

ACKNOWLEDGEMENTS

This work has been supported by the French National Research Agency through the "Habitat intelligent et solaire photovoltaïque" program (projects HYGROBAT ANR-10-HABISOL-002 and FIABILITE ANR-10-HABISOL-005)

REFERENCES

- Barbosa, R. M., et N. Mendes. 2008. Combined simulation of central HVAC systems with a whole-building hygrothermal model. *Energy and Buildings* 40, no. 3: 276-288
- Campolongo, F., Saltelli, A., Sorensen, T., & Tarantola, S. (2000). Hitchhiker's guide to sensitivity analysis. Sensitivity analysis, 15-47.
- Crawley D.B. Lawrie L.K., Winkelmann F.C., Buhl W.F., Huang Y.J., Pedersen C.O., Strand R.K., Liesen R.J., Fisher D.E., Witte M.J., Glazer J. (2001) EnergyPlus: creating a new-generation building energy simulation program. *Energy and Building*. Vol 33: 319-331.
- Fang L, Clausen G, Fanger PO. The impact of temperature and humidity on perception of indoor air quality, *Indoor Air* (8) 1998, 80–90
- Heo Y., Chodhary R. et Augenbroe G. A. Calibration of building energymodels for retrofit analysis under uncertainty [Revue]. - [s.l.] : Energy and Buildings , 2012. - Vol. Vol. 47 550-560.
- Künzel H. M. (1995) Simultaneous Heat and Moisture Transport in Building Components. One- and two-dimensional calculation using simple parameters. IRB Verlag .
- Labat, M., Woloszyn, M., Garnier, G., & Roux, J. J. (2012). Assessment of the air change rate of airtight buildings under natural conditions using the tracer gas technique. Comparison with numerical modelling. *Building and Environment*.
- Labat M., M. Woloszyn, G. Garnier, G. Rusaouen, J.-J. Roux. (2012b). Impact of direct solar irradiance on heat transfers behind an open-jointed ventilated cladding: experimental and numerical investigations. *Solar Energy*. Vol 86/9, 2549-2560
- Lu Y., Huang Z. et Zhang T. (2012). Method and Case study of quantitative uncertainty analysis in building energy consumption inventories. *Energy and Buildings*.
- Macdonald I. Strachan P. (2001). Practical application of uncertainty analysis. *Energy and Building*. Vol. 33: 219-227.
- Mendes, N., Winkelmann, F. C., Lamberts, R., & Philippi, P. C. (2003). Moisture effects on conduction loads. *Energy and Buildings*, 35(7), 631-644.
- Mara A. (2009). Extension of the RBD-FAST method to the computation of global sensitivity indices. *Reliability engineering and system safety*, Vol. 94: 1274-1281
- Mitchell, J.W., Beckman, W.A. (1995). Instructions for IBPSA Manuscripts, SEL, University of Wisconsin, Madison USA.
- Garcia Sanchez D., B. Lacarrière, M. Musy, B. Bourges, (2012). Application of sensitivity analysis in building energy simulations: Combining first- and second-order elementary effects methods, *Energy and Buildings*.
- Piot, A. (2009). Hygrothermique du bâtiment: expérimentation sur une maison à ossature bois en conditions climatiques naturelles et modélisation numérique (Doctoral dissertation, INSA de Lyon).
- Piot A., M. Woloszyn, J. Brau, C. Abelé. 2011. Experimental wooden frame house for the validation of whole building heat and moisture transfer numerical model. *Energy and Buildings*, 43, 6, 1322-1328.
- Rabouille, M. Perrotin, P., Wurtz, E., (2013) Analysis of dynamic thermal simulation for refurbishment. In: 13th international IBPSA conference BS2013, Chambéry, France, accepted paper.
- Rahni N., N. Ramdani, Y. Candau, P. Dalicieux (1997). Application of group screening to dynamic building energy simulation models *Computation and Simulation*. 285-304 : Vol. 57
- Saltelli A. Tarantola F., Campolongo F., Ratto M. (2004) Sensitivity analysis in practice : a guide to assessing scientific models. John Wiley & Sons, Ltd,
- Saltelli, A., Ratto, M., Andres, T., Campolongo, F., Cariboni, J., Gatelli, D., & Tarantola, S. (2008). *Global sensitivity analysis: the primer*. Wiley-Interscience.
- Shen H., Tzempelikos A. (2012) Sensitivity analysis on daylighting and energy performance of perimeter offices with automated shading. *Building and Environment*, 2012.
- Spitz, C., Mora, L., Wurtz, E., & Jay, A. (2012). Practical application of uncertainty analysis and sensitivity analysis on an experimental house. *Energy and Buildings*.
- Wetter, M. (2001). GenOpt®, Generic Optimization Program. In Seventh international IBPSA conference (pp. 601-608).
- Woloszyn, M, C. Rode. (2008). Tools for performance simulation of heat, air and moisture conditions of whole buildings. *Building Simulation*. 1: 5-2