

# Annexe 1 : liste classée des publications

Remarque sur l'ordre des auteurs : pour toutes les publications issues de mon équipe et en l'absence de collaborations extérieures, j'utilise la règle générale suivante : contributeur majeur en 1<sup>er</sup> (en général le doctorant) suivi des autres contributeurs par ordre alphabétique.

## 1. Revues scientifiques avec comité de lecture

- [R1] P. Girard et P. Nouet, «Evaluation of currents in the fA range», Electronics Letters, Vol. 26(13), pp. 844–845, 1990.
- [R2] P. Girard, P. Nouet et B. Pistoulet, «Single energy e-beam latch activation and deactivation», Microelectronic Engineering 12, pp. 129–133, 1990.
- [R3] P. Nouet et P. Girard, «An electron beam controlled latch operating under electron beam testing conditions», Electronics Letters, Vol. 28 (1), pp. 39–41, 1992.
- [R4] A. Khalkhal, P. Nouet et P. Girard, «Test cells for evaluation of low currents and capacitances» Electronics Letters, Vol. 29 (3), pp. 290–291, 1993.
- [R5] P. Girard, R. Lorival et P. Nouet, «Characterisation of time resolution in electron beam measurements», Electronics Letters, Vol. 29 (18), pp. 1641–1643, 1993.
- [R6] C. Landrault et P. Nouet, «Testability improvements using E-Beam controllability: principle and design for Electron-Beam Testability», Microelectronic Engineering 31, pp. 47-54, 1996.
- [R7] P. Nouet et A. Toulouse, «Use of test structures for characterization and modelling of inter- and intra-layer capacitances in a CMOS process», IEEE Trans. on Semiconductor Manufacturing, pp. 233–241, Vol. 10, No. 2, mai 1997.
- [R8] P. Nouet, L. Latorre et Y. Bertrand, «CMOS monolithic micro-electromechanical sensors», Preparing for the Future, vol. 8, No. 1, pp. 16–17, mars 1998.
- [R9] L. Latorre et P. Nouet, «A complete methodology for Electro-Mechanical Characterization of a CMOS Compatible MEMS Technology», IEICE Transactions on Electronics, Vol.E82-C, No.4, pp. 582-588, avril 1999.
- [R10] L. Latorre, P. Nouet, Y. Bertrand, P. Hazard<sup>1</sup> et F. Pressecq<sup>2</sup>, «Characterization and modeling of a CMOS compatible MEMS technology», Sensors and Actuators A, Vol. 74, pp. 143–147, 1999.
- [R11] L. Latorre, V. Beroule, Y. Bertrand, P. Nouet, “MEMS monolithiques : Application à la mesure du champ magnétique”, Nano et Micro Technologies : Microcapteurs et Microsystèmes Intégrés, Hermès, Vol. 1, n° 1, 2000, pp. 9-32.
- [R12] V. Beroule, Y. Bertrand, L. Latorre et P. Nouet, “Test and Testability of a Monolithic MEMS for Magnetic Field Sensing”, Journal of Electronic Testing: Theory and Applications, Vol. 17, Issue 5, October 2001, pp. 439-450.
- [R13] L. Latorre, Joonwon Kim<sup>3</sup>, Junghoon Lee<sup>3</sup>, P. de Guzman<sup>3</sup>, J. Le Hyesog<sup>3</sup>, P. Nouet et Chang-Jin Kim<sup>3</sup>, “Electrostatic actuation of microscale liquid-metal droplets”, Journal of Microelectromechanical Systems, Vol. 11, n° 4, August 2002, pp. 302-308.

1. Schneider Electric, Nanterre

2. CNES, Centre Spatial de Toulouse

3. Mechanical and Aerospace Engineering Department, University of California, Los Angeles (UCLA), USA

- [R14] M. Dardalhon, V. Berouille, L. Latorre, P. Nouet, G. Perez<sup>1</sup>, J. M. Nicot<sup>1</sup> and C. Oudea<sup>2</sup>, “Reliability analysis of CMOS MEMS structures obtained by Front Side Bulk Micromachining”, *Microelectronics Reliability*, Volume 42, Issues 9-11, September-November 2002, Pages 1777-1782.
- [R15] Vincent Berouille, Yves Bertrand, L. Latorre and P. Nouet, “Monolithic piezoresistive CMOS magnetic field sensors”, *Sensors and Actuators A: Physical*, Volume 103, Issues 1-2, 15 January 2003, Pages 23-32.
- [R16] U. Kac<sup>3</sup>, F. Novak<sup>3</sup>, F. Azais, P. Nouet et M. Renovell, “Extending IEEE Std. 1149.4 analog boundary modules to enhance mixed-signal test”, *IEEE Design & Test of Computers*, Vol. 20, n°2, March-April 2003, pp. 32-39.
- [R17] L. Latorre, V. Berouille et P. Nouet, “Design of CMOS MEMS Based on Mechanical Resonators Using a RF Simulation Approach”, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, Vol. 23, n°6, pp. 962-967, June 2004.
- [R18] F. Azaïs et P. Nouet, “Analog and Mixed-Signal Test Bus: IEEE 1149.4 Test Standard”, chapitre dans “Test and Design-for-Testability in Mixed-Signal Integrated Circuits”, Huertas, J.L. (Ed.), Springer (ISBN: 1-4020-7724-6), 2004, 28 pages.
- [R19] F. Azaïs, B. Caillard, S. Dournelle<sup>4</sup>, P. Salomé<sup>4</sup> et P. Nouet, “A New Multi-Finger SCR-Based Structure for Efficient On-Chip ESD Protection”, *Microelectronics Reliability*, Elsevier, Vol.45, pp. 233–243, 2005.
- [R20] F. Azaïs, M. Lubaszewski<sup>5</sup>, P. Nouet, M. Renovell, “A Strategy for Optimal Test Point Insertion in Analog Cascaded Filters”, *Journal of Electronic Testing*, Volume 21, Issue 1, Jan 2005, Page 9-16.
- [R21] V. Puyal, A. Konczykowska<sup>6</sup>, P. Nouet, S. Bernard, S. Blayac<sup>6</sup>, F. Jorge<sup>6</sup>, M. Riet<sup>6</sup>, J. Godin<sup>6</sup>, “DC–100-GHz Frequency Doublers in InP DHBT Technology”, *IEEE Transactions on Microwave Theory and Techniques*, Volume 53, Issue 4, April 2005 Page(s):1338 – 1344.
- [R22] N. Dumas, F. Azaïs, L. Latorre, P. Nouet, “Electro-thermal Stimuli for MEMS Testing in FSBM Technology”, *Journal of Electronic Testing*, Volume 22, Issue 2, Apr 2006, Pages 189 - 198, ISSN: 0923-8174 (Paper) 1573-0727 (Online).
- [R23] A. Chaehoi, F. Mailly, L. Latorre and P. Nouet, “Experimental and finite-element study of convective accelerometer on CMOS”, *Sensors and Actuators A: Physical*, Volume 132, Issue 1, 8 November 2006, Pages 78-84.
- [R24] N. Dumas, L. Latorre and P. Nouet, “Development of a low-cost piezoresistive compass on CMOS”, *Sensors and Actuators A: Physical*, Volumes 130-131, 14 August 2006, Pages 302-311.
- [R25] N. Dumas, L. Latorre and P. Nouet, “Analysis of offset and noise in CMOS piezoresistive sensors using a magnetometer as a case study”, *Sensors and Actuators A: Physical*, Volume 132, Issue 1, 8 November 2006, Pages 14-20.

---

1. CNES, Centre Spatial de Toulouse, France

2. EADS L.V., Paris, France

3. Jozef Stefan Institute, Ljubljana, Slovenia

4. ST Microelectronics, Central R&D, Crolles, France

5. UFRGS, Porto-Alegre, Brésil

6. Alcatel-Thales III-V Lab, Marcoussis, France

- [R26] C. Entringer<sup>1</sup>, P. Flatresse<sup>1</sup>, P. Galy<sup>1</sup>, F. Azais and P. Nouet, "Electro-thermal short pulsed simulation for SOI technology", *Microelectronics and Reliability*, Volume 46, Issues 9-11, September-November 2006, Pages 1482-1485.
- [R27] N. Dumas, F. Azaïs, L. Latorre and P. Nouet, "Thermal modeling of a piezoresistive CMOS MEMS and its application for test", *Journal of Integrated Circuits and Systems*, Vol 1, No 4, pp. 11-17, December 2006, <http://www.sbmicro.org.br/jics/html/volume1n4.html>
- [R28] C. Jeffrey<sup>2</sup>, N. Dumas, Z. Xu<sup>2</sup>, F. Mailly, F. Azaïs, P. Nouet, R.J.T. Bunyan<sup>3</sup>, D.O. King<sup>3</sup>, H. Mathias<sup>4</sup>, J.P. Gilles<sup>4</sup>, A.M.D. Richardson<sup>2</sup>, "Sensor Testing Through Bias Superposition", *Sensors and Actuators A*, Vol. 136, May 2007, pp. 441–455, doi:10.1016/j.sna.2006.11.030.
- [R29] O. Leman, A. Chaehoi, F. Mailly, L. Latorre and P. Nouet, "Modeling and system-level simulation of a CMOS convective accelerometer", *Solid-State Electronics*, Volume 51, Issues 11-12, November-December 2007, Pages 1609-1617, doi:10.1016/j.sse.2007.09.039
- [R30] H. Campanella<sup>5</sup>, P. Nouet, A. Uranga<sup>5</sup>, P. de Paco<sup>5</sup>, N. Barniol<sup>5</sup> and J. Esteve<sup>5</sup>, «Automated on-wafer extraction of equivalent-circuit parameters in thin-film bulk acoustic wave resonators and substrate», *Microwave and Optical Technology Letters*, Vol. 50, n° 1, Pages : 4-7, 2008, doi:10.1002/mop.22986
- [R31] O. Leman, F. Mailly, L. Latorre and P. Nouet, "HDL modeling of convective accelerometers for system design and optimization", *Sensors and Actuators A: Physical*, Vol. 142, pp. 178-184, March 2008, doi:10.1016/j.sna.2007.07.034.
- [R32] H.G. Kerkhoff<sup>6</sup>, X. Zhang<sup>6</sup>, F. Mailly, P. Nouet, H. Liu<sup>2</sup> and A. Richardson<sup>2</sup>, "A Dependable Micro-Electronic Peptide Synthesizer Using Electrode Data", *VLSI Design*, Hindawi Publishing Corporation, Volume 2008, Article ID 437879, 9 pages, doi:10.1155/2008/437879
- [R33] F. Mailly, N. Dumas, N. Pous, L. Latorre, O. Garel<sup>4</sup>, E. Martincic<sup>4</sup>, F. Verjus<sup>7</sup>, C. Pellet<sup>8</sup>, E. Dufour-Gergam<sup>4</sup>, P. Nouet, "Pirani pressure sensor for smart wafer-level packaging", *Sensors and Actuators A: Physical*, Volume 156, Issue 1, November 2009, Pages 201-207, ISSN 0924-4247, doi: 10.1016/j.sna.2009.02.013
- [R34] H. Campanella<sup>5</sup>, E. Martincic<sup>4</sup>, P. Nouet, A. Uranga<sup>5</sup>, J. Esteve<sup>5</sup>, "Analytical and Finite-Element Modeling of Localized-Mass Sensitivity of Thin-Film Bulk Acoustic-Wave Resonators (FBAR)," *IEEE Sensors Journal*, vol. 9, no. 8, pp. 892-901, Aug. 2009.  
doi: 10.1109/JSEN.2009.2024858
- [R35] J.R. Manouvrier<sup>1</sup>, P. Fonteneau<sup>1</sup>, C.A. Legrand<sup>1</sup>, P. Nouet, F. Azais, "Characterization of the transient behavior of gated/STI diodes and their associated BJT in the CDM time domain", *Microelectronics Reliability*, Vol. 49, Iss. 12, Dec. 2009, pp. 1424-1432.  
doi: 10.1016/j.microrel.2009.06.056
- [R36] Pradarelli, B; Latorre, L; Flottes, M.L.; Bertrand, Y; Nouet, P; "Remote Labs for Industrial IC Testing", *IEEE Transactions on Learning Technologies*, Volume 2, Issue 4 (October 2009) Pages 304-311, doi: 10.1109/TLT.2009.46

