

JNRSE – « National Days on Energy Harvesting and Storage »

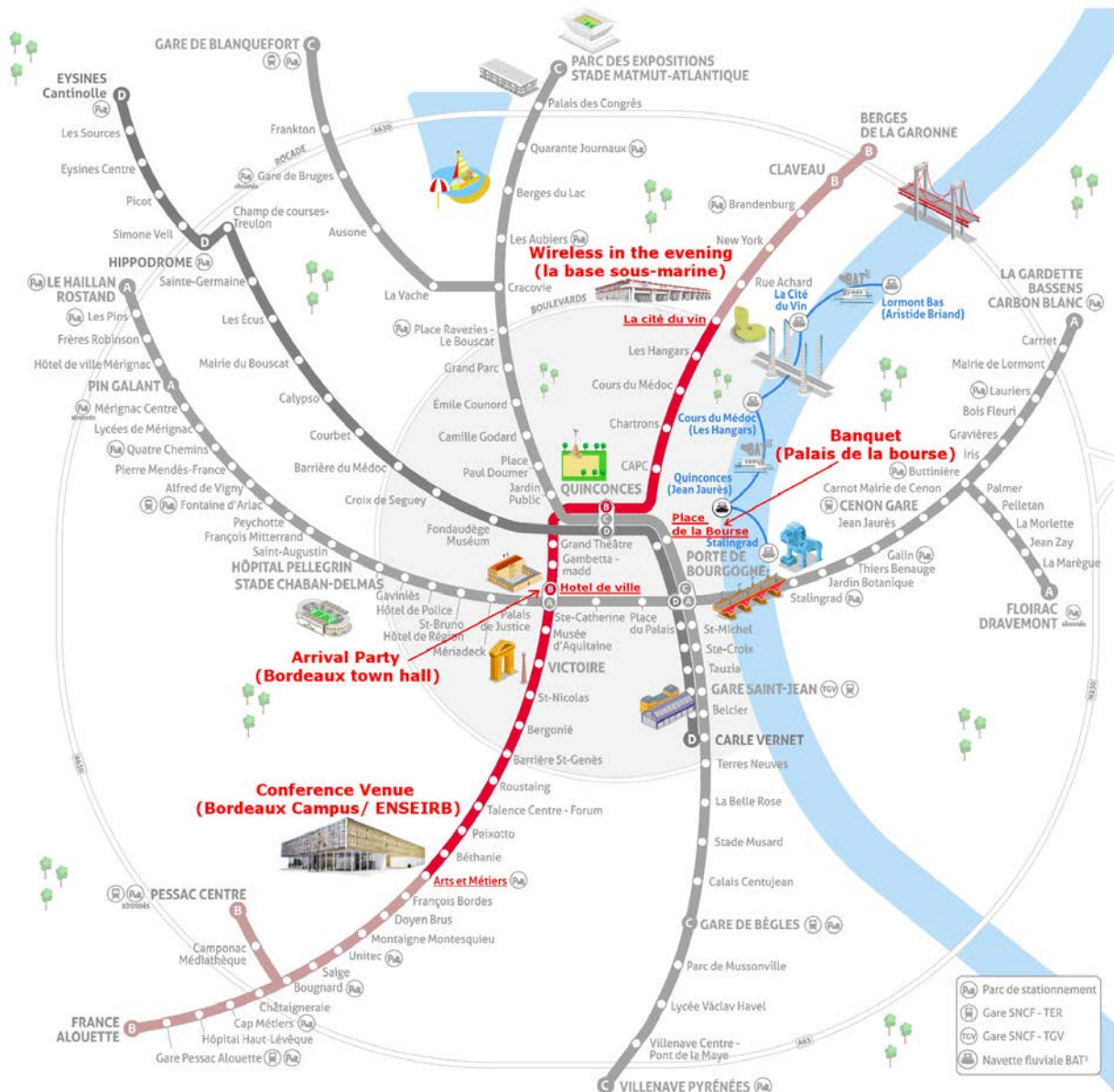
Bordeaux INP Avenue des facultés 33405 TALENCE FRANCE

