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# Furniture Highlights

## From THE FURNITURE RESEARCH UNIT MISSISSIPPI STATE UNIVERSITY

### Franklin Center for Furniture Manufacturing and Management

Amy Garrard

Steady progress is being made toward making The Franklin Center for Furniture Manufacturing and Management a reality at the Forest Products Laboratory at Mississippi State University. The Center will have a dual purpose in housing both the Furniture Research Unit – a research and teaching unit already established at the Forest Products Laboratory and The Institute for Furniture Manufacturing and Management. The Institute was detailed in the November, 2001 edition of Furniture Highlights. The Institute will expand the fundamental and applied knowledge of furniture production and management; transfer new knowledge and information; and enhance future workforce capabilities. The Furniture Research Unit's faculty and staff will continue to develop programs to deliver improved production and management technologies and processes to furniture and fixtures producers in Mississippi.

The Franklin Center for Furniture

Manufacturing and Management building will consist of an impressive 35,000 square feet of space and will provide state-of-the art facilities for furniture research and education. Research facilities will include office space for faculty and staff as well as laboratories for manufacturing efficiency, product design, quality testing, and engineering/automation. Classroom space will consist of teaching classrooms, a state-of-the-art computer laboratory, a 99-seat auditorium that may be used for large capacity classes as well as for conferences and short-courses, and a distance learning and technology transfer center. When completed, the new building will be a world class showcase for Mississippi products. Visitors from literally all over the world will be able to view the Wall of Honor in the main showcase lobby where plaques will be displayed in appreciation for donations of money and materials that made the Center possible. In addition to recognition on the 'Wall of Honor', several naming opportunities exist for individuals and companies that would like to contribute toward completing this Center. Please see Page 3 for specific naming opportunities.



## FURNITURE FACULTY

### Steven H. Bullard, Interim Head

Department of Forest Products

Director, Institute of Furniture Manufacturing and Management

Forest and Wildlife Research Center

Furniture production and distribution

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[sbullard@cfr.msstate.edu](mailto:sbullard@cfr.msstate.edu)

### Steve Hunter, Associate Professor

Forest Products

Industrial engineering; Lean Manufacturing in the furniture industry, ergonomics and physiology of workplace design; manufacturing system design and analysis

662.325.8344

[shunter@cfr.msstate.edu](mailto:shunter@cfr.msstate.edu)

### R. Dan Seale, Coordinator

Furniture Research Unit

Professor, Forest Products

Computer modeling; production economics and linear programming, marketing research

662.325.3072

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### Philip H. Steele, Professor

Forest Products

Development of software to analyze manufacturing processes; analysis of industrial investments; development of automated wood processing

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### Harold A. Stewart, Research Scientist

Forest Products

Wood machining; tool wear mechanisms; minimizing machining defects in wood; secondary processing of wood products

662.325.8329

[sstewart@cfr.msstate.edu](mailto:sstewart@cfr.msstate.edu)

### Jilei Zhang, Assistant Professor

Forest Products

Furniture testing; finite element modeling; computer aided testing; mechanical properties

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### Duane E. Lyon, Professor Emeritus

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## Franklin Center for Furniture Manufacturing and Management

*continued*

### Where we are ...

Final site location and general building plans have been approved by Campus Landscape, the Executive Committee, and the Bureau of Buildings and Grounds. Architects from Pryor and Morrow held a bid meeting at the Forest Products Laboratory, Mississippi State University, for all contractors interested in bidding on the Franklin Center for Furniture Manufacturing and Management, on March 7, 2002. Some material donations have been received and are being stored on campus in a secure location. Material pledges have also been received and are being incorporated into the bidding process. Currently the expected ground-breaking time frame for construction is summer of 2002. If you have questions or would like more information on the Franklin Center for Furniture Manufacturing and Management, please contact Dan Seale at 662.325.3072, email: [dseale@cfr.msstate.edu](mailto:dseale@cfr.msstate.edu) or Steve Bullard at 662.325.4444, email: [sbullard@cfr.msstate.edu](mailto:sbullard@cfr.msstate.edu).



Site Plan

Franklin Center for Furniture Manufacturing and Management

**Cash donations to date = \$1,307,462**  
**Gifts in kind = \$102,308**

Building Fund

*Franklin Center for Furniture Manufacturing and Management*  
Naming Opportunities

<b>Opportunity</b>	<b>Amount</b>	<b>Commitments</b>
Research Chair in Furniture Production Management	\$3,000,000	
<b>Franklin Center for Furniture Manufacturing and Management</b>	<b>\$1,000,000</b>	<b>\$1,000,000</b>
Lobby/Showroom	\$500,000	
Auditorium	\$250,000	
Distance Learning	\$325,000	
Conference Room	\$100,000	
<b>Ralph Williamson Engineering and Automation Laboratory</b>	<b>\$100,000</b>	<b>\$100,000</b>
Machinability Laboratory	\$100,000	
<b>James Graham Brown Foundation Quality Testing Laboratory</b>	<b>\$100,000</b>	<b>\$100,000</b>
Product Design Laboratory	\$100,000	
Second Floor Conference Room	\$50,000	
Large Classroom	\$50,000	
<b>Hubert W. and Gladys L. Motsenbocker Courtyard</b>	<b>\$25,000</b>	<b>\$25,000</b>
Computer Classroom	\$25,000	

For more information on naming opportunities or other ways to contribute to this center for excellence, please contact Mr. Keith Gaskin, Director of Development, Mississippi State University Foundation, Box 9680, Mississippi State, MS 39762. phone: 662.325.3815, email: [kgaskin@cfr.msstate.edu](mailto:kgaskin@cfr.msstate.edu)



# Franklin Center for Furniture Manufacturing and Management

## Naming Opportunities

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Lobby/Showroom - \$500,000



Auditorium - \$250,000



Distance Learning - \$325,000



Conference Room - \$100,000



Faculty Office

These images are conceptual representations of the owner's current design intent, actual construction may vary depending on further design analysis, budget, availability of depicted materials and colors, and other unforeseen circumstances beyond the control of the owner. Modeling by Pryor and Morrow Architects and MSU - School of Architecture - DRIL, Project Team: Sherry Berry, Larry Barrow, Jian Ying Jin, Xiang Wang.