1. ST Microelectronics, Central R&D, Crolles, France

2. Centre for Microsystems Research, Lancaster University, Lancashire, UK

3. QinetiQ, Malvern, UK

4. Institut d'Electronique Fondamentale, Université Paris Sud, Orsay, France

5. Centro Nacional de Microelectrónica, UAB, Bellaterra (Barcelona), Spain

6. Université de Twente, Pays-Bas

7. NXP Caen, France

8. IMS, Bordeaux, France

- [R37] B. Pradarelli, L. Latorre, P. Nouet, "Integrated Circuits Testing: Remote Access to Test Equipment for Labs and Engineering", International Journal of Online Engineering 5 (2009), pp. 43-50, doi:10.3991/ijoe.v5s1.1013
- [R38] N. Dumas, F. Azais, F. Mailly and P. Nouet, "Study of an electrical setup for capacitive MEMS accelerometers test and calibration", Journal of Electronic Testing, theory and applications, 26: 111-125, March 10, 2010, doi: 10.1007/s10836-009-5122-6
- [R39] O. Leman, F. Mailly, L. Latorre and P. Nouet, "Noise analysis of a first-order thermal sigma-delta architecture for convective accelerometers", Analog Integrated Circuits and Signal Processing, 2010, Volume 63, Number 3, Pages 415-423, doi: 10.1007/s10470-009-9419-2
- [R40] B. Andò, S. Baglio, C. Trigona, N. Dumas, L. Latorre, and P. Nouet, " Nonlinear mechanism in MEMS devices for energy harvesting applications", Journal of Micromechanics and Microengineering, 12 pp., Vol.20, Iss.12, December 2010.  
doi: 10.1088/0960-1317/20/12/125020
- [R41] N. Dumas, C. Trigona, P. Pons, L. Latorre and P. Nouet, "Design of Smart Drivers for Electrostatic MEMS Switches", Sensors and Actuators A: Physical, Vol. 167, Issue 2, Pages: 422-432, June 2011, doi: 10.1016/j.sna.2011.01.024.
- [R42] A.A. Rekik, F. Azaïs, N. Dumas, F. Mailly and P. Nouet, "A Behavioral Model of MEMS Convective Accelerometers for the Evaluation of Design and Calibration Strategies at System Level", Journal of Electronic Testing, Volume 27, Number 3, pp. 411-423, June 2011, doi: 10.1007/s10836-011-5207-x
- [R43] B. Alandry, L. Latorre, F. Mailly and P. Nouet, "A Fully Integrated Inertial Measurement Unit: Application to Attitude and Heading Determination" IEEE Sensors Journal, vol.11, no.11, pp.2852-2860, Nov. 2011, doi: 10.1109/JSEN.2011.2170161.
- [R44] E.M. Boujamaa, F. Mailly, L. Latorre and P. Nouet, "Improvement of Power Supply Rejection Ratio in Wheatstone-bridge based piezoresistive MEMS", Analog Integrated Circuits and Signal Processing, Vol. 71, Iss. 1, pp. 1-9, 2012, doi : 10.1007/s10470-010-9504-6

## 2. Conférences internationales avec actes et comité de lecture

Critère retenu : on trouvera dans cette rubrique les articles largement diffusés (disponible en ligne pour les plus récents) qui ont été sélectionnés par un comité de lecture et qui ont donné lieu à une présentation orale dans une conférence sélective (rang A).

- [C1] P. Girard, P. Nouet et B. Pistoulet, «Effet de l'irradiation électronique basse énergie sur les composants MOS», Radiations : effets sur les composants et systèmes (RADECS'89), Montpellier, 11-14 sept. 1989, Annales de Physique, Vol. 14, 1989, pp. 253–257.
- [C2] P. Girard, P. Nouet et B. Pistoulet, «Low leakage current evaluations for process characterizations», 20th European Solid State Device Research Conference, Nottingham, W. Eccleston et P.J. Rosser Editeurs, Adam Hilger, 1990, pp. 197–200.
- [C3] P. Nouet, P. Girard et B. Pistoulet, «Towards improvements on VLSI circuit reconfiguration», IEEE workshop on defect and fault tolerance in VLSI systems, Grenoble, 5–7 novembre 1990, pp. 175–177.
- [C4] P. Girard, P. Nouet et F.M. Roche, «Simple evaluation of very low currents in process characterization», IEEE International Conference on Microelectronic Test Structures (ICMTS'91, ISBN : 0-87942-588-1), Kyoto, Japan, 18–20 mars 1991, pp. 93–95.

- [C5] P. Charpenel, P. Girard, P. Nouet et H. Martin<sup>1</sup>, «Evaluation of zero charging primary energy on insulators in scanning electron microscopy», 2<sup>nd</sup> European Symposium on Reliability of Electron devices, Failure physics and analysis (ESREF'91), Bordeaux, 7–10 octobre 1991, pp. 693–697.
- [C6] P. Girard, P. Nouet, A. Khalkhal et F.M. Roche, «Evaluations of leakage currents and capacitances on elementary CMOS devices», IEEE ICMTS'93 (ISBN 0-7803-0857-3), Sitges, Barcelone, Espagne, 22–25 mars 1993, pp. 289–292.
- [C7] P. Charpenel, P. Girard et P. Nouet, «New method to assess MOS device reliability using a Scanning Electron Microscope», 2<sup>nd</sup> ESA Electronic Components Conference, ESTEC, Noordwijk, The Netherlands, 24–28 May 1993, (ESA WPP-063), pp. 343–347.
- [C8] A. Khalkhal, P. Girard et P. Nouet, «New Test Structures for On-Chip absolute and accurate measurement of capacitances in a CMOS process», IEEE ICMTS'94 (ISBN 0-7803-1757-2), San Diego, CA, pp. 130–134.
- [C9] R. Lorival et P. Nouet, «A Test Chip for MOS Transistor Capacitance Characterization», IEEE ICMTS'95 (ISBN 0-7803-2065-4), Nara, Japon, 23–25 mars 1995, pp. 139–144.
- [C10] A. Khalkhal et P. Nouet, «On-Chip measurement of interconnect capacitances in a CMOS process», IEEE ICMTS'95 (ISBN 0-7803-2065-4), pp. 145–149.
- [C11] P. Nouet et A. Toulouse, «On-Chip Measurements: A Way for Accurate Modeling of Interconnect Capacitances in a CMOS Process», PATMOS'95, Christian Piguet and Wolfgang Nebel Editors, BIS (ISBN 3-8142-0526-X), pp. 290–301, 1995.
- [C12] A. Toulouse et P. Nouet, «Capacitance Modelling of Submicronic MOS transistor based on On-Chip Measurements», 25<sup>th</sup> European Solid State Device Research Conference, ESSDERC'95, La Haye, Editions Frontières (ISBN 2-86332-182-X), pp. 805–808, 1995.
- [C13] P. Nouet et A. Toulouse, «A Test Chip for Interconnect Capacitance Modelling in a CMOS process», IEEE ICMTS'96 (ISBN 0-7803-2783-7), Trento, Italie, 25–28 mars 1996, pp. 61–65.
- [C14] C. Landrault, P. Nouet et A. Toulouse, «Interconnect capacitance modeling based on the on-chip measurement of realistic test patterns», PATMOS'96: 6<sup>th</sup> International Workshop on Power Timing Modeling Optimization Simulation (ISBN 88-371-0868-0), Bologna, Italy, September 23–25, 1996, pp. 213–220.
- [C15] C. Landrault, P. Nouet et A. Toulouse, «Inter- and intra-layer capacitance modeling in CMOS VLSI designs», Proc. DCIS'96: XI Conf. on Design of Integrated Circuits and Systems (ISBN 84-89.349-83-5), Sitges, Spain, 20–22 novembre 1996, pp. 599–604.
- [C16] P. Nouet et A. Toulouse, «A new Test Structure for Interconnect Capacitance Monitoring», IEEE ICMTS'97 (ISBN 0-7803-3243-1), Monterey, CA, USA, 17–20 mars 1997, pp. 81–84.
- [C17] Y. Bertrand, P. Hazard<sup>2</sup>, M. Labrunée<sup>3</sup>, L. Latorre, P. Nouet et F. Pressecq<sup>2</sup>, «Characterization of a Microsystem Technology for Space Applications: Use and Limitation of Test Vehicles», 2<sup>nd</sup> Round Table on Micro/Nano Technologies for Space, 15–17 octobre 1997, ESTEC, Noordwijk, Pays-Bas, pp. 225–229 (ESA WPP-132).

---

1. Hervé Martin, CNET, MEYLAN.

2. Schneider Electric

3. CNES, Centre Spatial de Toulouse

- [C18] L. Latorre, Y. Bertrand et P. Nouet, «On the use of test structures for the electro-mechanical characterization of a CMOS compatible MEMS technology», ICMTS'98: International Conference on Microelectronic Test Structures, Kanazawa, Japan, March 23–26, 1998, pp. 177–182 (ISBN 0-7803-4348-4).
- [C19] L. Latorre, Y. Bertrand, P. Hazard<sup>1</sup> et F. Pressecq<sup>2</sup>, «La technologie CMOS appliquée à la réalisation de capteurs de champ magnétique résonants», C2I'98, ENS Cachan, 18 et 19 novembre 1998, Ed. HERMES (ISBN 2-86601-730-7), pp. 323–330.
- [C20] L. Latorre, Y. Bertrand, P. Hazard<sup>1</sup>, F. Pressecq<sup>2</sup> et P. Nouet, «Design, Characterization and modeling of a CMOS magnetic field sensor», Design Automation and Test in Europe Conference, DATE'99, 9–12 mars 1999, Munich, pp. 239-243 (0-7695-0078-1).
- [C21] A. Toulouse, D. Bernard, C. Landrault et P. Nouet, «Efficient 3D modeling for extraction of interconnect capacitances in deep submicron dense layouts», DATE'99, Munich, 9–12 mars 1999, pp. 576–580 (0-7695-0078-1).
- [C22] L. Latorre, Y. Bertrand, P. Hazard<sup>1</sup>, F. Pressecq<sup>2</sup> et P. Nouet, «Modeling and design optimization of a CMOS compatible MEMS», 2<sup>nd</sup> int. conference on Modeling and Simulation of Microsystems (MSM99, ISBN : 0-9666135-4-6), San Juan, Puerto Rico, USA, pp. 620–623.
- [C23] D. Bernard, C. Landrault and P. Nouet, "Interconnect capacitance monitoring and modeling in a 0.25 μm CMOS technology", DCIS'99: 14<sup>th</sup> Design of Circuits and Integrated Systems Conference, Palma de Mallorca, Spain, Nov.16-19, 1999, pp. 701-705 (ISBN 84-7632-424-3).
- [C24] S. Baglio<sup>1</sup>, L. Latorre et P. Nouet, «Development of Novel Magnetic Field Monolithic Sensors with Standard CMOS Compatible MEMS Technology», Smart Structures and Integrated Systems, Proceedings of SPIE, Newport Beach, CA, USA, March 1-4, 1999, pp. 417-424 (ISBN 0-8194-3142-7).
- [C25] S. Baglio<sup>1</sup>, L. Latorre et P. Nouet, «Resonant magnetic field microsensors in standard CMOS technology», IMTC'99: 16<sup>th</sup> IEEE Instrumentation and Measurement Tech. Conference, (ISBN 0-7803-5276-9), Venice, Italy, May 24-26, 1999, pp. 452-457.
- [C26] L. Latorre, V. Berouille, Y. Bertrand, P. Nouet, I. Salesse<sup>2</sup>, "Micromachined CMOS magnetic field sensor with ferromagnetic actuation", Design, Test, Integration, and Packaging of MEMS/MOEMS, SPIE : Vol. 4019, Paris, France, May 9-11, 2000, pp. 398-405 (ISBN : 0-8194-3645-3).
- [C27] L. Latorre, V. Berouille, Y. Bertrand, I. Salesse<sup>2</sup>, P. Nouet, "Electro-mechanical magnetic field sensors in a CMOS technology", 15<sup>th</sup> Conference on Design of Circuits and Integrated Systems (DCIS00), Montpellier, France, Nov. 21-24, 2000, pp. 694-699.
- [C28] V. Berouille, Y. Bertrand, A. Boyer<sup>3</sup>, M. Dardalhon, A. Foucaran<sup>3</sup>, L. Latorre, P. Nouet, "Monolithic integration of a porous silicon humidity sensor", 15<sup>th</sup> Design of Circuits and Integrated Systems Conference (DCIS), Montpellier, France, Nov. 21-24, 2000, pp. 862-867.

