

Gisement solaire

Variabilité à La Réunion et en zones tropicale et intertropicale
Météorologie et Modélisation

OPÉRATION SCIENTIFIQUE 1

OS1

PUBLICATIONS SIGNIFICATIVES



« *Development of solar radiation database and website over La Reunion : RCI_GS* », M. Bessafi, P. Jeanty, J.-D. Lan Sun Luk, J.-P. Chabriat, A. Heintz; présentation orale à la conférence RESUS 2015, The International Conference on Renewable Energy and Sustainability, 03 - 05 Mars 2015, Rose Hill, Maurice

« *Technical design and characterization of a ground based solar metrology network on Reunion Island* », A. Heintz, J.-D. Cazal, C. Brouat, Y. Hoarau, P. Jeanty, M. Bessafi, J.-D. Lan-Sun-Luk, J.-P. Chabriat; poster présenté à la conférence SASEC2015, Third Southern African Solar Energy Conference, 11 - 13 mai 2015, Parc National du Kruger, Afrique du Sud

« *Radiation Budget in the Regional Climate Model RegCM4: Simulation Results from Two Different Radiative Schemes over the South West Indian Ocean* », P. Li, B. Morel, F. Solmon, M. Chiacchio, M. Bessafi; Clim. Res., in revision, 2016.

Stockage et conversion de l'énergie

Systèmes Pile à combustible et hybridation

OS²
OPÉRATION SCIENTIFIQUE 2

PUBLICATIONS SIGNIFICATIVES



« *Polymer electrolyte membrane fuel cell fault diagnosis based on empirical mode decomposition* », C. Damour, M. Benne, B. Grondin-Perez, M. Bessafi, D. Hissel, JP. Chabriat, Journal of Power Sources, Volume 299, 20 December 2015, Pages 596–603

« *Fault Tolerant Control Strategy applied to PEMFC water management* », C. Lebreton, M. Benne, C. Damour, N. Steiner, B. Grondin-Perez, D. Hissel, J.P. Chabriat, International Journal of Hydrogen Energy, Vol 40, Issue 33, 7 septembre 2015, 10636-10646

« *Modeling of a Cell-Free Synthetic System for Biohydrogen Production* », Fontaine N, Grondin-Perez B, Cadet F, Offmann B (2015), J Comput Sci Syst Biol 8:132-139. doi: 10.4172/jcsb.1000181

« *A novel non-linear model-based control strategy to improve PEMFC water management – The flatness-based approach* », C. Damour, M. Benne, B. Grondin-Perez, JP. Chabriat, B G. Pollet, International Journal of Hydrogen Energy, In Press, Corrected Proof, Available online 9 January 2015

« *Online PEM fuel cell water management strategy using model based diagnosis and real-time régulation* », C. Lebreton, C. Damour, M. Benne, B. Grondin-Perez, J.P.Chabriat, FDFC 2015

« *Stockage et conversion de l'énergie : Contrôle tolérant aux fautes appliqué à une PEMFC - Conception et optimisation d'une pile à combustible réversible (Q-URFC)* », B. Grondin-Perez, M. Benne, J.J. Kadjo, J. Deseure, J.P. Chabriat, GDR HySPàC, Octobre 2015

Optimisation énergétique de réseaux de capteurs

Wireless Sensor Network

OS³
OPÉRATION SCIENTIFIQUE 3



PUBLICATIONS SIGNIFICATIVES

J. Rivière, A. Douyère, F. Alicalapa and J.-D. Lan Sun Luk, «DC-Pass Filter Conception for CPW Rectenna Design», IEEE Conference Radio and Antenna Days of the Indian Ocean (RADIO), Mauritius, septembre 2015.

«Performances Analysis and Optimization Of Micro Power Ring Oscillator For Energy Scavenging applications Using the Contour Graph Method», Rahma Aloulou, Hassene Mnif, Mourad Loulou, Frederic Alicalapa and J. D. Lan Sun Luk, International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design, 07 - 09 September 2015 / Turkey, Istanbul.

A Power Management System for Energy Harvesting and Wireless Sensor Networks Application Based on a Novel Charge Pump Circuit, International Journal of Electronics, R. Aloulou, P-O Lucas De Peslouan, H. Mnif, F. Alicalapa, Lan Sun Luk & M. Loulou (2015). DOI: 10.1080/00207217.2015.1072848

«Contour Graph Approach Of Micropower Clock Generator Design For Energy Harvesting Charge Pump Circuits», Rahma Aloulou, J. Armand, P-O. lucas de Peslouan, Frédéric Alicalapa, Hassene Mnif, Lan Sun Luk Jean Daniel, Mourad Loulou Journal of Microelectronics, Electronic Components and Materials, ISSN 0352-9045 (printed edition, Vol. 45, No. 1 (2015), 87 – 97.

« A single-hop clustering and energy efficient protocol for wireless sensor networks », Somasekhar Kandukuri, Nour Murad and Richard Lorion, IEEE Radio 2015.

« Implementation of a Wake-up Radio Cross-Layer Protocol in OMNeT++ / MiXiM », Jean Lebreton and Nour Murad, OMNeT++ Community Summit 2015, Successor of the International Workshop on OMNeT++, IBM Research - Zurich, Switzerland – September 3-4, 2015.

« Real-time radio signal mapping using an autonomous robot », Jean Mickael Lebreton, Nour Murad and Richard Lorion, IEEE Radio 2015, Septembre 2015.