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## International Textile Works: A Laboratory for Experimental Artists from Around the World to Create Cutting- Edge Design, Grounded in Textiles

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**International Textile Works:  
A Laboratory for Experimental Artists from Around the World to Create Cutting-  
Edge Design, Grounded in Textiles**

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The International Textile Works, ITW, was launched in 2002 as an entity of the Department of Textiles, Clothing and Design, College of Education and Human Sciences, at the University of Nebraska-Lincoln. ITW is part of the ongoing activities of the Robert Hillestad Textiles Gallery, in cooperation with faculty in the department. Wendy Weiss, director of the gallery along with colleagues Professor Michael James and Yiqi Yang and Extension Specialist Diane Vigna are responsible for developing the program. We aspire to create an environment where design faculty, in collaboration with scientific faculty, develop innovative applications of process and technology. Our mission is to provide a place for experimental artists from around the world to create inventive design, grounded in textiles.

The University of Nebraska's competitively awarded 2002-03 Arts and Humanities Enhancement Fund provided start-up funds to invite our first visiting artist, Ana Lisa Hedstrom, to design and print on this equipment. The funding also helped underwrite a graduate research assistant in his work with textile science faculty member Dr. Yiqi Yang. With this program, we were able to provide support one on one support for both design and technical applications.

**Visiting Artist Program**

The first two visiting artists, Ana Lisa Hedstrom and Cynthia Schira, spent a total of 14 days in residence working at our facility. The results of the artists' digitally designed fabrics are presented in two nationally touring exhibitions of their work.



*Figure 1. Ana Lisa Hedstrom shows students her samples.*

Both shows have 32 page color catalogs that document how digital technology has influenced their creative process. The Nebraska Arts Council, the Friends of the Robert

Hillestad Textiles Gallery, Friends of Fiber Art International and the Duncan Family helped support the production of the exhibitions and catalogs.

Ana Lisa Hedstrom spent one week in residence working on the Mimaki printer, March 2003 and August 2003, to develop a new collection of fabric to design work for her exhibition *Process = Pattern: Hand-dyed and Digitally Printed Textiles by Ana Lisa Hedstrom* in the Robert Hillestad Textiles Gallery, January 28 – February 27, 2004. Her visit overlapped class prior to spring break. Students had an opportunity to interact with her and she had time to work uninterrupted during the break. Funding from the Arts and Humanities grant helped us to hire an undergraduate student who had easily learned the Sophis software that interfaces with the digital printer and a graduate student to work one on one with Hedstrom. In a short period of time, working between Adobe PhotoShop and the Sophis program, Hedstrom developed a grouping of designs based on scans of her own resist dyed and discharged fabric. Hedstrom's prior experience working with digitally manipulated scans of her work at EditTextil in Montreal using a heat transfer process onto polyester fabric was important to frame design concepts for direct digital printing. Examples of the Montreal production are in the traveling exhibition.

Schira, who has been working extensively with digital technology, developed her print files prior to her visit to Nebraska, where she spent three days with an undergraduate assistant printing the work that would accompany her computer assisted woven work. The traveling exhibition, *Intersecting Traditions: Recent Textiles by Cynthia Schira*, originated in the Robert Hillestad Textiles Gallery, and ran April 19 - May 21, 2004. Following this visit in November 2003, she returned to Nebraska for the opening of her exhibition and worked with youth. She taught a one-day workshop with children ranging from second to seventh grade.

### **Teaching Component**

University of Nebraska faculty member, Michael James, works with students to design for the digital printer. Students with Undergraduate Creative Activities & Research Experiences funding have worked directly with James to develop special projects over the course of an academic year. Two students with this experience have already been offered jobs in textile design firms prior to their graduation dates.

Faculty train students directly in the classroom to use this technology to be prepared for employment. In spring of 2003, James and Weiss team taught an advanced undergraduate course in which students worked both digitally and in the surface design studio to create fabrics with a variety of end uses. The students completed repeat designs with the conventional hand drawing and painting. They learned how to develop and refine repeats from scans, develop colorways and coordinates, and printed the designs on paper. Ana Lisa Hedstrom's one-week residence on campus proved pivotal for students to make the leap into digital printing.