## New Faculty Member Expert in Lean Manufacturing

*Steve Hunter*

In January, 2002 Dr. Steve Hunter joined the faculty as an Associate Professor in the Department of Forest Products. Dr. Hunter received a degree in Industrial Technology from Berry College; a M.S. in Manufacturing System Engineering and a Ph.D. in Engineering from Auburn University, respectively. His research interests include industrial engineering; Lean Manufacturing in the furniture industry; ergonomics and physiology of workplace design; 3D simulation and analysis of manufacturing system designs; engineering economics; manufacturing system design and analysis; and microgravity and astronaut human engineering and analysis.

### Research Plans:

Dr. Hunter plans to continue his research into furniture and related industry, in particular, Lean Production and the design, analysis, and implementation of Lean Manufacturing System design at Mississippi's furniture manufacturers. Dr. Hunter is especially interested in assisting furniture manufacturers to improve productivity, lower manufacturing costs, install continuous improvement techniques, and provide employees with safe and healthy workplaces. He plans to provide technical assistance to the state's furniture manufacturers and associated industries in the form of worksite analysis, seminars, and hands-on assistance with the first step in the Lean Production journey—design and implementation of cellular manufacturing. Lean Production and its subsystems—cellular manufacturing can assist Mississippi's furniture factories not only survive international competition but to expand their businesses.

Ergonomics and physiology of furniture manufacturers' workplaces is another area of interest. Job relat-

ed and work induced chronic injuries to workers cost American industry billions of dollars every year. Not only does this lack of human engineering cause workers much suffering and impact employers with high worker's compensation costs, but contribute to higher furniture costs. Thus human factors and related health problems contribute to higher product prices and therefore adversely affect our international competitiveness.

Along with Lean Production assistance, Dr. Hunter will help furniture manufacturers with work related ergonomic and physiology problems.

### Recent Research:

Dr. Hunter recently completed more than a year's research at NASA's Marshall Space Flight Center in Huntsville, Alabama where he provided high level 3D computer graphics simulation of microgravity environments affecting International Space Station astronauts. While at NASA, Dr. Hunter provided project management, worksite analysis, and 3D simulation for aerospace workers and manufacture of Space Launch Initiative reusable fuel tanks. Before this work, Dr. Hunter was selected as a NASA Fellow for research into the utilization of state-of-the-art computer simulation and the human engineering aspects for working astronauts.

However, Lean Manufacturing and manufacturing systems design and analysis have been the favorite research topics of Dr. Hunter. He has provided substantial research proving that Lean Manufacturing Systems can be justified not only on high productivity basis, but also upon greatly reduced work related manufacturing worker ergonomic and physiological health problems associated with archaic manufacturing systems designs.



## CHANGES...

As most of you probably are aware, Dr. Cynthia West accepted a position with the U.S. Forest Service as Assistant Station Director, Pacific Northwest Research Station in Portland, OR. Dr. West will be missed at the Forest Products Laboratory but this is a great opportunity for her and her family.

Dr. Steve Bullard has been named Interim Head, Department of Forest Products in addition to his responsibilities as Director of The Institute for Furniture Manufacturing and Management, Forest and Wildlife Research Center. Many of you know Dr. Bullard personally as he has been a member of the Furniture Research Unit since it was established at the Forest Products Laboratory.

Dr. Ian Hartley, Assistant Professor, Department of Forest Products has accepted a research/teaching position at the University of Northern British Columbia in Prince George, BC. We wish Dr. Hartley and his family the best of luck!

Dr. Steve Hunter has joined the faculty of the Department of Forest Products as Associate Professor.

# A LOOK AT OUR STUDENTS....

## JASON LONG

Jason is a Forest Products major in the Building Supplies Option in the Department of Forest Products. Jason is from Belmont, Mississippi and graduated from Northeast Community College in the Fall of 1996 with a degree in Forestry Technology before attending Mississippi State University. His expected graduation date is December of this year and his job interests include home building supply retailing, furniture retailing, and furniture & related industries manufacturing. Jason is an active member of the Student Chapter of the Forest Products Society.



Jason worked at Flexsteel Industries, Inc. in Starkville for two years and currently works for researchers at the Forest Products Laboratory.

In his spare time, Jason enjoys sports - especially Mississippi State football, movies and reading. He may be reached at 662.615.5929 or by email at [jlong19@hotmail.com](mailto:jlong19@hotmail.com).

## Student News

### Officers for the Forest Products Society Student Chapter

**Brad Stombock, *President***

**Demetrice Evans, *Vice-President***

**Ginni O'Neal, *Treasurer***

**Jody Dixon, *Secretary***

**Jeffrey Croom, *Special Projects***

**Dr. Susan Diehl, *Faculty Chapter Advisor***

On March 19, the FPS student chapter catered a fish dinner for the International Entomology Society meeting on campus as a fund raising project.

For more information on the Student Chapter of the Forest Products Society you may contact Brad Stombock at [lbs1@msstate.edu](mailto:lbs1@msstate.edu).

*Mississippi State University does not discriminate on the basis of race, color, religion, national origin, sex, age, disability or veteran status.*



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