Beenish Moalla Chaudry

Department of Computer Science Indiana University Informatics East, Room 231 919 East 10th Street, Bloomington IN 47408	Phone: (413) 461-6440 Email: bchaudry@umail.iu.edu WWW: http://www.beenishchaudry.yolasite.com

EDUCATION

- Doctorate in Computer Science (expected), Indiana University, Bloomington IN
- Master in Mathematics, Indiana University, Bloomington, IN
- Bachelors in Computer Science and Mathematics, Smith College, Northampton, MA

COMPUTER SKILLS

Web	: HTML, CSS, JavaScript
Web Programming	: ASP.NET, XML and Web Services
User Interface	: Flash
Databases	: Microsoft SQL Server, Microsoft Access
Graphics	: Photo Shop and Illustrator
Operating Systems	: Windows, UNIX and Mac OSX
Mobile Platform	: Windows Mobile, Android Eclipse
Programming Language Proficiency	: C#, Java, Android Java, C, C++, Arduino, ASP.NET, VB.NET, Visual Basic 6, VBA, SQL, PHP, CLISP, Verilog
Software	: Microsoft Word, Excel, Access, Power Point, Publisher, Visio, Visual Studio .NET, Quartus, R, Eclipse, Joomla
Soft Skills	: User Interface Design, User/ Task Analyst, Software Engineering, Database Design, Web Design and Development, Graphic Design, Mobile Application Design and Development
User research methods	: User-centered design, Participatory design, Evaluation, Focus group, Ethnographical study (short term), Observation, Card sorting.

AWARDS

Indiana University SoIC Poster Competition, 2nd Prize, Bloomington Indiana
Indiana University Women in Computing Travel Grant, Chicago IL**,** Spring 2010
- Award of travel and hotel registration for Random Hacks of Kindness

Indiana University Computer Science Travel Grant, IHI and AMIA, Washington DC, 2010
- Award of conference and tutorial registrations

Adobe Design Achievement Award (Mobile Design), Semi-finalist, 2009
- Visual design with Photoshop and interaction design with Flash ActionScript 2.0 | Collaborator: Heekyoung Jung

CRA-W Grad Cohort Workshop, San Francisco, California, Spring 2006
- Award of conference registration, lodging and travel expenses

PRAXIS, Smith College, 2001
- Internship award for Summer 2001

Smith International Scholar, 1999, 2000
- Internship award for Summer 1999 and Summer 2000

RESEARCH ACTIVITIES	
User-Centered Design Researcher, Indiana University, Bloomington, IN Advisor: Kay Connelly • Involved in the design, development, testing and debugging of a dietary intake monitoring mobile application for a low literacy chronically ill population • Graphic designed several icons for the application • Implemented low and high fidelity mobile prototypes using C#.NET for Windows Mobile to evaluate design ideas • Designed and conducted five user research studies with 2-26 participants • Research methods used: Interviews (structured and semi-structured), task-based prototype interactions, picture card study, long term and short studies • Analyzed qualitative and quantitative data • Preparing one more user research study for dissertation work • Author and co-author of several publications [B.1, C.2, W.1, A.2, A.3, R.1, R.3, R.4, R.5]	Sept. 2006 - Present
Affective Designer, Indiana University, Bloomington, IN Advisor: Shaowen Bardzell • Involved in the design of Affective Clothing (saris) • Implemented prototype saris using Arduino Lillypad for a user study • Coauthored a paper on *Affective Computing* [C.1]	Sept. 2008 – Dec. 2008
Research Assistant, Indiana University, Bloomington, IN Advisor: Amr Sabry • Background research in *Quantum Computing*	Sept. 2005 – May 2006
Research Assistant, Indiana University, Bloomington, IN Advisor: Zhenghan Wang • Background research in *Knot theory* and *Topological Quantum Computing*	Jan. 2003 – Sept. 2004
Research Assistant, Smith College, Northampton, MA Advisor: Joseph O'Rourke • Computer experiments for hypothesis proving • Proved Discrete Sliding Conjecture in a special case [T.2]	Sept. 2001 – Dec. 2002

