

Texas Housing Research Program, National Consortium of  
Housing Research Centers  
**College of Architecture, Texas A&M  
University**

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## *2007 Annual Report*

### **Overview of 2007**

Housing research at Texas A&M University includes interdisciplinary activities between faculty researchers in research centers and laboratories primarily in the Colleges of Architecture and Engineering. Housing policy, housing design, and community planning and design studies are underway in a number of departments. The College of Architecture was given an endowment from History Maker Homes in Dallas/Ft. Worth, Texas, of over \$2.4 million to endow chairs and professorships in support of housing research in the College of Architecture and the College of Business. The Department of Construction Science began a capital campaign to raise \$15 million for a new building.

### **Presentations/ Publications**

Abrams, R. (2005, November). *Case Studies in Sustainable Housing Communities: Linking Experience in the UK and China*. China/US Relations Summit, University of Peking, Beijing.

Bagneid, A. & Haberl, J. (2006, August). *A Finite Difference (FD) Model for the Thermal Simulation of a Courtyard Microclimate*. Proceedings of the 2<sup>nd</sup> Sim Build Conference, Boston, MA.

Baltazar-Cervantes, J. Haberl, J. Culp, C. & Yazdani, B. (2006, July). *Impact of the Implementation of the 2000/2001 IECC on Residential Energy Use in Texas: Preliminary Verification of Residential Energy Savings*. Proceedings of the 2006 Symposium on Improving Building Systems in Hot and Humid Climates, Orlando, FL.

Baltazar-Cervantes, J.C., Haberl, J., Culp, C., Yazdani, B. 2007. "Analysis and Documentation of Measured Weather Data for NOx Emissions Reductions Calculations for Texas Energy Efficiency/Renewable Energy (EE/RE) Projects", *Proceedings of the 8<sup>th</sup> International Conference for Enhanced Building Operation*", San Francisco, CA, published on CD ROM (October).

Bright, E. (2007, July 4-7). *A Tale of Two Methods: The Divergent Paths of Land Suitability Analysis and Impact Assessment as Conservation Tools*. ConserVision New Zealand Conference, University of Waikato, Hamilton, New Zealand.

Bright, E. (2007, April 26). *Immigration and Neighborhood Revitalization. Prepared for delivery at the keynote opening session, North American Perspectives on Cities and Migration: Which Way to a Workable Future?* Urban Affairs Association Annual Conference, Seattle, WA.

Dvorack, B. (2007, October 2). *Conserving Energy with Green Roof Technology*, Industrial Fabrics Association International. Sustainable Design with Fabric Symposium, Las Vegas, NV.

Giusti, C. (2007, April 12-14). *Colonias in Texas, Poverty in Texas, Latinos in Texas*, SIGLO XXI: Economies of Class. Economies of Culture IUPLR Interuniversity Program for Latino Research Conference, Austin, TX.

Giusti, C. (2006, December 12-14). *Economic Development and Colonias in Texas, Ravage of the Planet*. WESSEX Institute of Technology Conference, Bariloche, Argentina.

Giusti, C. (2006, November 8-12). *Financing Affordable Housing in Colonias in Texas. Local Host Panel on Race, Housing, and Politics in Texas Colonias and Neighborhoods*, American Association Schools of Planning ACSP National Conference – Borders and Cores, What is Planning in the Global Era? Fort Worth, TX.

Giusti, C. (2007, April 25-28). *Micro Credit for House Improvement in Low-Income Communities*. Urban Affairs Association 37<sup>th</sup> Annual Meeting, Cities and Migration: Opportunities and Challenges, Seattle, WA.

Graham, Charles. (2006, July 25). “*Wall Materials Selection for IAQ and Moisture Control*.” Fifteenth Symposium on Improving Building Systems in Hot and Humid Climates, Energy System Lab at Texas A&M University and Florida Solar Energy Center, Orlando, FL.

Graham, Charles W. et al. (2007, November 8-9). “*Design/Construction Risk: Designing Buildings and Managing Projects in the Face of Complexity*,” presented to RICS Americas Conference on Managing Risk, Maximizing Reward: Winning at High Stakes Development, Montego Bay, Jamaica.

