

UC-Davis Hosts Sustainable Textiles and Medical Protection Conference

Representatives from manufacturers, hospitals, industry trade associations, and academia gathered at UC-Davis recently for an enlightening conference covering a variety of issues related to sustainable textiles and healthcare protection. The Sustainable Textiles and Medical Protection (STAMP) Conference and Workshop was organized by a team of researchers at UC-Davis, who are working with UC-Berkeley, NC State, and Donghua University in China on a project that is financially supported by the National Science Foundation's Biocomplexity: Materials Use, Science, Engineering, and Society (MUSES) program.

Attended by about 50 participants, the goal of STAMP was to provide an opportunity to address the development and use of sustainable medical textiles. In addition, the intent was to foster future collaborative efforts between attendees and presenters, focusing on products/processes that have a low carbon impact, and encourage the development of textile products that provide improved protection and function for hospitals and the healthcare industry.

The conference focused on the following themes:

- Emerging healthcare protective textile materials and technologies
- Sustainable and "green" protective materials and operations
- Sustainable and "green" processing of medical textiles
- Sustainable, economic and eco-friendly medical textile supply chain systems
- Complex issues of textile uses in hospitals
- Future research directions

"We had two major groups of presentations," explained Gang Sun, Ph.D., professor of textiles and clothing, UC-Davis and moderator of the event. "One group focused on new technologies and materials for medical textiles, and the other looked at sustainable medical textiles."

The sustainable medical presentations were conducted by the NSF MUSES research team members on reusable and disposable medical textiles.

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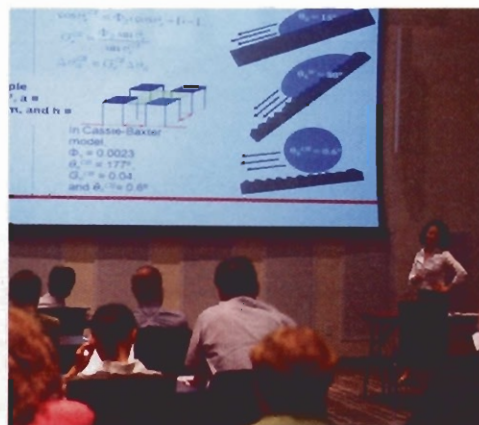
**GANG SUN, PH.D./
PROFESSOR TEXTILES &
CLOTHING, UC DAVIS.**

Dr. Sun noted, "The most important findings from both groups were in the areas of Life Cycle Assessment (LCA) studies and bio-protective functions."

Some of the interesting conference highlights in the area of new technologies and materials for sustainable medical textiles included: "Cradle-to-Use Life Cycle Inventory of Medical Gowns," presented by Dr. Celia Ponder, NCSU; "Smart Protective Barrier: Responsive Barrier and Self-Disinfection," presented by Dr. Song

Liu, University of Manitoba, Canada; "Nonwoven Dry Wipes for Medical and Industrial Applications," presented by Dr. Ramkumar, Seshadri, Texas Tech University; and "Novel Light-induced Antimicrobial Agents and Applications," presented by Dr. Gang Sun, UC-Davis.

The presentations from the NSF MUSES team generating interest on the sustainable medical textile side included: "Using Life Cycle Analysis to Evaluate the Environmental Benefits of Using Biocidal Medical Garments," presented by Dr. Celia Ponder, NCSU; "Prediction of Medical Waste from Selected Hospital Statistics," presented by Dr. Margaret Rucker, UC Davis; and "Protective Performance of Disposable and Reusable Gowns," presented by Dr. Gang Sun, UC Davis.



The conference was considered successful in promoting specific and needed innovation in the development of medical textiles for the healthcare industry. Dr. Sun and the organizers of the event believe the research presented will provide the following benefits:

- Bridge the divide between nonwoven and woven fabrics — the materials used in making disposable and reusable protective textiles.
- Promote the use of "green" materials and technology.
- Enhance the textile industry's ability to be more competitive in producing environmentally friendly, functional textiles for healthcare workers.
- Increase the life cycle assessment and protective performance of the non-woven and woven types of products.
- Educate healthcare workers, patients, and the public.

To download the STAMP Conference presentations, visit <http://nsf-muses.ucdavis.edu/stamp-conference.php>, or contact Dr. Gang Sun, UC Davis, gysun@ucdavis.edu, 530-752-0840. ●

Kathlyn Swantko, president of the FabricLink Network, created TheTechnicalCenter.com for industry networking and marketing of specialty textiles, and FabricLink.com for consumer education about everything fabric.

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