Day program Thursday 07 July 2022

Common day with Wireless Power Week Conference (<https://www.wpw2022.org/>)

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| 8h-8h25 Registration JNRSE |
| 8h30-9h15: Plenary John Rogers : Wireless, battery-free systems for neuroscience research (Grand Amphi) |
| <p>9h20-10h50: Session 5: Kinetics (Amphithéâtre D) <i>Invited speaker Steve Beeby (University of Southampton), Wireless power transfer for electronic textile systems</i></p> <p>Aurélien Carré (SYMME, Annecy): <i>Innovative blade shape for microwind turbines</i></p> <p>Adrien Morel (SYMME, Annecy): <i>Exploring the power limit of multi-modes multi-electrodes vibrations energy harvesters</i></p> <p>David Gibus (SYMME, Annecy): <i>Design of a vibration energy harvester with two close resonant frequencies</i></p> <p>Aya Benhemou (SYMME, Annecy): <i>Design approach for post-buckled beams in bistable piezoelectric energy harvester</i></p> |
| 10h50-11h05 Coffee break |
| <p>11h05-12h35: Session 6: Wireless Power (Amphithéâtre D)</p> <p>Nastouh Nikkiah (University of Technology Sydney): <i>Efficient dual-band single port rectifier for RF energy harvesting at FM and GSM bands</i></p> <p>Adrien Ameye (CEA Grenoble): <i>Increasing the robustness of electrodynamic wireless power receivers with hybrid transduction</i></p> <p>Jiafeng Zhou (University of Liverpool): <i>An aperture-shared MTS-shaped antenna with beamwidth improvement</i></p> <p>Xuan Viet Linh (AMPERE, Lyon): <i>3D plasmonics radio frequency energy harvester on stereolithography parts</i></p> <p>Mahmoud Wagih (University of Southampton): <i>Battery-free wireless node powered using high efficiency harvesting of 900 MHz GFSK-modulated packets with compact rectenna</i></p> <p>Giovanni Collodi (Università degli Studi di Firenze): <i>Integrated harvester solution based on a circularly polarized antenna operating at 5.8GHz</i></p> |
| 12h35-14h00: Lunch |
| <p>14h00-15h30: Session 7: Antenna, array design, rectifier circuits and rectennas (Amphithéâtre D)</p> <p>Shohei Ohtan (University of Hyogo): <i>High efficiency of rectifier circuit for wicopt utilizing doubly asymmetrical branch line coupler</i></p> <p>Hooman Kazemi (Raytheon Company): <i>Multi-technology 4-channel GAN rectenna MMIC circuit for RF radiative wireless power beaming</i></p> <p><i>Katsumi Kawai (University Kyoto):</i> <i>Development of rectenna for estimating received power level using second harmonic wave</i></p> <p>Si-Ping Gao (National University of Singapore): <i>Millimeter-wave rectifiers using proprietary Schottky diodes: diode modeling and rectifier analysis</i></p> <p>Yuki Tanaka (Panasonic Corporation): <i>Phase synchronous distributed microwave power transmission system using distributed PLL</i></p> <p>Ricardo A. M. Pereira (University Aveiro): <i>Quasioptical dielectric lens system for WPT solutions</i></p> |
| 15h30-17h00: Poster session WPW and coffee break |

18h30-Late: Conference banquet Palais de la Bourse (optional)



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Day Program Friday 08 July 2022 (amphithéâtre G)