PROFESSIONAL EXPERIENCE/ PAST INTERNSHIPS	
School of Optometry, Indiana University, Bloomington, IN Software Engineer <u>Achievements</u> • Presentations on the development stages of software <u>Roles and Responsibilities</u> • Design and development of a Web-based application for management of Optometry research data [SW.5] • Collection of functional, and technical requirements to make sure the project met expectations	Sept. 2008 – Sept. 2009

• Used N-tier architecture for presentation layer, the Business and Data Access Layers • Wrote stored procedures, LINQ queries and triggers using SQL in SQL SERVER 2005 • Defined custom security and business model policies • Worked intensely on the User Interface employing AJAX and CSS • Tested and deployed application on Test and Production Server Technologies • Hybrid Applications with C# and ASP.NET • Microsoft Visio • Web widget development using HTML, CSS, JavaScript and AJAX	
Nursing Research Lab, IUPUI, Indianapolis, IN MS Access Programmer and Database Developer Features implemented • Implementation of feature-rich software [SW.6] • Define custom security and business model policies. • Created a software that could serve the needs of a biomedical research study Roles and Responsibilities • Developed MS Access database to facilitate data collection and management for a biomedical research study • Developed user and task centered user interfaces • Defined the periodic extraction and performed formatting of data from multiple sources • Created out basic queries and reports required by the research team • Defined all algorithms and logic used to extract, format and report data in VBA Technologies • Microsoft Access • VBA	Jan 2007- Dec 2008
SURG Research Lab, Indiana University, Bloomington, IN Windows Mobile Application Developer Achievements • First of a kind mobile application for low-literacy to help them track their physical activities [SW.7] • Application employed in a 14-week long biomedical study • User interaction was logged to better understand the user and use of the application • Coauthoring a paper on feasibility of the application [R.6] Roles and Responsibilities • Designed user interfaces • Developed base controls for the application • Programmed the entire logic of the application • Troubleshot and resolved bugs in the application	June 2006 – Sept 2008

• Created a user manual Technologies • C#.NET for Windows Mobile • SQL Server CE 2.0	
Computer Science Department, Smith College, Northampton MA Java Software Engineer Achievements • Poster presentation and abstract publication on the software design philosophy [A.1] Roles and Responsibilities • Implement a software using OO and MVC design philosophy [SW.1] • Meetings with the client for gathering user requirements • Coding and testing of the implemented features Technologies • Java using UNIX OS as the development environment	June 2006 – Sept 2008

TEACHING EXPERIENCE	
INFO-I400 Health Informatics **School of Informatics and Computing, Indiana University** Description: Teaching assistant for Prof. Kay Connelly. Duties: Preparing and grading exams, grading two weekly reading responses, holding office hours to answer help students through the course. Guest Lecturer: *Clinical Decision Support Systems.*	Spring 2011
CSCI-B490 Mobile Computing **Department of Computer Science, Indiana University** Description: Guest lecturer and guest lab instructor for Prof. Kay Connelly. Topics covered: *Database Design* and *Web Services*.	Spring 2009
CSCI-B503 Algorithm Design and Analysis **Department of Computer Science, Indiana University** Description: Teaching assistant for Prof. Gregory Rawlins. Duties: Weekly office hours, preparing and grading assignments and exams.	Fall 2009
INFO-I399 Research Experience for Undergraduates **School of Informatics and Computing, Indiana University** Description: Research training mentor for Prof. Geoffrey Fox's Research Experience for Undergraduates course. Research Topics: *Mobile Application Design*, *Survey of Health Information Systems*	Fall 2009, Spring 2011
CSCI-B551 Hardware Systems Design **Department of Computer Science, Indiana University** Description: Teaching assistant for Prof. Geoffrey Brown. Duties: Weekly office hours, supervise lab sessions, prepare and grade assignments and exams.	Spring 2009