Haberl, J.S., principal author of (6) new or revised pages, including: “Heating, Ventilating, and Air Conditioning (HVAC)”, (424-427), “Refrigeration”, (434-435), “Heating, Ventilating, and Air Conditioning (HVAC)”, (440-441), “Heating, Ventilating, and Air Conditioning (HVAC)”, (448), *2007 AIA Residential Graphics Standards* (11<sup>th</sup> Edition).

Haberl, J., S., Baltazar-Cervantes, J.C., Liu, Z., Mukhopadhyay, J., Kim, S., Gilman, D., Culp, C., Yazdani, B. 2007. “A Methodology for Calculating Integrated Emissions Reductions From Energy Efficiency and Renewable Energy (EE/RE) Programs Across Texas”, *Proceedings of the 15.5 Symposium on Improving Building Systems in Hot and Humid Climates*, Texas A&M University, San Antonio, Texas, published on CD ROM (December).

Haberl, J., Culp, C., Yazdani, B., Gilman, D., Fitzpatrick, T., Muns, S., Verdict, M., Ahmad, M., Liu, B., Baltazar-Cervantes, J.C., Degelman, L., Turner, D. 2007. “*Energy Efficiency/Renewable Energy Impact in the Texas Emissions Reductions Plan (TERP)*,” Vol. I – Summary Report, Annual Report to the Texas Commission on Environmental Quality, January 2006 to June 2007, Energy Systems Laboratory Report No. ESL-TR-07-06-01, 15 pages (December).

Haberl, J., Culp, C., Yazdani, B., Subbarao, K., Verdict, M., Liu, Z., Baltazar-Cervantes, J-C., Gilman, D., Fitzpatrick, T., Turner, D. 2007. “*Statewide Air Emissions Calculations From Wind and Other Renewables*”, Annual Report to the Texas Commission on Environmental Quality, September 2005 to August 2006, Energy Systems Laboratory Report No. ESL-TR-07-07-01, 101 pages on CDROM & pdf (August).

Lee, C. (2006). *Next Generation of Active Learning Research in Urban Planning*. Association of Collegiate Schools of Planning, Fort Worth, TX.

Lee, C. (2006). *Environment and Neighborhood Walking: Older Versus Younger Adults*. Congress on Behavioral Medicine, Bangkok, Thailand.

Kim, S. & Lee, C. (2006). *Healthy Communities through a Local Urban Design Initiative*. Planning Schools Congress, Mexico City, Mexico.

Liu, Z., Baltazar-Cervantes, J.C., Subbarao, K., Haberl, J., Culp, C., Yazdani, B. 2007. “*Analysis Procedures for Weather-*

*normalized NOx Emissions Reductions Calculation for Green Power Purchases From Texas Wind Energy Providers*”, Proceedings of the 8<sup>th</sup> International Conference for Enhanced Building Operation”, San Francisco, CA, published on CD ROM (October).

Lu, J-C. & Peacock, W. G. (2006, November 12). *Multi-family Housing Recovery Following 1992 Hurricane Andrew in Miami-Dade County, Florida*. Paper presented at the Association of Collegiate Schools of Planning 47<sup>th</sup> Annual Conference, Fort Worth, TX.

Malhotra, M., Mukhopadhyay, J., Liu, Z., Haberl, J., Culp, C., Yazdani, B. 2007. “*Recommendaitons for 15% Above Code Energy Efficiency Measures for Single-family Residences*”, Proceedings of the 15.5 Symposium on Improving Building Systems in Hot and Humid Climates, Texas A&M University, San Antonio, Texas, published on CD ROM (December).

Mukhopadhyay, J., Cho, S., Culp, C., Haberl, J., Yazdani, B. 2007. “*Recommendaitons for 15% Above Code Energy Efficiency Measures for Single-family Residences*”, Proceedings of the 15.5 Symposium on Improving Building Systems in Hot and Humid Climates, Texas A&M University, San Antonio, Texas, published on CD ROM (December).

Neuman, M. (2006, November). *Planning the Unplanned City: Houston, Texas*. Moderator and Discussant, Association of Collegiate Schools of Planning Annual Conference, Fort Worth, TX.

Neuman, M. (July). *Regional Plan and Design to Rebuild a Sustainable Louisiana Gulf Coast*. Association of European Schools of Planning Annual Conference, Naples, Italy.

Nichols, J. M. & Tan, K. F. (2007, July). *A Treatise on Masonry Construction*. 10NAMC, St. Louis, MO.

Tan, K. & Nichols, J.M. (2006). *Frost Resistance of Concrete with Different Strength Grades and Mineral Admixtures*, CCR.

