

7^{èmes} Journées Nationales sur la Récupération et le Stockage d'Énergie

LYON, MAY, 9th-10th 2017



Conference program

Day 1	
09:00	Registration
09:30	Conference opening (chairs: M. Lallart / S. Basrour) - M.-C. BAIETTO , INSA Vice-President of Research
Session 1 (chairs: C. Jean-Mistral / P. Basset)	
09:45	Invited 1: Yoann HEBRARD , SKF Aerospace <i>The Internet of Things and the future of Condition Monitoring: enabling energy harvesting for intelligent bearing solutions</i>
10:25	Invited 2: Ioannis IEROPOULOS , University of the West of England Bristol <i>Microbial Fuel Cells and their implementation in practical applications</i>
11:05	Break
Session 2 (chairs: B. Allard / H. Debeda)	
11:25	Talk 1: Benjamin POLLET , François COSTA and Ghislain DESPESE <i>Inductor-less DC-DC converter using a piezoelectric transducer</i>
11:45	Talk 2: Cyril DREZET , Najib KACEM and Nouredine BOUHADDI <i>Low frequency electromagnetic vibration energy harvesting using HSLD stiffness design</i>
12:05	Talk 3: Sarah BOUBENIA , Guylaine POULIN-VITTRANT, Abhishek S. DAHIYA, Francois MORINI, Kevin NADAUD, Daniel ALQUIER <i>Density controlled growth of ZnO nanowires for piezoelectric energy harvesting</i>
12:25	Lunch
Session 3 (chairs: F. Mieyeville / E. Lefeuvre)	
14:00	Invited 3: Eric ALLENO , Institut de Chimie et de Matériaux Paris-Est <i>Recent advances in the field of thermoelectric materials</i>
14:40	Invited 4: Jens TWIEFEL , Leibniz Universität Hannover <i>The Self-Resonating Dynamics of a Sliding Mass on a Harmonically Base Excited Beam and its Applicability on Vibration Energy Harvesting</i>
15:20	Talk 4: Nagham EL GHOSSEIN , Ali SARI and Pascal VENET <i>Lithium-Ion Capacitors: a New Promising Technology of Supercapacitors</i>
15:40	Coffee break / poster session / JNRSE Live!
18:00	End of day
Day 2	
Session 4 (chairs: B. Allard / A. Badel)	
09:00	Invited 5: Danilo DE ROSSI , Faculty of Engineering University of Pisa <i>Slowbots for autonomous navigation</i>
09:40	Talk 5: Alexis BRENES , Elie LEFEUVRE, Adrien BADEL and Chan-Sei YOO <i>Optimization of synchronized charge extraction for piezoelectric energy harvesters</i>
10:00	Talk 6: Mohamad AWAD , Philippe BENECH, J-Marc DUCHAMP <i>Design of a voltage multiplier in FD-SOI technology for RF energy harvesting applications</i>
10:20	Break
Session 5 (chairs: M. Lallart / P. Basset)	
10:50	Talk 7: Adrian RENDON-HERNANDEZ and Skandar BASROUR <i>Modeling and operating temperature tuning of a thermally activated piezoelectric generator</i>
11:10	Talk 8: Yingxian LU , Frédéric MARTY, Dimitri GALAYKO, Jean-Marc LAHEURTE and Philippe BASSET <i>A VEH-Assisted Long-Range RFID Tag System for Applications With Low-Frequency Vibrations</i>
11:30	Talk 9: Boris LOSSOUARN , Gaetan KERSCHEN and Jean-François DEÛ <i>Perspectives on energy harvesting through analogous piezoelectric networks</i>
11:50	Talk 10: Gregorio BOCCALERO , Corrado BORAGNO, Stefano OLIVIERI and Andrea MAZZINO <i>Energy Harvesting from fluids in motion by means of DEGs and EMc in a coupled-mode flutter system</i>
12:10	Lunch
Session 6 (chairs: C. Jean-Mistral / S. Basrour)	
14:00	Invited 6: Henry A. SODANO , University of Michigan <i>Piezoelectric Nanowires: A Novel Technology for High Strength Composites, Sensors and Energy Systems</i>
14:40	Invited 7: Adrien BADEL , SYMME, Université de Savoie-Mont-Blanc <i>Toward wideband vibration energy harvesters</i>
15:20	Best presentation and best poster awards
15:40	Conference closing
16:00	End of conference