CSCI-A110 Introduction to Computers and Computing **Department of Computer Science, Indiana University** Description: Training instructor for wed design using CSS and XHTML, Microsoft Excel, Access and Word. Duties: Biweekly lectures, grade assignments and exams.	Fall 2007, Spring 2008
MATH-M118 Introduction to Finite Mathematics **Department of Mathematics, Indiana University** Description: Teaching assistant for Prof. Daniel Maki. Duties: Weekly office hours, prepare and grade weekly quizzes, assignments and exams.	Fall 2004, Spring 2005

SOFTWARE AND PROTOTYPES	
[SW.9]	**MoSSaIC** A web-based application created on Symphony using PHP. The application is currently under field testing and will be used to predict propensity of landslides in various areas of developing countries. This application was developed in collaboration with a group doing environment research in UK.
[SW.8]	**Dietary Intake Monitoring Application** A C# mobile application for dialysis patients to help them monitor their fluid and nutrient. Based on alternative input mechanisms: barcode scanning, voice recording and interactive icons. Based on a backend database. Low literacy accessible interface incorporating accessible visualization of health-related data.
[SW.7]	**Daily Activity Monitoring Application** A C# mobile application to help chronically ill low literacy people record and monitor their daily activities.
[SW.6]	**Nursing Research Management Software** Research management software based on Visual Basic for Applications with Access backend database to help nurse researchers methodologically conduct a biomedical research study and collect research data. [R.2]
[SW.5]	**Optometry Lab and Research Management Software** A lab and research management web-based application created using ASP.NET and C# for Indiana University Optometry Lab to manage its research data, and conduct and organize research activities. A year-long project for Software Engineering course.
[SW.4]	**Information Visualization Software** A fisheye calendar for a low-literacy population to help them visualize their nutrient intake over a long period of time to help them make behavioral changes. Course project for Information Visualization.
[SW.3]	**Energy Monitoring Ambient Display** Design concept for an energy monitoring ambient display in a house. Course project for Research Methods in HCI.
[SW.2]	**Medicine Dispenser for the Elderly** Conducted user studies and implemented a prototype medicine dispenser for elders. Pervasive Computing course project.
[SW.1]	**Visualization of Oriented Matroids** A Java software tool for visualization of oriented matroids based on OO and MVC paradigms of software design. An internship project

PUBLICATIONS

Book Chapter

[B.1] *Evaluation of Two Mobile Nutrition Tracking Applications for Chronically Ill Populations with Low Literacy Skills*. Katie A. Siek, Kay H. Connelly, Beenish Chaudry, Desiree Lambert, Janet L. Welch. In Mobile Health Solutions for Biomedical Applications. Joseph Tan and Phillip Olla eds. March 2009 (ISBN:

1605663328)

Peer-Reviewed Conference Paper

[C.2] *The Design of Mobile Portion Size Estimation Interface for Low-Literacy Populations.* Beenish Chaudry, Kay Connelly, Katie A. Siek, Janet Welch. 8 pages. Proc. of Pervasive Heathcare 2011. **Nominated for Best Paper Award**.

[C.1] *Designing for the cultural other: Materiality and technology in Indian homes.* Shaowen Bardzell, Rajasee Rege, Chen Huang, Beenish Chaudry. Proc. of International Conference on Designing for Pleasurable Products and Interfaces, 2009.

Workshop Paper

[W.1] *Challenges in Evaluating Three Assistive Health Applications*. Katie A. Siek, Steven E. Ross, Kay H. Connelly, Jeffrey S. LaMarche, Danish Ullah Khan, and Beenish Chaudry. In CHI 2009 Workshop: Evaluating New Interactions in Healthcare: Challenges and Approaches.