---

1. Université de Catania, Italy

2. ATEMI, service commun de l'Université Montpellier II

3. Centre d'Electronique et de Micro-optoélectronique de Montpellier (CEM2)

- [C29] L. Latorre, P. Nouet, J. Kim<sup>1</sup>, C.J. Kim<sup>4</sup>, “Electrostatic actuation of microscale liquid metal droplets : Analysis, experiment, and FEM simulation”, MEMS'00 : ASME International Micro-Electro-Mechanical Systems (Vol. 2), Orlando, Florida, USA, November 5-10, 2000, pp. 105-110 (ISBN 0-7918-1900-0).
- [C30] L. Latorre, V. Berouille, M. Dardalhon, P. Nouet, F. Pressecq<sup>2</sup>, C. Oudea<sup>3</sup>, “Characterization of CMOS MEMS technology scatterings”, Proc. of the 27<sup>th</sup> International Symposium for Testing and Failure Analysis (ISTFA 2001, ISBN 0-87170-746-2), Santa Clara (CA), USA, 11-15 November 2001, pp. 373-377.
- [C31] B. Ando<sup>1</sup>, S. Baglio<sup>1</sup>, P. Nouet, N. Savalli<sup>1</sup>, “Characterization of parasitic behaviors in CMOS microsensors”, Proc. of the 18<sup>th</sup> IEEE Instrumentation and Measurement Technology Conference (IMTC 2001, ISBN 0-7803-6646-8), 2001, pp. 1459-1462.
- [C32] D. Bernard, C. Landrault, P. Nouet, “Closed-Form Models for Inter- and Intra-Layer Capacitance in a VDSM CMOS Technology”, Proc. IFIP VLSI-SOC 2001 (ISBN 2-9517461-0-5), 11<sup>th</sup> edition, Montpellier, France, December 3-5, 2001, pp. 35-40.
- [C33] V. Berouille, Y. Bertrand, L. Latorre, P. Nouet, “A CMOS MEMS for magnetic field sensing with improved SNR”, Proc. IFIP VLSI-SOC 2001 (ISBN 2-9517461-0-5), 11<sup>th</sup> edition, Montpellier, France, December 3-5, 2001, 307-312.
- [C34] V. Berouille, L. Latorre, M. Dardalhon, C. Oudea<sup>6</sup>, G.Perez<sup>5</sup>, F. Pressecq<sup>5</sup>, P. Nouet, “Impact of Technology Spreadings on MEMS Design Robustness”, Proc. IFIP VLSI-SOC 2001 (ISBN 2-9517461-0-5), 11<sup>th</sup> edition, Montpellier, France, December 3-5, 2001, pp. 194-198.
- [C35] V. Berouille, L. Latorre, M. Dardalhon, C. Oudea<sup>4</sup>, G. Perez<sup>5</sup>, F. Pressecq<sup>2</sup> et P. Nouet, “Impact of technology spreading on MEMS design robustness”, SOC Design Methodologies, Kluwer Academic Publishers (ISBN 1-4020-7148-5), pp. 241-251, 2002. *Version révisée et étendue d'un papier présenté à IFIP VLSI-SOC 2001 (référence C34)*.
- [C36] V. Berouille, Y. Bertrand, L. Latorre et P. Nouet, “Evaluation of the oscillation-based test methodology for micro-electro-mechanical systems”, Proc. 20<sup>th</sup> IEEE VLSI Test Symposium (VTS'2002), pp. 439-444, Monterey, CA, USA, 28 Avril-2 Mai 2002.
- [C37] V. Berouille, Y. Bertrand, L. Latorre et P. Nouet, “Micromachined CMOS Magnetic Field Sensors With Low-noise Signal Conditioning”, Proc. IEEE International Conference on Micro Electro Mechanical Systems (MEMS'2002, ISBN: 0-7803-7185-2), pp. 256-259, LAS VEGAS, NEVADA, USA, JANUARY 20-24, 2002.
- [C38] V. Berouille, Y. Bertrand, L. Latorre et P. Nouet, “On the use of an Oscillation-based Test Methodology for CMOS Micro-Electro-Mechanical Systems”, Proc. DATE'2002 (ISBN 0-7695-1471-5), page 1120 (poster), Paris, France, 4-8 Mars 2002.
- [C39] L. Latorre, V. Berouille, Y. Bertrand, G. Cathebras, M. Spinka et P. Nouet, “On the Use of CMOS On-Chip Mechanical Devices for Spectral Analysis”, EUROSENSORS'02: 16<sup>th</sup> European Conference of solid-state Tranducers, Prague, Czech Republic, September 15-18, 2002, pp. 191-192.

---

1. Mechanical Engineering Lab, UCLA, USA

2. CNES, Centre Spatial de Toulouse

3. EADS LV, European Aeronautic Defense and Space Company, Launch Vehicle Dpt., Paris, France

4. EADS LV, European Aeronautic Defense and Space Company, Launch Vehicle Dpt., Paris, France

5. CNES, Centre Spatial de Toulouse

- [C40] D. Bernard, C. Landrault et P. Nouet, "Interconnect Capacitance Modelling in a VDSM CMOS Technology", SOC Design Methodologies, Kluwer Academic Publishers (ISBN 1-4020-7148-5), pp. 133-144, 2002.
- [C41] V. Beroulle, Y. Bertrand, L. Latorre et P. Nouet, "Noise optimisation of a piezoresistive CMOS MEMS for magnetic field sensing", SOC Design Methodologies, Kluwer Academic Publishers (ISBN 1-4020-7148-5), pp. 461-472, 2002.
- [C42] L. Latorre, V. Beroulle et P. Nouet, "Design & Simulation of a CMOS MEMS Using Standard Microelectronic CAD Environment", NANOTECH'03: Nanotechnology Conference, San Francisco (USA), février 2003, pp. 472-475.
- [C43] B. Caillard, F. Azaïs, P. Nouet, S. Dournelle<sup>1</sup> et P. Salomé<sup>3</sup>, "STMSCR: A new multi-finger SCR-based protection structure against ESD", EOS/ESD Symposium, Las Vegas (USA), septembre 2003, pp. 223-241.
- [C44] F. Azaïs, B. Caillard, S. Dournelle<sup>3</sup>, P. Nouet et P. Salomé<sup>3</sup>, "A Novel SCR-Based Protection Structure Against ESD with Efficient Multi-Finger Triggering", ESSDERC'03: European Solid-State Device Research Conference, Estoril (Portugal), septembre 2003, pp. 207-210.
- [C45] B. Caillard, F. Azaïs, P. Nouet, S. Dournelle<sup>3</sup> et P. Salomé<sup>3</sup>, "Electrical Modeling of LSCRs in Deep Submicron CMOS Technologies for Circuit-Level Simulation of ESD", BCTM'03: Bipolar/BiCMOS Circuits and Technology Meeting, Toulouse, Septembre 2003, pp. 97-100
- [C46] N. Dumas, L. Latorre et P. Nouet, "Low Noise CMOS Amplifier for a Piezoresistive Magnetic Field Sensor", DCIS'03: 18<sup>th</sup> International Conference on Design of Circuits and Integrated Systems, Ciudad Real (Espagne), novembre 2003, pp. 639-644.
- [C47] A. Chaehoi, L. Latorre, S. Baglio<sup>2</sup> et P. Nouet, "Piezoresistive CMOS Beams for Inertial Sensing", Proc. of IEEE Sensors'03, Toronto (Canada), octobre 2003, pp. 142-143.
- [C48] A. Chaehoi, L. Latorre et P. Nouet, "A CMOS MEMS Accelerometer with Bulk Micromachining", EUROSENSORS'04: European Conference on Solid-State Tranducers, P2.18 (2 pages) 2004.
- [C49] L. Dilillo, V. Beroulle, N. Dumas, L. Latorre et P. Nouet, "An A/D Interface for Resonant Piezoresistive MEMS Sensor", ISIE'04: IEEE International Symposium on Industrial Electronics, Ajaccio (France), May 4-7, 2004, pp. 83-88.
- [C50] N. Dumas, F. Azaïs, L. Latorre et P. Nouet, "Electrically-Induced Thermal Stimuli for MEMS Testing", ETS'04: 9th IEEE European Test Symposium , 2004, pp. 60-65.
- [C51] D. Martin<sup>3</sup>, R. Desplats<sup>4</sup>, G. Haller<sup>2</sup>, F. Azaïs et P. Nouet, "Optimised Probing Flow for High Speed Fault Localization", ISTFA'04: International Symposium on Testing and Failure Analysis, pp.176-180, 2004.
- [C52] D. Martin<sup>2</sup>, R. Desplats<sup>3</sup>, G. Haller<sup>2</sup>, F. Azaïs et P. Nouet, "Automated Diagnosis and Probing Flow for Fast Fault Localization in IC", Microelectronics Reliability, Vol. 44, Issues 9-11, 15<sup>th</sup> European Symposium on Reliability of Electron Devices, Failure Physics and Analysis (ESREF'04), September-November 2004, Pages 1553-1558.