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| 8h-8h25 Registration JNRSE |
| 8:30-9:30: Panel Session – Startups in Wireless Power: Challenges and Opportunities |
| 9:30-10:15 Plenary 3: Johan Kolar “Mission unlimited”- wireless charging of permanently deployed autonomous hydrones |
| 10h15-10h30: JNRSE Introduction , H. Debéda, S. Basrour |
| 10h30-11H00: <i>Invited speaker: Noëlle Gogneau (C2N Paris-Saclay) - Electromechanical transducers based on GaN nanowires: Influence of the nanometer scale on the properties</i> |
| 11h00-11h20: Aiman Jroni (IEMN, Lille) - <i>Sputtered vanadium nitride films as efficient pseudocapacitive electrodes with high cycling stability</i> |
| 11h20-11H50: <i>Invited speaker Didier Lasseux (I2M Bordeaux) - Current production in porous microelectrodes: modelling towards an optimal material design</i> |
| 11h50-12h10: Gallien Delattre (CEA Grenoble) - <i>Wideband opportunities of resonant electromagnetic vibration energy harvesters thanks to electrical tuning</i> |
| 12h15-13h45 : Lunch |
| 13h45-14h15: <i>Invited speaker Benoit Guiffard (IETR Nantes) - Flexoelectric energy conversion in soft polymer Films</i> |
| 14h15-14h35: Maxim Germer (IHM, Technical University of Dresden , Allemagne) - <i>Efficient Impulse-Driven Electromagnetic Energy Harvesting for Tire Pressure Monitoring Systems</i> |
| 14h35- 15h50 Poster session WPW (see p. 4)/ Coffee |
| 15h50-16h20: <i>Invited speaker Lionel Hirsch (IMS Bordeaux) - The boost of organic solar cells with Non-Fullerene Acceptors</i> |
| 16h20-16h40 : Quentin Demouron (SYMME Annecy) - <i>Load resistance impact on the electromechanical dynamic of bistable piezoelectric energy harvesters</i> |
| 16h40-16h50: Closing remarks |

Poster session JNRSE next page

| SPEAKER | POSTER TITLE |
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| Decroix Nicolas/ CEA Grenoble | P1. A Low-Power Microcontroller-Based Power Management Circuit with a two-measurements MPPT |
| Timotéo Payre/CEDRAT Technologies, Meylan | P2. A wideband piezoelectric vibration energy harvester |
| Ambia Campos Jose Francisco/C2N, Orsay | P3. An Information Theory Approach to Vibration Energy Harvesting |
| Aouali Kaouthar xxx/ FEMTO ST, Besançon | P4. Benefits of the collective dynamics for efficient broadband energy harvesting |
| Givois Arthur/ IEMN, Lille | P5. Design of a piezoelectric transducer for strain energy harvesting in automotive application |
| Sodhi Tanbir Kaur/ C2N, Orsay | P6. Electrical characterization of PA-MBE grown GaN nanowires via conductive probe AFM - Effect of load and generator resistances |
| Haim Simon Emmanuel/ G2Elab Grenoble | P7. External polarization source for dielectric elastomer generators : triboelectric generator |
| Rodriguez Alex/ IMB Barcelone | P8. Heat sink implementation on micro-thermoelectric generators (μ TEGs) for power enhancement |
| Kamal Lmimouni /IEMN Lille | P9. High Rectification Ratio in Organic Diode Rectifier. Application in Flexible Energy Harvesting Rectenna |
| Casisa Anthony/ ROBERVAL Compiègne | P10. Investigations sur la modélisation d'un récupérateur à empilement piézoélectrique amplifié |
| Tacyniak Pierre/ TIMA Grenoble | P11. Numerical simulations of acoustic power transfer |
| Dumons Emmanuel/ GREMAN Tours | P12. Stress cycle on a ZnO nanowire-based nanogenerator: a phenomenological study |
| Pung Héléne/ SyMMES Grenoble | P13. Thermotropic Ionic Liquid Crystals: Tunable-by-design Soft Matter-based Electrolytes for Energy |
| Moien Rahmani/ ESYCOM Paris | P14. Transducer Interfacing Circuits for Electrostatic Near-Limits Kinetic Energy Harvesting |