She provided a model that catapulted the students in a way that is difficult for the on-site faculty. After her visit, students became excited to print their fabric on the digital printer. Students exhibited the fabric designs concepts on boards and finished projects that combined digitally printed fabrics with dyeing, printing, devore and other hand manipulations at the Robert Hillestad Textiles Gallery in a show called *Into the Surface: Advanced Student Design Exhibition*, April 14 - April 30, 2003.

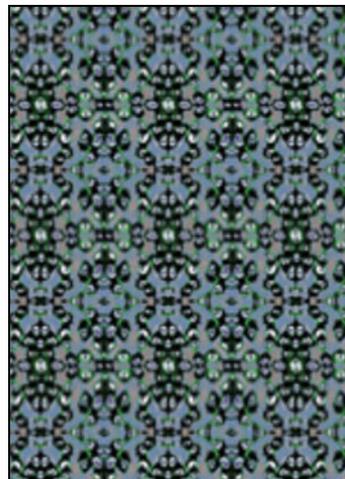


Figure 2-3. Hedstrom talks with students assistants about their work.

### **Outreach Outcomes**

The Robert Hillestad Textiles Gallery has an ongoing tradition of offering one, two and three day workshops with the visiting artists whose work is exhibited in the gallery. Ana Lisa Hedstrom taught a resist scouring silk workshop to an adult group. ITW is developing model workshops with visiting artists to train undergraduate and graduate students to deliver the material to new audiences. Cynthia Schira's workshop with youth launched this endeavor. Schira developed a workshop in which she worked with young people to hand paint design concepts on paper with water based paint. In the afternoon, with the help of many students, faculty and other adult assistants, the youth scanned a selection of their paintings and then manipulated them in PhotoShop. Since her visit in April, undergraduate students have provided Nebraska youth with similar content, emphasizing digital design process.

The second opportunity to work with a visiting artist came with programs by Ellen Oppenheimer in September 2004. In conjunction with her exhibition, *Complex Pattern: The Quilts of Ellen Oppenheimer*, September 13-October 8, 2004, Michael James organized a workshop for artists and educators working in the schools. Oppenheimer provided a comprehensive afternoon demonstration of how she works with young people in the Oakland schools to generate dyed fabric for art-quilt making. She created workstations so each participant could experience the variety of ways her classroom students learn how approach fabric design.

In addition, Ellen worked with college students demonstrating how she uses graphic software as a design tool in her screen prints.

### **Research Component**

Graduate students began applied research under the supervision of Dr. Yiqi Yang to test the best use of the technology available at ITW with artists' needs foremost. To date, they have published work regarding:

- appropriate steaming conditions for color consistency of reactive dyes,(Naarani/Yang)

- improvement of light fastness of reactive ink jet printed fabric using UV absorbers, (Naarani/Yang)
- humidity and temperature printing conditions for optimal shade consistency, (Naarani/Thillainayagam/ Yang)

The combination of artists and scientists working together create an environment where these two disciplines interact and directly inform each other.

### **ITW Equipment**

Studio with digital textile technology and printing:

Mimaki Textile Jet TX1600S – direct inkjet 60" fabric printer

An industrial steamer

Mangle/padder (small)

Hot air oven

### **Results and Issues at ITW**

The creative value of the program at ITW has been demonstrated. How to find adequate resources to support research and artistic agenda is a critical issue to continue our work.

- Funding for a design technologist and technical support in the laboratory is also needed.

- How to design a program that faculty with limited time can fully support. How to convince industry that conducting research to resolve technical problems for artists is worthwhile to fund

### **Recommendations**

Because of the expense of equipping a facility with both the equipment and staff required to use digitally technology, I recommend we work together to develop collaborative relationships with between institutions for training and printing of fabric.

Furthermore, I recommend that we develop partnerships between Textile Design programs to train college students to provide community based art programming that introduces technology to youth.

The next step would be to create partnerships among artists, schools, community centers and our talented group of college students to develop community art programming models. Then we should be positioned to secure the resources we need from private foundations to realize this dream. Such programs will provide valuable interaction between our students and professional artists and create opportunities for young people to develop their artistic potential at the same time that they are becoming conversant with technology. I welcome your reactions and participation in developing this concept.