1. ST Microelectronics, Central R&D, Crolles, France

2. Université de Catania, Italy

3. ST Microelectronics, Rousset, France

4. CNES, Centre Spatial de Toulouse

- [C53] V. Puyal, A. Konczykowska<sup>1</sup>, P. Nouet, S. Bernard, S. Blayac<sup>4</sup>, F. Jorge<sup>4</sup>, M. Riet<sup>4</sup> et J. Godin<sup>4</sup>, “A DC-100 GHz Frequency Doubler in InP DHBT Technology”, IEEE MTT-S International Microwave Symposium Digest, 2004, pp. 167-170.
- [C54] A. Chaehoi, L. Latorre, P. Nouet, “Design of CMOS Cantilevers for Inertial Sensing”; Euspen 2005: 5<sup>th</sup> international conference and 7<sup>th</sup> annual general meeting of the European Society for Precision Engineering and Nanotechnology, Montpellier (France), May 8-11 2005, pp 341-344.
- [C55] N. Dumas, L. Latorre, P. Nouet, "Design of a high resolution MEMS-based CMOS magnetometer", EUSPEN'05: European Society for Precision Engineering and Nanotechnology, pp. 287-290, 2005.
- [C56] N. Dumas, F. Azais, L. Latorre, et P. Nouet, « On-Chip Electro-Thermal Stimulus Generation for a MEMS-Based Magnetic Field Sensor », VTS'05: 23<sup>rd</sup> IEEE VLSI Test Symposium, pp. 213- 218, 1-5 May 2005.
- [C57] S. Baglio<sup>1</sup>, V. Sacco<sup>1</sup>, A. Bulsara<sup>1</sup> et P. Nouet, “Read-Out circuit in RT-Fluxgate”, ISCAS’05: IEEE Int. Symposium on Circuits and Systems, pp. 5910-5913, 23-26 May, 2005.
- [C58] N. Dumas, L. Latorre, P. Nouet, «Design of a micromachined CMOS compass », TRANSDUCERS'05: 13<sup>th</sup> International Conference on Solid-State Sensors, Actuators and Microsystems, pp. 405- 408, June 5-9, 2005.
- [C59] F. Mailly, F. Azaïs, N. Dumas, L. Latorre and P. Nouet, « Towards on-line testing of MEMS using electro-thermal excitation », ETS'05: 10<sup>th</sup> IEEE European Test Symposium, Tallinn, Estonia, May 22<sup>nd</sup> – 25<sup>th</sup>, 2005, Pages: 76-81.
- [C60] A. Chaehoi, N. Dumas, F. Mailly, L. Latorre and P. Nouet, « Absolute Pitch, Roll and Yaw Measurement on CMOS », 4<sup>th</sup> IEEE Sensors Conference 2005, Irvine, United States, Oct. 31<sup>st</sup> – Nov 3<sup>rd</sup>, 2005, pp. 133-136 - Digital Object Identifier: 10.1109/ICSENS.2005.1597654
- [C61] H.G. Kerkhoff<sup>2</sup>, X. Zhang<sup>1</sup>, H. Liu<sup>2</sup>, A. Richardson<sup>3</sup>, P. Nouet et F. Azaïs, «VHDL-AMS Fault Simulation for Testing DNA Bio-Sensing Arrays», 4<sup>th</sup> IEEE Sensors Conference, pp. 1030-1033, Irvine, CA, Oct. 31-Nov. 03, 2005.
- [C62] C. Entringer<sup>4</sup>, P. Flatresse<sup>3</sup>, P. Salomé<sup>3</sup>, P. Nouet et F. Azais, “Physics and Design Optimization of ESD Diode for 0.13µm PD-SOI Technology”, EOS/ESD Symposium, 4 pages, 2005.
- [C63] V. Puyal, A. Konczykowska<sup>5</sup>, P. Nouet, S. Bernard, M. Riet<sup>4</sup>, F. Jorge<sup>4</sup>, J. Godin<sup>4</sup>, «A broadband active frequency doubler operating up to 120 GHz», 35<sup>th</sup> European Microwave Conference (EuMC), Paris, 4-6 October 2005, Volume: 3, pp. 1503-1506, ISBN: 2-9600551-2-8, Digital Object Identifier: 10.1109/EUMC.2005.1610236
- [C64] C. Entringer<sup>3</sup>, P Flatresse<sup>3</sup>, P. Galy<sup>3</sup>, P. Nouet et F. Azais, “Partially Depleted SOI Body-Contacted MOSFET-Triggered Silicon Controlled Rectifier for ESD Protection”, EOS/ESD symposium, 2006, Vol. 28, pages 166-171.
- [C65] C. Entringer<sup>3</sup>, P Flatresse<sup>3</sup>, P. Galy<sup>3</sup>, F. Azais et P. Nouet, “Electro-thermal short pulsed simulation for SOI technology”, ESREF'06: European Symposium on Reliability of Electron Devices, Failure Physics and Analysis, October , 4 pages, 2006.

1. Alcatel-Thales III-V Lab, Marcoussis, France

2. MESA+ Institute for Nanotechnology, Enschede, the Netherlands

3. Centre for Microsystems Research, Lancaster University, Lancashire, UK

4. ST Microelectronics, Central R&D, Crolles, France

5. Alcatel-Thales III-V Lab, Marcoussis, France

- [C66] O. Leman, A. Chaehoi, F. Mailly, L. Latorre and P. Nouet, "HDL simulation of a thermal accelerometer for system design", 20<sup>th</sup> Eurosensors Conference, 17th -20th September 2006, Göteborg, Sweden, 2 pages.
- [C67] O. Leman, A. Chaehoi, F. Mailly, L. Latorre and P. Nouet, "Modeling of a CMOS Convective Accelerometer for HDL integration", ESSDERC'06: 36<sup>th</sup> European Solid-State Device Research Conference, 2006, pp. 134-137, DOI: 10.1109/ESSDER.2006.307656.
- [C68] V. Puyal, A. Konczykowska<sup>4</sup>, M. Riet<sup>4</sup>, S. Bernard, P. Nouet, J. Godin<sup>4</sup>, «InP HBT XOR and phase-detector for 40 Gbit/s clock and data recovery (CDR)», MIKON'06 : 16<sup>th</sup> Int. Conf. on Microwaves, Radar and Wireless Communications, Cracow, Poland, 22-24 May 2006, pp. 1115–1118. DOI : 10.1109/MIKON.2006.4345382.
- [C69] O. Leman, F. Mailly, L. Latorre and P. Nouet, "A Comparative Study of Conditioning Architectures for Convective Accelerometers", 6<sup>th</sup> IEEE Conference on SENSORS 2007, 28-31 Oct. 2007, Page(s):107 – 110, doi:10.1109/ICSENS.2007.4388347
- [C70] J-R. Manouvrier<sup>3</sup>, P. Fonteneau<sup>3</sup>, C-A. Legrand<sup>3</sup>, P. Nouet, F. Azais, «Characterization of the transient behavior of gated/STI diodes and their associated BJT in the CDM time domain», 29<sup>th</sup> Electrical Overstress/Electrostatic Discharge Symposium (EOS/ESD), 2007, pp.: 3A.2-1-3A.2-10, doi:10.1109/EOSESD.2007.4401748
- [C71] X. Zhang<sup>1</sup>, H.G. Kerkhoff<sup>1</sup>, F. Mailly, P. Nouet, H. Liu<sup>2</sup>, A. Richardson<sup>2</sup>, "A Fault-Tolerant MEF Peptide Synthesizer using Control and Direct Sensing Electrodes Employing Current and Impedance Tests", IMSTW'07: IEEE Int. Mixed-Signals Testing Workshop, June 18-20, 2007, Portugal, pp. 176-181, ISBN: 978-972-9181-2-4.
- [C72] H. Campanella<sup>1</sup>, P. Nouet, P. de Paco<sup>1</sup>, A. Uranga<sup>1</sup>, N. Barniol<sup>1</sup>, and J. Esteve<sup>1</sup>, "Automated on-wafer characterization in micro-machined resonators: towards an integrated test vehicle for bulk acoustic wave resonators (FBAR)" IEEE Intl. Conf on Microelectronic Test Structures, Tokyo, Japan, 19-22 March 2007, Page(s): 157–161, doi:10.1109/ICMTS.2007.374474
- [C73] E. Schuler<sup>2</sup>, M. Negreiros<sup>2</sup>, P. Nouet, L. Carro<sup>2</sup>, "A Digitally Testable Capacitance-Insensitive Mixed-Signal Filter", 12<sup>th</sup> IEEE European Test Symposium, ETS'07, 20-24 May 2007, Pages: 21-28, doi: 10.1109/ETS.2007.6
- [C74] H. Campanella<sup>1</sup>, A. Uranga<sup>1</sup>, P. Nouet, P. De Paco<sup>1</sup>, N. Barniol<sup>1</sup> and J. Esteve<sup>1</sup>, "Instantaneous de-embedding of the on-wafer equivalent-circuit parameters of acoustic resonator (FBAR) for integrated circuit applications", SBCCI07 : 20<sup>th</sup> annual conference on Integrated circuits and systems design, 2007, pp. 212–217, Brésil, doi : <http://doi.acm.org/10.1145/1284480.1284539>
- [C75] J.R. Manouvrier<sup>3</sup>, P. Fonteneau<sup>3</sup>, C.-A. Legrand<sup>3</sup>, H. Beckrich-Ros<sup>3</sup>, C. Richier<sup>3</sup>, P. Nouet et F. Azais, "A Physics-Based Compact Model for ESD Protection Diodes under Very Fast Transients", 30<sup>th</sup> Electrical Overstress/Electrostatic Discharge Symposium, EOS/ESD 2008. 7-11 Sept. 2008, Page(s): 67-75. ISBN: 978-1-58537-146-4
- [C76] Campanella, Humberto<sup>1</sup>; Esteve, Jaume<sup>1</sup>; Nouet, P.; Martincic, Emile<sup>4</sup>; Uranga, Arantxa<sup>1</sup>; Barniol, Nuria<sup>1</sup>, "Analytical and finite-element modeling of a localized-mass sensor," 2008 IEEE Sensors, pp.367-370, 26-29 Oct. 2008. DOI: 10.1109/ICSENS.2008.4716457

1. Centro Nacional de Microelectrónica, UAB, Bellaterra (Barcelona), Spain

2. UFRGS, Porto-Alegre, Brésil

3. ST Microelectronics, Central R&D, Crolles, France

4. Laboratoire IEF, Paris, France

- [C77] Leman O., Mailly F., Latorre L., Nouet P., "Study of First-Order Thermal  $\Sigma$ - $\Delta$  Architecture for Convective Accelerometers", Symposium on Design, Test, Integration and Packaging of MEMS/MOEMS, DTIP 2008, p.100-104. oai:hal.archives-ouvertes.fr:hal-00277687\_v1
- [C78] Boujamaa E. M., Soulie Y., Mailly F., Latorre L., Nouet P., "Rejection of Power Supply Noise in Wheatstone Bridges: Application to Piezoresistive MEMS", Symposium on Design, Test, Integration and Packaging of MEMS/MOEMS, DTIP 2008, 4 pages. oai:hal.archives-ouvertes.fr:hal-00277686\_v1
- [C79] Leman O., Dumas N., Mailly F., Latorre L. and Nouet P., "An approach to integrate MEMS into high-level system design flows", *invited talk*, NEWCAS-TAISA 2008, 22-25 June 2008, Page(s): 273–276, doi: 10.1109/NEWCAS.2008.4606374
- [C80] Alandry, B.; Dumas, N.; Latorre, L.; Mailly, F.; Nouet, P.; "A CMOS Multi-sensor System for 3D Orientation Determination" IEEE Computer Society Annual Symposium on VLSI, ISVLSI, 7-9 April 2008, Page(s): 57–62. Digital Object Identifier 10.1109/ISVLSI.2008.80
- [C81] Dumas, N.; Azais, F.; Mailly, F.; Richardson, A.; Nouet, P.; "A novel method for test and calibration of capacitive accelerometers with a fully electrical setup" 11<sup>th</sup> IEEE Workshop on Design and Diagnostics of Electronic Circuits and Systems, DDECS 2008, 16-18 April 2008, 6 pages. Digital Object Identifier 10.1109/DDECS.2008.4538807
- [C82] Dumas, N.; Azais, F.; Mailly, F.; Nouet, P.; "Evaluation of a fully electrical test and calibration method for MEMS capacitive accelerometers"; IEEE 14<sup>th</sup> Int. Mixed-Signals, Sensors, and Systems Test Workshop, IMS3TW, 18-20 June, 2008, pp.6. doi: 10.1109/IMS3TW.2008.4581616
- [C83] Pous N., Mailly F., Latorre L., Martincic E.<sup>1</sup>, Verjus F.<sup>2</sup>, Pellet C.<sup>3</sup>, Dufour-Gergam E.<sup>1</sup>, Nouet P., "Pressure Sensor for Smart Wafer-Level Packaging of MEMS", EuroSensors 2008, pp. 408-411. ISBN: 978-3-00-025217-4
- [C84] Alandry B., Mailly F., Latorre L., Verjus F.<sup>2</sup>, Garel O.<sup>1</sup>, Dufour-Gergam E.<sup>1</sup>, Nouet P., "Towards New Low-Cost Multi-Sensor Systems", EuroSensors XXII 2008, pp. 549-552. ISBN: 978-3-00-025217-4
- [C85] Leman, O.; Latorre, L.; Mailly, F.; Nouet, P.; "A Closed-Loop Architecture with Digital Output for Convective Accelerometers" IEEE Computer Society Annual Symposium on VLSI, ISVLSI'08, 7-9 April 2008, Page(s): 51–56. doi : 10.1109/ISVLSI.2008.89
- [C86] Alandry, Boris; Dumas, N.; Latorre, L.; Mailly, Frederick; Nouet, P., "A MEMS-based multi-sensor system for attitude determination," Design, Test, Integration & Packaging of MEMS/MOEMS, 2009, DTIP'09, pp.261-264, 1-3 April 2009.  
URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=4919514&isnumber=4919470>
- [C87] Boujamaa, E.M.; Dumas, N.; Latorre, L.; Mailly, F.; Nouet, P., "The active bridge: An alternative to the Wheatstone bridge for efficient conditioning of resistive MEMS sensors," Design, Test, Integration & Packaging of MEMS/MOEMS, 2009, DTIP, pp. 265-268, 2009.  
<http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=4919515&isnumber=4919470>
- [C88] Dumas, N.; Azais, F.; Mailly, F.; Nouet, P., "A method for electrical calibration of MEMS accelerometers through multivariate regression," IEEE 15<sup>th</sup> Int. Mixed-Signals, Sensors, and Systems Test Workshop, 6 pages, 10-12 June 2009, doi : 10.1109/IMS3TW.2009.5158685

