

Ahmad Hasan

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Professional Experience

Sep. 2010 to Present

Assistant Professor, Buildings Mechanical and Energy Systems
Department of Architectural Engineering, UAE University, Al Ain, UAE

May 2010 to Sep. 2010

Postdoctoral Research Fellow, "Thermal Conductivity Enhancement of Phase Change Materials using Metallic Powders" Dublin Institute of Technology.

Educational Background

PhD

Nov. 2006 - April 2010

Thesis Title:	Solid-Liquid Phase Change Materials for Thermal Management of Photovoltaics.
Institution:	Dublin Institute of Technology, Dublin, Ireland
Supervisors:	Prof. Brian Norton, Dr. Sarah James McCormack & Dr. Ming Jun Huang
Publication:	The list is attached at the end

M.Sc. in Energy Systems Engineering (2004-2006)

Institution:	Aachen University of Applied Sciences, Aachen Germany.
Thesis	Development and validation of computational model under Matlab/Simulink to investigate operating parameters of an air source heat pump.

B.Sc. in Mechanical Engineering (1999-2003)

Institution:	University of Engineering & Technology Lahore, Pakistan
Project:	Efficiency enhancement measures for a Combined Cycle Power Plant

Lecturing Experience

- Part time assistant lecturer for three years in *Building service Engineering* subject for undergraduate students in the School of Built Environment, Dublin Institute of Technology from January 2007 to April 2010.
- Part time assistant lecturer for two years in *AutoCAD for Building Service Engineers* for undergraduate students in the School of Electrical Service Engineering, Dublin Institute of Technology, from January 2008 to April 2010.
- Part time assistant lecturer for three years in *Fundamental Physics Lab* for undergraduate students in the School of Physics, Dublin Institute of Technology from November 2006- December 2009.

Completed Research Projects

- 1- Utilizing Building Integrated Photovoltaic (BIPV) in Housing Design:Towards Achieving Environmental.
- 2- Increased Performance of Building Integrated Photovoltaics Exposed to High Temperature Environment Through Cooling by Phase Change Materials.
- 3- Thermal Properties of Technology-rich Learning Environments.
- 4- Double Skin Façades with Integrated Vertically Greenhouse for Low Energy Building Performance; with Reference to Abu Dhabi

Current Research Projects

- 1- Novel Building Façade Integrated with Phase Change Materials to Reduce Cooling load of Buildings For UAE Climate
- 2- Carbon Nanotube impregnated Phase change Materials for cooling of IC packages

List of Publications, Proceedings and Presentations

Peer Reviewed Journals

- 1- Hasan, A., McCormack, S. J., Huang, M. J., Norton, B., 2009. Evaluation of Phase Change Materials for Thermal Regulation Enhancement of Building Integrated Photovoltaics. Solar Energy Volume 84, Issue 9, September 2010, Pages 1601-1612.
- 2- Hasan, A., McCormack, S. J., Huang, M. J., Norton, B. Energy and Cost Saving of a Photovoltaic-Phase Change Materials (PV-PCM) System through Temperature Regulation and Performance Enhancement of Photovoltaics. MDPI- Energies 2014, 7(3), 1318-1331.
- 3- A., McCormack, S. J., Huang, M. J., Norton, B. Characterization of phase change materials for thermal control of photovoltaics using Differential Scanning Calorimetry and Temperature History Method. Elsevier-Energy Conversion and Management 2014. Pages-322-329.
- 4- M. A. Haggag, S. K. Elmasry, and A. Hassan. Design with Nature: Experimental study on reduced heat gain through green façades in a high heat load climate. Energy and Buildings. Elsevier-Energy and Buildings Volume 82, October 2014, Pages 668–674
- 5- S.K Elmasry, M.A Haggag,. A Hassan. Study of Thermal Performance of Contemporary Technology-Rich Educational Spaces. Submitted to Journal of Systemics, Cybernetics and Informatics JSCI. pages 36-40

Conference Proceedings

- 1- Hasan, A., McCormack, S. J., Huang, M. J., Norton, B., 2007. Experimental design for integrating phase change materials into building integrated photovoltaics for thermal control. Proceedings of the 3rd Photovoltaic Science, Applications and Technology Conference (PVSAT-3), March 28th – 30th, Durham, UK,
- 2- Hasan, A., Schnitzler, E., McCormack, S. J., Huang, M. J., Norton, B., 2007. Phase change materials for thermal control of building integrated photovoltaics: Experimental design and findings. Proceedings of the 22nd European Photovoltaic Solar Energy Conference and Exhibition, Sept 2007, Milan, Italy.
- 3- Hasan, A., McCormack, S. J., Huang, M. J., Norton, B., 2008. Phase change materials for thermal control of building integrated photovoltaics: characterization and experimental evaluation. Proceedings of the 4th Photovoltaic Science, Applications and Technology Conference (PVSAT-4), April 2nd – 4th , Bath, UK,

- 4- Hasan, A., McCormack, S. J., Huang, M. J., Norton, B., 2007. Analysis of different phase change materials to regulate temperature in building integrated photovoltaics. Proceedings of the 5th Photovoltaic Science, Applications and Technology Conference (PVSAT-5), April 1st – 4th, Wrexham, UK .
- 5- Haggag, M., A. Hassan, and S. Elmasry"Design with Nature: Integrating green façades into sustainable buildings with reference to Abu Dhabi". Proceeding of the 6th International Conference on Relating Design in Nature with Science and Engineering, 11-13 June 2012, La Coruna, Spain.
- 6- Elmasry, S., M. Haggag, and A. Hassan, "A Study of Thermal Performance of Contemporary Technology-Rich Educational Space“, Proceeding of the 5th International Multi-Conference on Engineering and Technological Innovation: IMETI 2012, 17-20 July 2012, Orlando, Florida, USA.

Conference Presentations

- 1- Institute of Physics in Ireland, (IOP), Spring Weekend Meeting, 30th March-1st April, 2007, Ireland.
- 2- Institute of Physics Spring Weekend Meeting, Carrickmacross, Co. Monaghan, Ireland, 7-9, March 2008.
- 3- Dublin Energy Lab, PhD Colloquium, Dublin Institute of Technology, Dublin, 18 October 2008, Ireland
- 4- COST Action TU0802 Meeting of the Management Committee & Working Groups of “Next generation cost effective phase change materials for increased energy efficiency in renewable energy systems in buildings (NeCoE-PCM)”. 9th & 10th July 2009, Dublin Institute of Technology, Dublin Ireland.