

MICHIGAN STATE UNIVERSITY

HOUSING EDUCATION AND RESEARCH CENTER (HERC)
School of Planning, Design and Construction
MICHIGAN STATE UNIVERSITY
101 Human Ecology Building
East Lansing, MI 48824

<http://www.spdc.msu.edu/RealWorldApplicationsofKnowledge/OutreachEngagementExtensionPrograms/HousingEducationResearchCenter.aspx>

Mr. Paul Streng, Executive Director
Dr. Matt Syal, Research Director

Annual Report - 2010

ORGANIZATION

The Housing Education and Research Center (HERC) is a part of the Construction Management group in the School of Planning, Design and Construction. The center was established in 1995 and became a member of the National Consortium of Housing Research Centers in January 1996.

The School of Planning, Design and Construction was established at Michigan State University on July 1, 2004. It consists of majors in Construction Management, Interior Design, Landscape Architecture, and Urban & Regional Planning. The school began offering a new Ph.D. degree program in Construction Management from July 2005. Both, the school and the Ph.D. program have "Housing" as one of the key focus areas.



School of
Planning, Design &
Construction

Construction
Management
Interior Design
Landscape Architecture
Urban & Regional Planning

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I. Funded Research and Outreach Projects

Sustainability and Energy Efficiency

a. Build America Project - Deep Energy Retrofit in Existing Housing, U.S. Dept. of Energy / National Renewable Energy Lab., 2010-2014

Project Team consists of DOW, Michigan State University (MSU), Ferris State University and Habitat for Humanity. MSU PI's: T. Mrozowski and M. Syal

b. Building Energy Codes Adoption and Compliance. MI BES project lead with MSU and BCAP and subcontractors. Funding from US. DOE. (Current-contract pending) - T. Mrozowski

c. Michigan Energy Code Training and Implementation Project, Funded by Bureau of Energy Systems, State of Michigan (Current) - T. Mrozowski

d. Michigan Energy Code Training and Implementation Project, funded by Midwest Energy Efficiency Alliance, the Dow Company and Guardian Industries, (Current) - T. Mrozowski

e. Impact of LEED® projects on Electrical Contractors, 2008-10, ELECTRI International (NECA Research Foundation) - M. Syal

f. Smart Grid and Renewable Energy, 2010-11, ELECTRI International (NECA Research Foundation) - M. Syal

International

a. Green Building Guidelines in the U.S. and India, 2007-10, GATI Initiative - MSU and U.S. Dept. of Education - M. Syal

b. Application of Leadership in Energy and Environmental Design (LEED®) standards to the Commune Di Arco School in Northern Italy, funded by Commune Di Arco. (Current) - T. Mrozowski

c. Executive Training Program for professionals from Korean National Housing Corporation (KNHC) and Korean Land Corporation (KLC), 2010 - M. Syal and T. Mrozowski

II. Publications: Papers and Reports

- Singh, A, Berghorn, G., Joshi, S., and Syal, M. (June 2010). "Review of Life-Cycle Assessment Applications in Building Construction," Published online in June 2010, expected to appear in the March 2011 issue, Journal of Architectural Engineering, ASCE, vol. 17(1)
- Kumar, G., Syal, M. and Strauss, E. (2010) "Environmental Laws in the United States and India related to the Built Environment," American Professional Constructor, Journal of the American Institute of Constructors (AIC), 33(4), 27-36.
- Singh, A., Syal, M., Grady, S. and Korkmaz, S. (2010). "Impact of Green Work Environments on Occupant Health and Productivity," American Journal of Public Health, vol. 100(9), 1665-1668.
- Ali, S., Hammad, A., Hastak, M., and Syal, M. (2010). "Analysis of a Modular Housing Production System Using Simulation," Jordan Journal of Mechanical and Industrial Engineering, vol. 4(2), 256-269.
- Korkmaz, S., Messner, J. I., Riley, D. R., and Magent, C. (2010). "High Performance Green Building Design Process Visualization and Integration". ASCE Architectural Engineering. Scheduled for publication in March 2010.

III. Student Builders and Contractors Association (SBCA)

SBCA is affiliated with NAHB and AGC with membership open to students from CM and affiliated majors. Some of the annual projects SBCA undertakes each year are - the Construction Management Career Fair (with over 23 employers attending), Habitat for Humanity, Safety Day, and sponsoring a team in the NAHB residential competition, etc. The MSU students secured 1st place in 2004 NAHB competition. In addition, four NAHB/ Greater Lansing HBA scholarships, totaling \$7,500, were awarded to MSU CM students in 2010. Mr. Paul Streng is serving as the faculty advisor and Mr. Ken Gotchalk is serving as the competition team coach for 2010-11.