1. Laboratoire IEF, Paris, France

2. NXP, Caen, France

3. Laboratoire IMS, Bordeaux, France

- [C89] O Leman, F Mailly, L Latorre, P Nouet, "A wide bandwidth, wide dynamic range thermal  $\Sigma\Delta$  architecture for convective accelerometers", IEEE Sensors Conference, Nouvelle-Zélande, Octobre 2009, pp.1828-1831, doi: 10.1109/ICSENS.2009.5398429
- [C90] Boujamaa, El Mehdi; Dumas, N.; Latorre, L.; Mailly, Frederick; Nouet, P.; "An Innovative, Offset Imune, Conditionning and Read-out Circuitry for Resistive MEMS Sensors", IEEE joint Workshop on Circuits and Systems and TAISA Conference, 2009, 4 pages. doi: 10.1109/NEWCAS.2009.5290466.
- [C91] O. Leman, Frederick Mailly, L. Latorre, P. Nouet, "Linearity optimization using dithering in a 1st order thermal  $\Sigma\Delta$  modulator", IEEE joint Workshop on Circuits and Systems and TAISA Conference, 2009, 4 pages, doi: 10.1109/NEWCAS.2009.5290433
- [C92] N. Pous, F. Azais, L. Latorre, P. Nouet, J. Rivoir, "Exploiting Zero-Crossing for the Analysis of FM Modulated Analog/RF Signals using Digital ATE", ATS'09: IEEE Asian Test Symposium, Taichung, Taiwan, 23-26 Nov., 2009, Page(s):261 – 266, doi: 10.1109/ATS.2009.56
- [C93] E. Lefevre<sup>1</sup>, E. Martincic<sup>1</sup>, M. Woytasik<sup>1</sup>, X. Leroux<sup>1</sup>, S. Edmond<sup>1</sup>, C. Pellet<sup>3</sup>, P. Nouet, E. Dufour-Gergam<sup>1</sup>, "Silicon on insulator temperature and pressure sensor for MEMS smart packaging", Procedia Chemistry, Volume 1, Issue 1, Proceedings of the Eurosensors XXIII conference, August 2009, Pages 782-785, doi: 10.1016/j.proche.2009.07.195
- [C94] Alandry, B.; Nouet, P.; Mailly, F.; Latorre, L.; "A MEMS-based multi-sensor platform for consumer applications", Ph.D. Research in Microelectronics and Electronics, 2009. PRIME 2009. 12-17 July 2009 Page(s):320 – 323; doi: 10.1109/RME.2009.5201361
- [C95] E.M. Boujamaa, L. Latorre, O. Leman, F. Mailly et P. Nouet, "A Novel Low Power Interface for Resistive MEMS Sensors", 3<sup>rd</sup> IEEE International Conference on Signals, Circuits and Systems, 6-8 Novembre 2009, Djerba, Tunisie, 4 pages, doi: 10.1109/ICSCS.2009.5412550.
- [C96] A.A. Rekik, F. Azaïs, N. Dumas, F. Mailly et P. Nouet, "Investigations on Electrical-only Test Setup for MEMS Convective Accelerometer", 3<sup>rd</sup> IEEE International Conference on Signals, Circuits and Systems, 6-8 Nov. 2009, Djerba, Tunisie, 6 p., doi : 10.1109/ICSCS.2009.5412624.
- [C97] Pous, N.; Azaïs, F.; Latorre, L.; Nouet, P.; Rivoir, J.; "Experiments on the analysis of phase/frequency-modulated RF signals using digital tester channels", 11<sup>th</sup> Latin American Test Workshop (LATW), pp.1-7, 28-31 March 2010. doi: 10.1109/LATW.2010.5550370
- [C98] Andò, B.; Baglio, S.; Dumas, N.; Latorre, L.; Nouet, P.; Trigona, C.; "Nonlinear behaviour of a micromachined SOI device for energy harvesting application", Symposium on Design Test Integration and Packaging of MEMS/MOEMS (DTIP), pp.263-265, 5-7 May 2010. <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5486474&isnumber=5486443>
- [C99] N. Dumas, L. Latorre, F. Mailly and P. Nouet, "Design of a Smart CMOS High-Voltage driver for electrostatic MEMS switches", Symposium on Design Test Integration and Packaging of MEMS/MOEMS (DTIP), pp.44-47, 5-7 May 2010. <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5486486&isnumber=5486443>
- [C100] Alandry, B.; Boujamaa, E.M.; Hacine, S.; Latorre, L.; Mailly, F.; Nouet, P.; "An optimized electronic architecture for resistive sensors", Symposium on Design Test Integration and Packaging of MEMS/MOEMS (DTIP), pp.372-375, 5-7 May 2010. <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5486491&isnumber=5486443>

- [C101] Rekik, A.A.; Azaïs, F.; Dumas, N.; Masmoudi, M.; Mailly, F.; Nouet, P.; "A study of package effects on the behavior of MEMS convective accelerometers", Symposium on Design Test Integration and Packaging of MEMS/MOEMS (DTIP), pp.6-9, 5-7 May 2010  
<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5486499&isnumber=5486443>
- [C102] A.A. Rekik, F. Azais, N. Dumas, F. Mailly and P. Nouet, "Modeling the influence of etching defects on the sensitivity of MEMS convective accelerometers", IEEE 16<sup>th</sup> Int. Mixed-Signals, Sensors and Systems Test Workshop (IMS3TW), 6 p., 7-9 June 2010.  
*doi: 10.1109/IMS3TW.2010.5503011*
- [C103] N. Dumas, L. Latorre, F. Mailly and P. Nouet, "Smart drivers for online diagnosis of electrostatic MEMS actuators", IEEE 16th Int. Mixed-Signals, Sensors and Systems Test Workshop (IMS3TW), 6 p., 7-9 June 2010. *doi: 10.1109/IMS3TW.2010.5503018*
- [C104] Alandry, B.; Latorre, L.; Mailly, F.; Nouet, P.; "A CMOS-MEMS Inertial Measurement Unit", 2010 IEEE Sensors, pp.1033-1036, 1-4 Nov. 2010. *doi: 10.1109/ICSENS.2010.5690799*
- [C105] Boujamaa, E.M.; Alandry, B.; Hacine, S.; Latorre, L.; Mailly, F.; Nouet, P.; "A low power interface circuit for resistive sensors with digital offset compensation", IEEE International Symposium on Circuits and Systems (ISCAS), pp. 3092-3095, May 30 2010-June 2 2010.  
*doi: 10.1109/ISCAS.2010.5537970*
- [C106] Rekik, A.A.; Azais, F.; Dumas, N.; Mailly, F.; Nouet, P.; "Test and calibration of MEMS convective accelerometers with a fully electrical setup", 12<sup>th</sup> Latin American Test Workshop (LATW), pp.1-6, 27-30 March 2011. *doi: 10.1109/LATW.2011.5985907*
- [C107] Dumas, N.; Hacine, S.; Mailly, F.; Latorre, L.; Nouet, P.; "A tracking converter for resistive sensors based on a feedback active bridge", IEEE 9<sup>th</sup> Int. New Circuits and Systems Conference (NEWCAS), pp.458-461, 26-29 June 2011. *doi: 10.1109/NEWCAS.2011.5981269*
- [C108] Rekik, A.A.; Azaïs, F.; Dumas, N.; Mailly, F.; Nouet, P.; "An electrical test method for MEMS convective accelerometers: Development and evaluation", Design, Automation & Test in Europe Conference & Exhibition (DATE), pp.1-6, 14-18 March 2011.  
<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5763137&isnumber=5762992>
- [C109] Rekik, A.A.; Azaïs, F.; Dumas, N.; Mailly, F.; Nouet, P.; "A MEMS Convective Accelerometer Equipped with On-Chip Facilities for Sensitivity Electrical Calibration", IEEE 17<sup>th</sup> Int. Mixed-Signals, Sensors and Systems Test Workshop, 2011, pp.82-87, 16-18 May 2011. *doi: 10.1109/IMS3TW.2011.21*
- [C110] A.A. Rekik, B. Mezghani, F. Azaïs, N. Dumas, M. Masmoudi, F. Mailly, P. Nouet, "Investigation on the effect of geometrical dimensions on the conductive behaviour of a MEMS convective accelerometer", Symposium on Design Test Integration and Packaging of MEMS/MOEMS (DTIP), pp. 14-17, 11-13 May 2011.  
<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6107996&isnumber=6107967>
- [C111] Hacine S., Mailly F., Dumas N., Latorre L., Nouet P., "An Ultra Low Power Temperature Sensor for Smart Packaging Monitoring", Symposium on Design Test Integration and Packaging of MEMS/MOEMS (DTIP), pp. 320-323, 11-13 May 2011.  
<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6107995&isnumber=6107967>
- [C112] Trigona C., Dumas N., Latorre L., Nouet P., "A Novel Integrated Solution for the Control and Diagnosis of Electrostatic MEMS Switches", Symposium on Design Test Integration and Packaging of MEMS/MOEMS (DTIP), pp. 315-319, 11-13 May 2011.  
<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6107994&isnumber=6107967>

- [C113] Hacine S., El Khach T., Mailly F., Latorre L., Nouet P., "A Micro-Power High-Resolution Sigma-Delta CMOS Temperature Sensor", 2011 IEEE Sensors, pp. 1530-1533, 29-31 October 2011. doi: 10.1109/ICSENS.2011.6127123
- [C114] C. Trigona, N. Dumas, L. Latorre, B. Andò, S. Baglio and P. Nouet, "Exploiting Benefits of a Periodically-Forced Nonlinear Oscillator for Energy Harvesting from Ambient Vibrations", Proceedings of Eurosensors 2011, Procedia Engineering, Vol. 25, 2011, Pages 819-822. doi: 10.1016/j.proeng.2011.12.201

