

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 - 2011

ORGANIZATION

The Housing Education and Research Center (HERC) is a part of the Construction Management program 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

1. Build America Project - Deep Energy Retrofit in Existing Housing, U.S. Dept. of Energy / National Renewable Energy Laboratory, 2010-2012, Project Team consists of DOW, Michigan State University (MSU), Ferris State University and Habitat for Humanity. MSU PI's: T. Mrozowski, M. Syal, S. Kim and M. Metoyer
2. Building Energy Codes Adoption and Compliance. MI State Housing Development Authority project lead, with MSU and Public Sector Consultants Inc. as subcontractors. Funding from US. DOE. Pacific Northwest National Laboratory. Project Completed June 2011. Mrozowski
3. Michigan Energy Code Training and Implementation Project, Funded by Bureau of Energy Systems, State of Michigan - T. Mrozowski. Project Completed June 2011.
4. Michigan Energy Code Training and Implementation Project, funded by Midwest Energy Efficiency Alliance, the Dow Company and Guardian Industries, (Current) - T. Mrozowski

5. Uniform Energy Code Compliance Assessment, funded by MI Public Service Commission, T Mrozowski, Project Completed Oct 2011
6. Smart Grid and Renewable Energy, 2010-12, ELECTRI International (NECA Research Foundation) - M. Syal
7. Economic Benefits and Environmental Sustainability from Low-Income Green Home Development in Michigan, December 2010-January 2012, funded by Michigan Applied Public Policy Research Grant, Institute for Public Policy and Social Research, Michigan State University. E. Lee, S. Kim, and Thom Phillips
8. Affordable Housing Study in Mid-Michigan, Sustainable Communities Regional Planning Grant Program, January 2012-December 2013, funded by U.S. Department of Housing and Urban Development, S. Kim

International

9. Sustainable Built Environment in the U.S. and India, 2010-11, Visiting Scholar funding, Center for Study of Int'l Development, MSU - M. Syal
10. Executive Training Program for professionals from India on Sustainable Built Environment, Summer 2011 - M. Syal
11. Sustainable Development teaching and research assistance in India, Fulbright Specialist, U.S. Dept. of State, 2011-12, M. Syal
12. LEED Building certification support, Trento, Italy, 2009-11 – T. Mrozowski
13. Case Studies of Zero-Energy Homes and Environment-Friendly Neighborhoods in Korea, April 2011-August 2011, funded by The Center for Advanced Study of International Development, Michigan State University

II. Publications: Papers and Reports

1. Pillai, G, Syal, M., Hastak, M., Ofei-Amoh, K., and Duah, D. (2012). "Health Performance Criteria for Homes," Accepted for publication in the AIC Journal - The American Professional Constructor, expected publication in the Spring 2012 issue.
2. Syal, M., Mago, S., Abdulrahman, K., Li, Q., and Mago, S. (2011). "LEED Requirements and Construction Project Management," International Journal of Construction Project Management, Nova Science Publishers, 3(3), 1-12.
3. Jeong, J., Hastak, M., Syal, M., and Hong, T. (2011). "Internal Relationship Modeling and Production Planning Optimization for the Manufactured Housing," International Journal of Automation in Construction, 20(7), 864-873.
4. Singh, A, Berghorn, G., Joshi, S., and Syal, M. (March 2011). "Review of Life-Cycle Assessment Applications in Building Construction," Journal of Architectural Engineering, ASCE, vol. 17(1), 15-23.
5. S. Samuel and Syal, M. (2011). "Information Framework For Residential Energy Retrofit," M.S. report, Michigan State University

6. R. Kweku Ofei-Amoh (2011) – “Installation and Construction Management Aspects of Smart Grids,” M.S. thesis, Michigan State University
7. Mrozowski, T. (2011). “Michigan Energy Code Training and Implementation Project Final Report”, Bureau of Energy Systems, State of Michigan
8. Mrozowski, T. (2011). “Uniform Energy Code Compliance Assessment, Final Report”, MI Public Service Commission.
9. Mrozowski, T. (2011). “Building Energy Codes Adoption and Compliance”. Final Report MI State Housing Development.
10. Choi, B., Kim, S, & Allen, A. (2011). “College Students’ Place Attachment to Home Environments in the U.S. And Korea”. Housing and Society, December 2011, 165-187 (tentative page numbers)
11. Choi, B., & Kim, S. (2011). “The Effects of Place Attachment to Childhood Home to the Housing Satisfaction”. Journal of the Korean Housing Association, 22(2), 111-120.
12. Kim, Suk-Kyung, Lee, J., & Bell, R. (2011). “New Urbanism in Michigan: Case Studies, Public Opinions, and Evidence-Based Policy Suggestions”. In A. Schneider & L. Meunier (Eds.), Informing the Debate: Michigan Applied Public Policy Research Program (pp. 229-286), East Lansing, MI: Michigan State University.
13. Kim, S, & Seidel, A.D. (2012). “Safe Communities for Urban Renters: Residents’ Perceived Safety, Physical Territoriality, and Social Ties in Urban Apartment Properties”. Journal of Architectural and Planning Research. June 2012 issue.
14. Kim, S. (2012). “High-Rise Housing”. In A. Carswell (Ed.), The Encyclopedia of Housing, 2nd edition (page numbers to be assigned). Thousand Oaks, CA: SAGE Publications.
15. Kim, S. (2012). “Housing Abroad- Asia”. In A. Carswell (Ed.), The Encyclopedia of Housing, 2nd edition (page numbers to be assigned). Thousand Oaks, CA: SAGE Publications.

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 29 employers attending), Habitat for Humanity, Safety Day, AGC Student Constructor Awareness Night (SCAN), and sponsoring a team in the NAHB residential competition, etc. The MSU students have always secured high rankings in the NAHB competition. In addition, four NAHB/ Greater Lansing HBA scholarships, totaling \$7,500, were awarded to MSU CM students in 2011. Dr. Mohamed El-Gafy is serving as the faculty advisor and Mr. Ken Gotchalk is serving as the competition team coach for 2011-12.