

HOUSING RESEARCH CENTER

PURDUE UNIVERSITY

Department of Building Construction Management

401 North Grant Street

West Lafayette, In 47907-2021

ANNUAL REPORT – 2007

ORGANIZATION

The Purdue Housing Research Center is located in the Building Construction Management Program in the School of Technology. The Center activities are directed by Prof. Robert Cox as the Executive Director. This center works in conjunction with the Division of Construction Engineering & Management, School of Civil Engineering with Professor Makarand (Mark) Hastak serving as the Research Director for Manufactured Housing. Professor Joseph Orczyk and Mr. Mark Schaurette, both from the Department of Building Construction Management, serve as Co-Research Directors for Re-Construction.

2007 ACTIVITIES

Shah, Sharvil and M. Hastak. (2008). Use of Cold Formed Steel as a Structural Material in a Manufactured House Construction – an Investigative Study, MS Thesis Purdue University.

Reports and Publications

1. AbuHammad, A.,* Salem, S., **Hastak, M.**, and Syal, M. (2007). “A Decision Support System for Manufactured Housing Facility Layout.” Paper accepted for publication in the ASCE *Journal of Architectural Engineering*. (1st tier category)
2. AbuHammad, A.,* Salem, S., **Hastak, M.**, and Syal, M. (2007). “Optimization Model for Manufactured Housing Production Systems” Paper submitted to the *Journal of Construction Management and Economics*, Taylor and Francis Ltd, London, UK. (1st tier category)
3. Sabharwal, A., Syal, M. and Hastak, M. (2007). “Impact of Manufactured Housing Component Assembly Redesign on Facility Layout and Production Process.” Paper submitted to *Journal of Construction Innovation*, Emerald Publishing, Bingley, UK (1st tier category)
4. Jeong, Jae G., Hastak, Makarand and Syal, Matt. (2007). “Manufacturer-Retailer Relationship Modeling and Optimization for the Manufactured Housing Industry.” Paper submitted to *Journal of Construction Innovation*, Emerald Publishing, Bingley, UK (1st tier category)

Planned or Anticipated Journal Publications

1. Garcia, Juan Pablo, Jae G Jeong, Makarand Hastak, and Matt G. Syal. (2007). “Alternative Housing Systems: Hybrid Home Concept” Planned submission to the ASCE *Journal of Architectural Engineering*. (1st tier category)

2. AbuHammad, A.,* Salem, S., **Hastak, M.**, and Syal, M. (2007). "Analysis of a Manufactured Housing Production System Using Simulation" Planned submission to the *ASCE Journal of Construction Engineering and Management*. (1st tier category)
3. Jeong, Jae G., **Hastak, Makarand** and Syal, Matt G. (2007). "Manufactured Housing Supplier Relationship Management Modeling and Optimization" Planned submission to the *ASCE Journal of Construction Engineering and Management*. (1st tier category)
4. Jeong, Jae G., **Hastak, Makarand** and Syal, Matt G. (2007). "Internal Supply Chain Modeling and Optimization for the Manufactured Housing Manufacturer" Planned submission to the *ASCE Journal of Construction Engineering and Management*. (1st tier category)
5. Jeong, Jae G., **Hastak, Makarand** and Syal, Matt G. (2007). "Integrated DSS for Manufactured Housing Supply Chain Management" Planned submission to the *ASCE Journal of Construction Engineering and Management*. (1st tier category)
6. Swarup, L., Syal, M. and **Hastak, M.** (2007). "Whole House Performance Criteria Framework and its Application," Planned submission to the *ASCE Journal of Architectural Engineering*. (1st tier category)

Center of Re-Construction

- A Center of Re-Construction is in the process of being established.
- On a broad basis the Center will work in the areas building rehabilitation as the result of disaster or natural deterioration.

NAHB Student Chapter

- 37 members
- Meetings are held each month with speakers, participation in the local chapter of NAHB, and fund raising activities to off set costs to travel to the national convention.
- Professor Dale Koehler is the faculty advisor