### **3. Colloques Internationaux sans actes ou avec actes à diffusion restreinte**

- [W1] P. Girard, P. Nouet et B. Pistoulet, «Single energy e-beam latch activation and deactivation», 2<sup>nd</sup> European Conference on Electron and Optical Beam Testing of Integrated Circuits (EOBT89), Duisbourg, Allemagne, 1–4 octobre 1989.
- [W2] P. Nouet, «Towards E-Beam testing and reconfiguration of integrated circuits: An E-Beam programmable memory point», ISMEC'90, Zagreb, Yougoslavie, 21–24 mai 1990, pp. 53–56.
- [W3] C. Landrault et P. Nouet, «Testability improvements using E-Beam controllability: principle and design for Electron-Beam Testability», 5<sup>th</sup> European Conference on Electron and Optical Beam Testing of Electronic Devices, Wuppertal, Allemagne, August 27-30, 1995 (Poster).
- [W4] L. Latorre, P. Nouet, Y. Bertrand, P. Hazard<sup>1</sup> et F. Pressecq<sup>2</sup>, «Characterization and modeling of a CMOS compatible MEMS technology», E-MRS'98, Strasbourg, 16–19 juin 1998.
- [W5] Y. Bertrand, L. Latorre, P. Nouet, I. Salesse<sup>3</sup>, "Intégration monolithique de capteurs et de leur électronique de traitement: Application à la mesure de champ magnétique", 4<sup>èmes</sup> Rencontres Transfrontalière Capteurs et Biocapteurs, Montpellier, France, 16-17 septembre 1999.
- [W6] D. Bernard, C. Landrault, P. Nouet, "Analytical models for inter-and intra-layer capacitance extraction in a 0.25 μm CMOS technology", 4<sup>th</sup> Workshop on Signal Propagation on Interconnects, Magdeburg, Allemagne, May 17-19, 2000.
- [W7] V. Beroulli, Y. Bertrand, L. Latorre, P. Nouet, "MEMS testing - a case study", 6<sup>th</sup> IEEE International Mixed-Signal Testing Workshop, Montpellier, June 21-23, 2000, pp. 244-248.
- [W8] M. Dardalhon, V. Beroulli, P. Nouet, L. Latorre, A. Boyer<sup>4</sup>, A. Foucaran<sup>4</sup>, "Porous silicon humidity sensor and its electronic integrated on a same chip", 5<sup>ème</sup> Rencontres Transfrontalières Capteurs et Biocapteurs, Vic, Spain, September 21-22, 2000, pp. 9-13.
- [W9] U. Kac<sup>5</sup>, F. Novak<sup>5</sup>, F. Azais, P. Nouet et M. Renovell, "Experimental test infrastructure supporting IEEE 1149.4 Standard", Digest of the 7<sup>th</sup> IEEE European Test Workshop (ETW2002), pp. 211-212 (poster), Corfu, Greece, May 26-29, 2002.
- [W10] F. Azaïs, P. Nouet, M. Renovell, U. Kac<sup>5</sup> et F. Novak<sup>5</sup>, "Design of an IEEE 1149.4 test chip with extended ABM functionality", Proc. of the 8<sup>th</sup> IEEE Int. Mixed-Signal Testing Workshop (IMSTW2002), pp. 153-159, 18-21 Juin 2002, Montreux, Suisse.

---

1. Schneider Electric

2. CNES, Centre Spatial de Toulouse

3. ATEMI, service commun UMII

4. Centre d'Electronique et de Micro-optoélectronique de Montpellier (CEM2)

5. Jozef Stefan Institute, Ljubljana, Slovenia

- [W11] U. Kac<sup>5</sup>, F. Novak<sup>5</sup>, F. Azais, P. Nouet, M. Renovell, "Implementation of an experimental IEEE 1149.4 mixed-signal test chip", BTW'02: digest of the 1<sup>st</sup> IEEE International Board Test Workshop (6 pages), 10-11 Octobre 2002, Baltimore, USA.
- [W12] V. Beroulle, Y. Bertrand, L. Latorre, P. Nouet, M. Lubaszewski<sup>1</sup> et R.P. Ribas<sup>1</sup>, "Testing Resonant Micro-Electro-Mechanical Sensors using the Oscillation-based Test Methodology", Proc. of the 3<sup>rd</sup> IEEE Latin-American Test Workshop (LATW2002), pp. 99-104, 9-13 Février 2002, Montevideo, Uruguay.
- [W13] F. Azaïs, Y. Bertrand, J.V. Calvano<sup>2</sup>, M. Lubaszewski<sup>1</sup>, P. Nouet et M. Renovell, "Designing testable analog filters with optimal DfT Insertion", Proc. of the 8<sup>th</sup> IEEE Int. Mixed-Signal Testing Workshop (IMSTW'02), pp. 201-203 (poster), 18-21 Juin 2002, Montreux, Suisse.
- [W14] M.Dardalhon, M-O. Dzeukou<sup>3</sup>, V. Berouille, L. Latorre, P. Nouet, G.Pérez<sup>3</sup> et C. Oudea<sup>4</sup>, "Impact of environmental parameters on CMOS MEMS structures", CANEUS2002, 25-30 août 2002, Montréal, Canada.
- [W15] F. Azaïs, M. Lubaszewski<sup>1</sup>, P. Nouet et M. Renovell, "On the Synthesis of Analog Cascaded Filters with Optimal Test Point Insertion", Proc. of the 4<sup>th</sup> IEEE Latin-American Test Workshop (LATW2003), pp. 212-216, Février 2003, Natal, Brésil.
- [W16] A. Chaehoi, Y. Bertrand, L. Latorre et P. Nouet, "Improving the Efficiency of the Oscillation-based Test Methodology for Parametric Faults", Proc. of the 4<sup>th</sup> IEEE Latin-American Test Workshop (LATW2003), pp. 234-237, Février 2003, Natal, Brésil.
- [W17] A. Chaehoi, L. Latorre, F. Azaïs et P. Nouet, "Use of a Statistical Approach for Efficient Implementation of Oscillation-Based Test Strategy", IMSTW'03: 9th IEEE International Mixed-Signal Testing Workshop, Seville (Espagne), juin 2003, pp. 99-103.
- [W18] N. Dumas, L. Latorre et P. Nouet, "Amplificateur CMOS Faible Bruit pour Micro Capteur MEMS", TAISA'03: Traitement Analogique de l'Information, du Signal et ses Applications, 4<sup>ème</sup> édition, Louvain (Belgique), septembre 2003, pp. 71-74.
- [W19] N. Dumas, F. Azaïs, L. Latorre et P. Nouet, "On the Use of Electrical Stimuli for MEMS Testing", LATW'04: 5<sup>th</sup> IEEE Latin American Test Workshop, 2004, pp. 118-122.
- [W20] D. Martin<sup>5</sup>, G. Haller<sup>5</sup>, F. Azaïs et P. Nouet, "Investigations on the Use of EWS Data for Failure Diagnosis Enhancement", LATW'04: 5<sup>th</sup> IEEE Latin American Test Workshop, 2004, pp.6-10.
- [W21] D. Martin<sup>5</sup>, G. Haller<sup>5</sup>, F. Azaïs et P. Nouet, "On the Development of a Low-Cost Diagnostic Flow for Efficient Failure Analysis", ETS'04: 9<sup>th</sup> IEEE European Test Symposium, 2004.
- [W22] N. Dumas, F. Azais, L. Latorre, P. Nouet, "BIST Implementation of Electro-Thermal Stimulus Generation for a MEMS-based Magnetic Field Sensor", LATW'05: 6<sup>th</sup> IEEE Latin-American Test Workshop, pp. 207-212, Salvador, Brazil, 2005.
- [W23] F. Mailly, N. Dumas, L. Latorre, F. Azais, P. Nouet, «Electro-Thermal On-line Testing of a MEMS Magnetometer Through Bias Modulation», LATW'05: 6<sup>th</sup> IEEE Latin-American Test Workshop, pp. 213-218, Salvador, Brazil, 2005.

1. Univ. Federal do Rio Grande do Sul (UFRGS) – Porto Alegre (Brasil)

2. Brasilian NRI, Brasil

3. CNES, Centre Spatial de Toulouse

4. EADS LV, European Aeronautic Defense and Space Company, Launch Vehicle Dpt., Paris, France

5. ST Microelectronics, Rousset, France

- [W24] F. Mailly, F. Azaïs, N. Dumas, L. Latorre, and P. Nouet, « Superposition vs. modulation: a comparative analysis for electro thermal on line MEMS testing », IMSTW'05: 11<sup>th</sup> IEEE Int. Mixed-Signals Testing Workshop, pp. 212-219, Cannes, France, June 27<sup>th</sup>-29<sup>th</sup>, 2005.
- [W25] H. Liu<sup>1</sup>, H.G. Kerkhoff<sup>2</sup>, A. Richardson<sup>1</sup>, X. Zhang<sup>2</sup>, P. Nouet et F. Azaïs, «Design & Test of an Oscillation Based System Architecture for DNA Sensor Arrays», IMSTW'05: 11<sup>th</sup> IEEE Int. Mixed-Signals Testing Workshop, pp. 234-239, Cannes, France, June 27<sup>th</sup>-29<sup>th</sup>, 2005.
- [W26] A. Chaehoi, L. Latorre, F. Mailly et P. Nouet, « A Monolithic CMOS 3-Axis Accelerometer Combining Piezoresistive and Heat Transfer Effects», PRIME'05: PhD Research in Microelectronics and Electronics, pp. 219-222, 2005.
- [W27] A. Chaehoi, L. Latorre, F. Mailly and P. Nouet, « Experimental and finite-element study of convective accelerometer on CMOS », Eurosensors XIX, Barcelona, Sept. 11<sup>th</sup>-14<sup>th</sup>, 2005.
- [W28] N. Dumas, L. Latorre, P. Nouet, «Offset and Noise Rejection Analysis in CMOS Piezoresistive Sensors », Eurosensors XIX, Barcelona, Spain, Sept. 11<sup>th</sup>-14<sup>th</sup>, 2005.
- [W29] C. Entringer<sup>3</sup>, P. Flatresse<sup>3</sup>, P. Salomé<sup>3</sup>, P. Nouet et F. Azaïs, « Comparison Between 0.13 µm PD-SOI Gated Diode and non Gated Diode through DC TCAD Simulations », EUROSOI'05: Proceedings EUROSOI Workshop, 2005.
- [W30] Lafont M., Azais F., Galy P.<sup>3</sup>, Salomé P.<sup>3</sup>, Nouet P., “A simulation tool for CDM stress evaluation at circuit level”, EOS/ESD/EMI Workshop, France, pp. 89-92, May 2006.
- [W31] O. Leman, F. Azaïs, L. Latorre, F. Mailly, P. Nouet, « On the testing of the electronic conditioning chain of a CMOS MEMS based magnetic field sensor », LATW'06: 7th IEEE Latin American Test Workshop, March 26-29, pp. 29-34, 2006.
- [W32] A. Riviere<sup>4</sup>, P. Coll<sup>4</sup>, D. Bernard<sup>4</sup>, P. Nouet, F. Azais, “On the Use of LVTPNP in ESD Protection Structures”, International Electrostatic Discharge Workshop, Stanford Sierra Conference Center, South Lake Tahoe, CA, May 14-17, 2007.
- [W33] X. Zhang<sup>2</sup>, H.G. Kerkhoff<sup>2</sup>, F. Mailly, P. Nouet, H. Liu<sup>1</sup>, A. Richardson<sup>1</sup>, “A Fault-Tolerant MEF Peptide Synthesizer using Control and Direct Sensing Electrodes Employing Current and Impedance Tests”, IMSTW'07: International Mixed-Signals Testing Workshop, June 18-20, 2007, Póvoa de Varzim, Portugal, Pages : 176-181, ISBN: 978-972-9181-2-4
- [W34] H. Campanella<sup>5</sup>, A. Uranga<sup>5</sup>, P. Nouet, N. Barniol<sup>5</sup>, L. Terés<sup>5</sup>, J. Esteve<sup>5</sup>, “Design and Characterization of a Bulk-acoustic-resonator (FBAR)”, 8<sup>th</sup> International Symposium on RF MEMS and RF Microsystems, MEMSWAVE 2007, 26-29 Juin 2007, Barcelone, Espagne.
- [W35] E.M. Boujamaa, Y. Soulié, F. Mailly, L. Latorre, P. Nouet, « Réjection du bruit d'alimentation du pont de Wheatstone : application aux MEMS piézorésistifs », TAISA'2007 : 8<sup>ème</sup> colloque sur le Traitement Analogique de l'Information, du Signal et ses Applications, 18 et 19 octobre 2007, Lyon, France, pp. 95-98.
- [W36] O. Leman, F. Mailly, L. Latorre, P. Nouet, « Accéléromètre convectif CMOS en boucle fermée », TAISA'2007 : 8<sup>ème</sup> colloque sur le Traitement Analogique de l'Information, du Signal et ses Applications, 18 et 19 octobre 2007, Lyon, France, pp. 107-110.