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Posters

Poster ID

146045	Bogdan VYSOTSKIY, Denis AUBRY, Philippe GAUCHER, Elie LEFEUVRE and Fabien PARRAIN <i>Modeling of an Electrostatic Bistable Energy Harvester with Compensational Springs in Gravity Field for Biomedical Applications</i>
146558	Thomas HUGUET, Adrien BADEL and Mickaël LALLART <i>Exploiting bistable subharmonic orbits for a wider vibration energy harvesting bandwidth</i>
147456	D. DIAB, F. LEFEBVRE, G. NASSAR, N. SMAGIN, F. EL OMAR, A. NAJA <i>Experimental Study on Energy Harvesting from an Autonomous Miniaturized Acoustic Transducer of Spherical Form</i>
147786	Mamadou COULIBALY, Raphaël RENOUD, Caroline BORDERON and Hartmut W. GUNDEL <i>Effect of a titanium seed layer on the structural and energy storage properties of PbZrO₃ antiferroelectric films</i>
148059	Kritsadi THETPRAPHI, Jean-Fabien CAPSAL and Mickaël LALLART <i>Electrothermal Effect and Coupling in Electroactive Polymers</i>
148092	E. VANDELLE, D.H.N. BUI, T.P. VUONG, G. ARDILA, K. WU, S. HEMOUR <i>Passive Beam Forming Antennas for Ambient RF Energy Harvesting</i>
148135	A. CAPITAINE, G. PILLONNET, A. MOREL, O. ONDEL and B. ALLARD <i>Analyse des pertes du flyback pour la récupération d'énergie à partir de piles microbiennes sédimentaires</i>
148149	Do Hanh Ngan BUI, Tan Phu VUONG, Jacques VERDIER, Bruno ALLARD and Philippe BENECH <i>Design and integration of flexible antenna in RF energy harvesting circuit</i>
148476	Linjuan YAN, Yu-Chieh HSIEH, Mickaël LALLART and Wen-Jong WU <i>A Hybrid Switching Method for High Power Output, Load-Tolerant Piezoelectric Microgenerator</i>
149295	Adrien MOREL, Gaël PILLONNET, Armande CAPITAINE, Yohan WANDEROILD and Adrien BADEL <i>Inductorless impedance matching strategy using multiple capacitance configurations</i>
150361	Valentin ISSINDOU, Bernard VIALA, Leticia GIMENO, Orphee CUGAT, Cyril RADO and Sophie BOUAT <i>Fabrication methods for high-performance miniature disks of Terfenol-D for energy harvesting</i>
150363	Isabel RUA-TABORDA, Egon FERNANDES, Armaghan SALEHIAN and Hélène DEBEDA <i>Densification of printed PZT thick films on SS substrates used for vibration energy harvesting</i>
150372	François BERNARD, Leticia GIMENO, Bernard VIALA and Orphée CUGAT <i>The Effect Of Temperature And Strain On Power Conversion Efficiency Of PVDF-Based Thermal Energy Harvesters</i>
150409	Giulia BASSANI, Claire JEAN-MISTRAL and Emanuele RUFFALDI <i>Development of an auxetic frame for scavenging human kinetic energy</i>
150419	Marc-André HACHEY, Fabien FORMOSA and Luc FRÉCHETTE <i>Developing a polymeric piston-membrane for a microscale Free Piston Stirling Engine</i>
150459	Linda SERAIRI, Yamina Ghozlane HABBA, Martine CAPOCHICHI-GNAMBODOE, Yingxian LU, Philippe BASSET and Yamin LEPRINCE-WANG <i>ZnO nanowires for piezoelectric nanogenerators</i>
150469	Achraf KACHROUDI, Clara LAGOMARSINI, Skandar BASROUR, Claire JEAN-MISTRAL and Alain SYLVESTRE <i>Towards an autonomous electrostatic generator for micropower vibration energy harvesting under inertial load</i>
150522	Matthias GEISLER, Sebastien BOISSEAU and Pierre GASNIER <i>Mechanical energy harvesting for smart wearables</i>
151402	Florian HUET, Émile ROUX and Aurélien CARRÉ <i>Small nomadic counter-rotating wind turbine : Design and experimentation</i>
151554	Vincent BOITIER, Jean Marie DILHAC, Marise BAFLEUR, Paul DURAND ESTEBE <i>Thermogeneration harvesting in an aeronautical application, from specification to realization</i>