Peacock, W. G. (2006, October 5). *Long-term Housing Recovery*. Student Disaster Symposium, Texas A&M University, College Station, TX.

Peacock, W. G. , Zhang, Y., Lu, J-C and Lin, Y.S. (2006, November 14). *Population Dislocation, Temporary Shelter and*

*Permanent Housing Recovery Estimation*. Mid-America Earthquake Center NSF Site Visit, University of Illinois – Urbana, IL.

Peterson, J. R. & Saginor, J. (2006, April 11-14). *The Impact of Stricter Border Enforcement on Real Estate Values and Development*. Presented at the American Real Estate Society Meeting, San Francisco, CA.

Tabb, P. (2007, June). *A Critique of Village III at the Babcock Ranch Community*. Design Forum in Port Charlotte, FL.

Tabb, P. (2007, March). *Sustainable Urbanism: Serenbe Community*. International Conference on Sustainable Urbanism, College Station, TX.

Vanegas, J. (2006, July). *Delivering and Receiving Maximum Value in Land Development*. Opening Plenary Lecture within the General Opening Session of the Land Development Breakthroughs – Best Practices Conference, Chicago, IL.

Vanegas, J. (2007, February). *Enhancing the Quality of Life for People and Place in the Colonias of Texas through Sustainable Urbanism*. Keynote Plenary Lecture at 2<sup>nd</sup> International Conference on Sustainability Engineering and Science, New Zealand Society for Sustainable Engineering and Science (NZSSES) and the International Centre for Sustainability Engineering and Research (ICSER), Auckland, NZ.

Vanegas, J. (2007, May). *Toward an Integrated Development Program: Sustainable Urbanism, Civil Infrastructure, and Facilities*. Opening Lecture at the 2007 “Emilio Rosenblueth” National Civil Engineering Chair Meeting, Consortium of Mexican Universities, Merida, Mexico.

Vanegas, J. (2006, May). *Developing Regional and Specialized Funding Strategies for Housing*. Invited Speaker in the International Shelter Conference “Challenges of the Housing Market in the 21<sup>st</sup> Century,” organized by the Caribbean Association of Housing Finance Institutions (CASHFI) and the Inter-American Housing Union (UNIAPRAVI) in association with USAID, Montego Bay, Jamaica.

Zandt, S. V. (2007, May 9). *Land Banking in the Brazos Valley*. Presented at the Brazos Valley Valley Council of Governments Board Meeting, Bryan, TX, and for Continuing Legal Education

Credits (CLE) sponsored by the Brazos Valley Affordable Housing Corporation and a grant from the OneStar Foundation.

Zandt, S. V. (2006, November 8-12). *Low-income and Minority Access to Areas of High Opportunity: A Report Card for the Dallas Metroplex*. Presented at the Association of Collegiate Schools of Planning Annual Conference, Fort Worth, TX.

Zandt, S. V. (2007, April 26-29). *Small-Town Housing Needs: Obstacles and Opportunities*. Presented at the Urban Affairs Association Annual Meeting, Seattle, WA.

## **Selected**

### **Research Grants**

Graham, Charles and Cooper, Aaron, 2007. "Mold Susceptibility of Rapidly Renewable Materials Used in Wall Construction," \$6,000.00, by Construction Industry Advisory Council, Department of Construction Science, Texas A&M University (published as Master of Science Thesis).

\$100,000 for Solar Decathlon from U.S. Department of Energy – The College of Architecture at Texas A&M University was selected in 2006 to be one of the contestants in the 2007 Solar Decathlon in Washington, DC by the U.S. Department of Energy. The house was displayed at the Decathlon in September – November, 2007, and won First Place from the American Institute of Architecture Students (AIAS).

### **O.N. Mitchell Jr. Graduate Student Fellowships**

During 2007, five fellowships were awarded to graduate students studying residential construction and visualization.

### **Advisory Council**

The Housing Research Program reports to the Dean of the College of Architecture through the Department of Construction Science and the Center for Housing and Urban Development. The Residential Subcommittee of the Construction Industry Advisory Council (CIAC) for the Department of Construction Science provides advisory support.

### **NAHB Student Chapter**

With over 80 members, the NAHB Student Chapter at Texas A&M University continues to be active. Community service projects are a major activity for the Chapter.

### **Primary Contact**

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