1. Centre for Microsystems Research, Lancaster University, Lancashire, UK

2. MESA+ Institute for Nanotechnology, Enschede, the Netherlands

3. ST Microelectronics, Central R&D, Crolles, France

4. Atmel corporation, Rousset, France

5. Centro Nacional de Microelectrónica, UAB, Bellaterra (Barcelona), Spain

- [W37] J.R. Manouvrier<sup>3</sup>, P. Fonteneau<sup>3</sup>, C.-A. Legrand<sup>3</sup>, P. Nouet et F. Azais, “Transit Time Extraction Method for ESD Protection Diodes Model” IEW'08: International ESD Workshop, Toulouse, 2008.
- [W38] E.M. Boujamaa, N. Dumas, L. Latorre, F. Mailly et P. Nouet, “An Efficient Low Power Interface Circuit for Resistive MEMS Sensors”, FTFC'09 : 8<sup>èmes</sup> Journées Faible Tension Faible Consommation, June 03-05, 3 pages, 2009.
- [W39] Pierre-Francois Desrumaux, Yoan Dupret<sup>1</sup>, Jens Tingleff<sup>1</sup>, Justin Penfold<sup>1</sup>, Sean Minehane<sup>2</sup>, Mark Redford<sup>2</sup>, Laurent Latorre, Pascal Nouet, « Yield Analysis of Analogue Circuits using Quasi-Monte Carlo-based Statistical Moment Estimation », SAME 2011 Forum, October 12-13, 2011.

## 4. Colloques nationaux

- [N1] P. Girard, B. Pistoulet, P. Nouet, F.M. Roche et R. Lorival, «Etude des conditions de charge d'oxyde par faisceau d'électrons. Applications à la reconfiguration de circuits intégrés et à l'analyse de processus», Journées GCIS, Toulouse, 14–16 juin 1989.
- [N2] P. Girard, B. Pistoulet, P. Nouet, F.M. Roche, R. Lorival et P. Charpenel, «Etude des conditions de charge d'oxyde par faisceau d'électrons. Applications à la reconfiguration de circuits intégrés et à l'analyse de process», Journées GCIS, Toulouse, 7–8 juin 1990.
- [N3] P. Girard, F.M. Roche, P. Charpenel, P. Nouet et R. Lorival, «Etude des défauts induits lors de la lithographie par faisceau d'électrons», GCIS, Toulouse, 6–7 juin 1991.
- [N4] P. Nouet, P. Lepinay et A. Ferreira<sup>2</sup>, «Simulation de technologie : outils et utilisation pédagogique», 4ème journées pédagogiques du Comité National pour la Formation en Microélectronique (CNFM), Saint-Malo, 2–4 décembre 1996, pp. 38–43.
- [N5] A. Toulouse, P. Nouet et C. Landrault, «Amélioration des extractions électriques dans les outils de CAO : caractérisation et modélisation des capacités d'interconnexions», Coll. CAO de Circuits Intégrés et Systèmes, pp. 260–263, Villard de Lans, France, 15–17 janvier 1997.
- [N6] C. Landrault, R. Lorival, P. Nouet et A. Toulouse, «Caractérisation et modélisation des capacités dues aux interconnexions», Rapport LIRMM 97107, 6 pages, journées nationales du GDR GAPS, Toulouse, 21–22 mai 1997.
- [N7] P. Nouet, «Outils de caractérisation pour les circuits intégrés submicroniques», Journées Nationales du GDR GAPS, Toulouse, France, 28-29 avril 98.
- [N8] L. Kenmei<sup>3</sup>, F. Huret<sup>2</sup>, E. Paleczny<sup>2</sup>, P. Kennis<sup>2</sup>, D. Deschacht et P. Nouet, «Modélisation de la propagation dans les interconnexions», Journées Nationales du GDR GAPS, Toulouse, France, 28–29 avril 1998, Rapport LIRMM 98061.
- [N9] D. Bernard, D. Deschacht, P. Nouet, A. Toulouse et E. Vanier, «Modélisation physique et temporelle des interconnexions dans les circuits VLSI», Journées Nationales du GDR GAPS, Toulouse, France, 28–29 avril 1998, Rapport LIRMM 98060.
- [N10] P. Nouet, D. Bernard, C. Landrault et A. Toulouse, «Interconnects in deep submicron dense layouts: design and performance aspects», SAME'98: Sophia-Antipolis Forum on MicroElectronics, October 29th, 98, Technical Conference Proceedings, pp. 54–56.

1. CSR, Cambridge, UK

2. AIME – INSA, Toulouse.

3. IEMN – Lille.

- [N11] C. Dufaza, G. Cathébras, L. Torres, G. Cambon, P. Nouet, P. Lépinay et JM. Dandonneau, «Centrale d'achat et de maintenance de logiciels du CNFM (CAML)», Rapport LIRMM 98224, 5èmes Journées Pédagogiques du Comité National de Formation en Microélectronique, St Malo, France, 30 novembre – 2 décembre 1998, pp. 125–126.
- [N12] C. Dufaza, G. Cathebras, L. Torres, P. Nouet, P. Amadou, P. Lepinay, J.M. Dandonneau, "Formation à la CAO micro-électronique en France", CETSIS-EEA'99: Colloque sur l'Enseignement des Technologies et des Sciences de l'Information et des Systèmes, Montpellier, France, 4-5 novembre, 1999, pp. 101-104.
- [N13] V. Beroulle, Y. Bertrand, P. Hazard<sup>1</sup>, L. Latorre, P. Nouet, F. Pressecq<sup>2</sup>, I. Salesse<sup>3</sup>, "MEMS monolithiques pour la mesure de champ magnétique", Forum ADEMIS, Séminaire National des Nano et Microtechnologies, MENRT, Paris, France, 17-18 novembre 1999.
- [N14] V. Beroulle, Y. Bertrand, L. Latorre, P. Nouet, "La simulation électrique de capteurs électromécaniques : Utilisation des langages HDL-A et VHDL-AMS", Journée nationale du CNRS (GDR Microsystèmes), MENRT, Paris, France, 19 novembre 1999.
- [N15] V. Beroulle, Y. Bertrand, L. Latorre et P. Nouet, "Conception et Test d'un capteur de champ magnétique micro-électromécanique", JNRDM, Strasbourg, 24-25 Avril 2001
- [N16] V. Beroulle, Y. Bertrand, L. Latorre et P. Nouet, "Conception et test d'une micro-boussole électromécanique intégrée", Actes du 3ème Colloque de CAO de circuits et systèmes intégrés, pp. 97-100, Paris, 15-17 Mai 2002.
- [N17] F. Azaïs, B. Caillard, P. Nouet et P. Salomé<sup>4</sup>, "Caractérisation et modélisation de thyristors parasites en technologie CMOS fortement submicronique", Actes du 3<sup>ème</sup> Colloque de CAO de circuits et systèmes intégrés, pp. 97-100, Paris, 15-17 Mai 2002.
- [N18] B. Caillard, F. Azaïs, P. Nouet, S. Dournelle<sup>4</sup> et P. Salomé<sup>4</sup>, "Characterization and modelization of parasitic LSCRs in deep submicron CMOS technology", Workshop EOS/ESD/EMI, pp. 12-14, 13 novembre 2002, LAAS, Toulouse.
- [N19] A. Chaehoi, N. Dumas, L. Latorre, F. Mailly, P. Nouet, «Accéléromètre thermique sur CMOS», CCT CNES, Toulouse, France, 14-15 juin 2005.
- [N20] V. Puyal, A. Konczykowska<sup>5</sup>, P. Nouet, S. Bernard, M. Riet<sup>5</sup>, F. Jorge<sup>5</sup>, J. Godin<sup>5</sup>, « XOR en technologie TBH InP pour les futures transmissions optiques à 40 Gb/s », 14<sup>èmes</sup> Journées Nationales Microondes, 2 pages, Nantes, 11-12-13 mai 2005.
- [N21] N. Dumas, L. Latorre, F. Mailly et P. Nouet, « Méthodes de test alternatives pour les MEMS », Journées Nationales du GDR MNS, Toulouse, 21-23 novembre, 2007.
- [N22] Leman O., Alandry B., Boujamaa E. M., Dumas N., Mailly F., Azais F., Latorre L., Nouet P., « Conception de MEMS : de l'idée à l'intégration SoC/SiP », GDR SoC/SiP, France, 2008.
- [N23] Boujamaa E. M., Mailly F., Latorre L., Nouet P., « The Active Bridge: an Alternative to the Wheatstone Bridge », Journées Nationales du GDR MNS, Montpellier, 3-5 December, 2008.
- [N24] Alandry B., Dumas N., Mailly F., Latorre L., Nouet P., « 3D orientation determination », Journées Nationales du GDR MNS, Montpellier, 3-5 December, 2008.

