35) A. FORT, M. MUGNAINI, S. ROCCHI, B. SERRANO SANTOS, L. TONDI, V. VIGNOLI - '**Fine Tuning Design of Control Board Parameters for Sensing Applications**' (atto di convegno, 2006) , 2244 - 2248, IEEE IMTC 2006, Sorrento (NA) (Italy) dal 24/4/2006 al 27/4/2006
- 36) M. B. C. ALIOTO, M. POLI, S. ROCCHI, V. VIGNOLI - '**Power Modeling of Precharged Address Bus and Application to Multi-bit DPA Attacks to DES Algorithm**' (atto di convegno, 2006) , 593 - 602, PATMOS, Montpellier (France) dal 13/9/2006 al 15/9/2006
- 37) M. B. C. ALIOTO, M. POLI, S. ROCCHI, V. VIGNOLI - '**Techniques to Enhance the Resistance of Precharged Busses to Differential Power Analysis**' (atto di convegno, 2006) , 624 - 633, PATMOS, Montpellier (France) dal 13/9/2006 al 15/9/2006
- 38) T. ADDABBO, M. B. C. ALIOTO, A. FORT, S. ROCCHI, V. VIGNOLI - '**Uniform-Distributed Noise Generator Based on a Chaotic Circuit**' (atto di convegno, 2006) , 1156 - 1160, IEEE IMTC 2006, Sorrento (NA) (Italy) dal 24/4/2006 al 27/4/2006