Abstracts

[A.3] *Merging Literacy with Computer Technology for Self-Managing Diet and Fluid Intake*. Janet L. Welch, Kay Connelly, Katie A. Siek, Josette Jones, Susan Perkins, Beenish Chaudry, Janet Kain, Linda Scott, Kim Astroth, Seongkum Heo, Sue McManus, Jerry Mooney, Cindy Calley. 20th International Nursing Research Congress Focusing on Evidence-Based Practice.

[A.2] *Case study of design of a mobile health application for a chronically ill, low-literacy population*. Kay Connelly, Katie A. Siek, Janet Welch, Beenish Chaudry, Josette Jones, and Linda Scott. 2009 mHealth Summit.

[A.1] *Developing a Java Software Tool for Visualization of Oriented Matroids***.** Beenish Chaudry, Ileana Streinu, Geetika Tewari, Elif Tosun. The Journal of Computing in Small Colleges, Proc. of 5th annual CCSNE 5, 15 (April 2000), 330-331

Technical Reports

[T.2] *Discrete Sliding Conjecture and Gluing Graphs,* Beenish Chaudry*,* Smith Technical Report, December 2003

[T.1] *PushPush is NP-hard in 3D*. J. O'Rourke and Smith Problem Solving Group (including *Beenish Chaudry, Sorina Chircu, Elizabeth Churchill, Sasha Fedorova, Biliana Kaneva, Haley Miller, Irena Pashchenko, Geetika Tewari, Elif Tosun*). Smith Technical Report 064, Nov. 1999.

Under Review and in Preparation

[R.5] *Electronic Self-Monitoring of Physical Activity by Adults on Hemodialysis.* Kim Astroth, Janet Welch, Susan Perkins, Kay Connelly, Katie A. Siek, Beenish Chaudry, Josette Jones. 10 pages (*in preparation*)

[R.4] *Mobile Interfaces for Low-Literacy Populations*, Beenish Chaudry, Kay Connelly, Katie A. Siek, Janet Welch. 12 pages (*under review*)

[R.3] *Getting over the wow factor: A Study of a Mobile Health Application*. Kay Connelly, Katie A. Siek, Beenish Chaudry, Janet Welch. 10 pages (*in preparation*)

[R.2] *Research Management System for a Collaborative Biomedical Research Project*. Beenish Chaudry, Josette Jones, Janet Welch. 10 pages *(in preparation)*

[R.1] *Feasibility of a mobile application to self-monitor diet and fluid intake.* Janet L. Welch, Kay Connelly, Katie A. Siek, Josette Jones, Susan M. Perkins, Beenish Chaudry, Janet Kain, Linda Scott, Kim Astroth, Seongkum Heo, Sue McManus, Jerry T. Mooney, and Cynthia S. Johnson. 37 pages, (*in preparation*).

PROFESSIONAL ACTIVITIES

Designer and Developer for an Android application, Pennapps Mobile Application Hackathon, University of Pennsylvania, January 2011

Member of Software Engineering Team for Mossaic (Landslide Detection web-based application),

Random Hacks of Kindness**,** December 2010
Volunteer Web Designer and Developer, **Proseeds Group**, March 2010 – June 2010
Designer of a web-based application for a non-profit organization, DevDerby**,** September 2010
Active Member, Public Speaking Club, Spring 2010
Information Architect and Usability Tester, **Apartment Family Student Council**, Sept 2009 - Dec. 2009
Creative Chair, Women in Informatics and Computing, 2009 – present
Events co-Chair, Women in Informatics and Computing, 2007– 2008
Web mistress, Women in Informatics and Computing, 2005 – 2007

REFERENCES		
Kay Connelly Associate Professor Department Computer Science Indiana University Bloomington, IN 47404 Email: connelly@cs.indiana.edu Phone: 812-855-0739	Katie A. Siek Assistant Professor Department Computer Science University of Colorado Boulder, CO 80309 Email: ksiek@cs.colorado.edu Phone: 303-492-5066	Shaowen Bardzell Assistant Professor School of Informatics Indiana University Bloomington, IN 47408 Email: selu@indiana.edu Phone: 812-855-1341