1. Schneider Electric, Nanterre

2. CNES, Centre Spatial de Toulouse

3. ATEMI, service commun de l'Université Montpellier II

4. ST Microelectronics, Central R&D, Crolles, France

5. Alcatel-Thales III-V Lab, Marcoussis, France

## 5. Rapports de contrat et brevets

- [I1] P. Charpenel, P. Girard, R. Lorival, P. Nouet et B. Pistoulet, «Etude des conditions de charge d'isolants sous irradiation électronique basse énergie», Rapport final de convention CNET CNS-LAMM, octobre 1990.
- [I2] L. Latorre, Y. Bertrand et P. Nouet, «Evaluation des techniques Microélectroniques contribuant à la réalisation de Microsystèmes : application à la mesure du champ magnétique», Rapport LIRMM 97069, 59 pages, Convention de Recherche CNES-Schneider Electric, 1997.
- [I3] F. Gibert, P. Nouet et M. Renovell, «Effet de la dérive de tension de seuil sur les composants MOS et les systèmes électroniques en technologie CMOS», Rapport LIRMM 97070, 30 pages, Commande du Centre National d'Etudes Spatiales.
- [I4] F. Gibert, R. Lorival, D. Luong, P. Nouet et M. Renovell, «Utilisation de Capteurs de Fiabilité pour le Contrôle de Qualité des Circuits ASIC en Environnement Spatial», Rapport final Convention de Recherche N°844/95/CNES/1919/00 (LIRMM #97234).
- [I5] M. Attali, L. Latorre et P. Nouet, «Etude et Conception d'une électronique à capacités commutées pour le traitement de signal d'un capteur à effet hall», Rapport LIRMM 98171, Commande de la Société Schneider Electric, déc. 1998.
- [I6] F. Azaïs, B. Caillard et P. Nouet, "Caractérisation des structures LSCR, MLSCR et LVTSCR des runs H8L65 et H8T83", Rapport de Contrat n° 1, LIRMM/STM : Utilisation de structures de thyristors pour la réalisation de protection contre les décharges électrostatiques dans les circuits CMOS, Juillet 2001, 71 pages, Confidential.
- [I7] F. Azaïs, B. Caillard et P. Nouet, "SCR and ESD protection : Patent search results", Rapport de Contrat n° 2, LIRMM/STM : Utilisation de structures de thyristors pour la réalisation de protection contre les décharges électrostatiques dans les circuits CMOS, Juillet 2001, 32 pages, Confidential.
- [I8] F. Azaïs, B. Caillard et P. Nouet, "Modélisation Electrique de LSCR en Technologie H9", Rapport de Contrat n° 3, Contrat LIRMM/STM : Utilisation de Structures de Thyristors pour la Réalisation de Protection contre les Décharges Electrostatiques dans les Circuits CMOS, novembre 2002, Confidential.
- [I9] F. Azaïs, B. Caillard, et P. Nouet, "Caractérisation TLP des Structures STMSCR du Run H8T106", Rapport de Contrat n° 4, Contrat LIRMM/STM : Utilisation de Structures de Thyristors pour la Réalisation de Protection contre les Décharges Electrostatiques dans les Circuits CMOS, 2003.
- [I10] B. Caillard, S. Dournelle<sup>1</sup>, P . Salomé<sup>1</sup>, F. Azaïs et P. Nouet, "Dispositif de protection contre des décharges électrostatiques comprenant plusieurs thyristors", Brevet n°FR2838881, publié le 24 octobre 2003.
- [I11] B. Caillard, S. Dournelle<sup>1</sup>, P. Salomé<sup>1</sup>, F. Azaïs et P. Nouet, "Electrostatic discharge protection device comprising several thyristors", United States Patent n°7,113,377 - September 26, 2006. <http://www.freepatentsonline.com/7113377.html>
- [I12] C. Entringer<sup>1</sup>, P Flatresse<sup>1</sup>, P. Salome<sup>1</sup>, P. Nouet and F. Azais, "Thyristor à grille", Brevet n°FR0652837, 06/07/2006.

---

1. ST Microelectronics, Central R&D, Crolles, France

- [I13] F. Azaïs, Marie Lafont et P. Nouet, "Protection des modules multi-puces aux décharges électro-statiques", Rapport Final de Contrat, Contrat de collaboration de recherche LIRMM / ST Microelectronics (UM2 n° : 03/CR/043), Juillet 2007, 153 pages, confidentiel.
- [I14] C. Entringer<sup>1</sup>, P Flatresse<sup>1</sup>, P. Salome<sup>1</sup>, P. Nouet and F. Azais, « Gated thyristor and related system and method », United States Patent n°7,619,863- Publication Date: 11/17/2009.  
<http://www.freepatentsonline.com/7619863.html>
- [I15] E.M. Boujamaa, P. Nouet, F. Mailly et L. Latorre, « Circuit d'amplification d'un signal représentant une variation de résistance d'une résistance variable et capteur correspondant », Demande de Brevet Français n°0854585 du 4 juillet 2008. Demande d'extension internationale (PCT) publiée le 7 janvier 2010.  
<http://www.freepatentsonline.com/WO2010001077.html>

## 6. Divers

- [D1] V. Bonzom, L. Lew Yan Voon, P. Nouet, N. Pascual, S. Paul et J. Trauchessec, «de e– à C++», Séminaire du Département Microélectronique du LAMM, Montpellier, 19 décembre 1990, rapport LIRMM 90108.
- [D2] P. Nouet, P. Charpenel et P. Girard, «An electron beam activated memory point operating under electron beam testing conditions», Rapport LIRMM 91060.
- [D3] P. Nouet, «Caractérisation de courants de fuites», Rapport LIRMM 92036.
- [D4] P. Nouet, «On-Chip Absolute and Accurate Measurement of Interconnect Capacitances in a CMOS Process : Design of the Test Chip LIRMM-ABS01 and dedicated Experimental Procedure», Rapport de recherche à caractère technique destiné à la promotion de la technique de mesure dans l'industrie (diffusé chez Advanced Micro Devices, Sunnyvale, CA, USA), Rapport LIRMM 94029.
- [D5] P. Charpenel et P. Nouet, «Using a Scanning Electron Microscope to determine Total-Dose Radiation sensitivity of CMOS processes», Rapport LIRMM 94059.
- [D6] D. Bernard, C. Landrault, P. Nouet, "Interconnexions et évolutions technologiques dans les CI VLSI", L'Actualité Composants du CNES, n° 10, 4<sup>ème</sup> trimestre 2000, pp. 28-34.
- [D7] L. Latorre, P. Nouet, C.J. Kim<sup>1</sup>, F. Pressecq<sup>2</sup>, "Microrelais MEMS à bille de mercure", L'Actualité Composants du CNES, n° 6, Février 2000, pp. 15-17.
- [D8] Latorre L., Nouet P., Dugénie P., Cerri S. A., "Remote Access to Manufacturing Test Facilities: a reality in IC, a dream in MEMS", MST News, Vol. 6/06, pp. 39-41, 2006

## 7. Séminaires invités

- [S1] "Technologies Microsystèmes Compatibles VLSI", Journées du CCT composant, CNES, Toulouse, France, 31 mars 2000.
- [S2] "Activités Microsystèmes du LIRMM", Journées du CCT composant, CNES, Toulouse, France, 5 septembre 2000.
- [S3] "Introduction aux MEMS", DEUG STPI, Université Montpellier II, 6 décembre 2000.

---

1. Mechanical Engineering Lab, UCLA, USA

2. CNES, Centre Spatial de Toulouse

- [S4] “Introduction aux microsystèmes (MEMS)”, DEUG STPI, 1<sup>ère</sup> année, Université Montpellier II, 28 novembre 2001.
- [S5] “Capteurs intelligents et intégration”, Formation aux nanotechnologies du pôle STIIS, Université Montpellier II, 9 Janvier 2002.
- [S6] “Test des Microsystèmes Monolithiques (MEMS)”, La place des MEMS dans l’enseignement EEA, Bordeaux, France, 14-15 Mars 2002.
- [S7] “Test des Microsystèmes Monolithiques (MEMS)”, 8<sup>ème</sup> atelier « Analyse et mécanismes de défaillance des composants pour l’électronique », Port d’Albret, France, 4-7 Juin 2002.
- [S8] “Introduction aux microsystèmes (MEMS)”, Conférence sur les métiers de l’EEA, DEUG 1<sup>ère</sup> année, Université Montpellier II, 30 Octobre 2002.
- [S9] “Introduction aux microsystèmes (MEMS)”, Conférence sur les métiers de l’EEA, DEUG 1<sup>ère</sup> année, Université Montpellier II, 12 novembre 2003.
- [S10] “Test engineering and Design for Testability of Micro- and Nano- Systems”, First DfMM Summer School, 13/15 September 2004, Tutorial day, ISLI, Livingston, Scotland:  
 - Part I: Reliability, Failures and Test Structures in Micro- and Nano- Systems, 1h30  
 - Part II: Manufacturing test of Micro- and Nano- Systems, 1h30
- [S11] “Electrically-Induced Thermal Stimuli for MEMS Testing”, First DfMM Summer School, 13/15 September 2004, Research day, ISLI, Livingston, Scotland.
- [S12] “Introduction aux microsystèmes (MEMS)”, Conférence sur les métiers de l’EEA, DEUG 1<sup>ère</sup> année, Université Montpellier II, 10 novembre 2004.
- [S13] «Adding Value to Design and Test through Education: What are the Challenges?», LATW-IBERCHIP Joint Panel, 6th IEEE Latin-American Test Workshop, March 30th - April 2nd, 2005, Salvador, Bahia, Brazil.
- [S14] «Interfaces pour microsystèmes magnétiques », Journées nationales de la Section Electronique du club EEA "Interfaces Capteurs : Vers les Micro-Nanosystèmes ", 17 et 18 novembre 2005, ESCPE- LYON.
- [S15] «Challenges in Manufacturing Test of Micro and Nano-Systems », The Innovative Manufacturing Research Conference, Scottish Manufacturing Institute, Edinburgh, June 28th, 2005.
- [S16] «Challenges in Manufacturing Test of Micro and Nano-Systems», Workshop on Design for Reliability and Manufacturability in MNT, Co-organised by the EC-funded Network of Excellence "Design for Micro & Nano Manufacture" (PATENT-DfMM) and the NEXUS Methodology Working Groups "Reliability & Test" and "Design Modelling Simulation", 25 April 2006, Stresa, Lago Maggiore, Italy (in conjunction with DTIP, 26-28 April 2006).
- [S17] « Challenges in Manufacturing Test of MNT-based Systems », 12th IEEE Int. Mixed Signal Testing Workshop, June, 23rd, 2006 – Edinburgh, UK.
- [S18] « Design for Manufacturing of MNT-based Systems : a test case », Journées Nationales du GDR Micro- et Nano-Systèmes, Lille, 12 octobre 2006.
- [S19] «Conception de Microsystèmes Monolithiques Testables et Robustes aux Variations de Process», Ecole d'hiver Francophone sur les Technologies de Conception des systèmes embarqués Hétérogènes, Grand Hôtel de Paris, Villard-de-Lans, France – 10-12 janvier 2007.

- [S20] «Design for Test of MNT-based Systems: Alternative Test Solutions for reduced Test Costs», MEMUNITY (The MEMS Test Community) workshop, Tuesday, March 6<sup>th</sup> 2007, CEA-LETI Grenoble.
- [S21] “The future of Embedded Test within the Design for Micro & Nano manufacture NoE” (in collaboration with Prof A. Richardson<sup>1</sup>, University of Lancaster), Workshop on Design for Reliability and Manufacturability in MNT, 24 April 2007, Stresa, Italy.
- [S22] “Challenges in MEMS Manufacture Testing and embedded test solutions”, NTC (Northern Test Center) Remote and Embedded Testing Seminar, Pohto, Oulu, Finlande, May 29<sup>th</sup>, 2007.
- [S23] “Motionless testing of embedded inertial sensors”, Design, Test & manufacturing Technologies for Integrated Micro&Nano systems Summit, Lancaster, October 1<sup>st</sup>-4<sup>th</sup>, 2007.
- [S24] “Mécanismes non linéaires dans les dispositifs MEMS pour la récupération d'énergie”, Journées Nationales du GDR Micro- et Nano-Systèmes, Besançon, 19 novembre 2009.
- [S25] “Design and Test of Integrated-MEMS & CMOS-MEMS”, Colloque “Frontier of Engineering France – Japon”, Grenoble, 12 et 13 octobre 2010.

## 8. Synthèse

	89/07	2008	2009	2010	2011	
Revues Scientifiques avec Comité de Lecture (§ 1)	29	3	5	3	3	43
Conférences Internationales avec Actes et Comité de Lecture (§ 2)	74	11	11	9	9	114
Colloques sans actes ou à audience restreinte (§ 3 et 4)	56	4	2	0	1	63
Divers (Séminaires invités, brevets, rapports de contrat, § 5, 6 et 7)	44	0	2	1	0	47
Total	203	18	20	13	13	267

1. Centre for Microsystems Research, Lancaster University, Lancashire, UK