25th Annual
CCSC Eastern Conference

held at

VILLANOVA
UNIVERSITY

Villanova, Pennsylvania

Friday, October 30, 2009
and
Saturday, October 31, 2009

"Treats and Some Tricks in Computer Science Education!!!!!"

A Message from the Chairs

Although CCSCE 2009 is still three months away as we write this message, there are already a number of accomplishments, invitations and acknowledgments to mention.

As you can see from this document, our program is blessed with 22 quality papers, two important panels, four fascinating tutorials and six innovative workshops. The two keynote presenters (Eric Raymond, who promises to live up to his curmudgeonly reputation in our opening session, and Tom Way, whose content at the conference banquet we're not at liberty to divulge, other than a hint that it's consistent with this year's conference theme) will provide educational and provocative presentations. Furthermore, an invited talk by Tiffany Barnes in session 2B will explore the creation and evaluation of educational games for computing. And we're also proud to be continuing and expanding CCSC's outreach to the K-12 community.

We also invite you to participate in our conference in other ways: There's time to make submissions (till September 14) for the Nifty Ideas and Lightning Talks sessions, as well as (till September 30) faculty and student posters. And don't forget to get a team together for the Programming Contest! Finally, keep the date in mind (September 30) for early registration. We believe this is the first CCSC conference that offers online credit-card registration.

The location of our conference this year cannot be beat. Villanova University is in the beautiful suburbs of Philadelphia – easy to get to, and lots to see.

We are deeply indebted to the wonderful people who have helped us plan this conference. The previous conference chairs, Sr. Jane Fritz, Elizabeth Chang and Gary Gillard, were unstintingly supportive. We also appreciate the guidance of the CCSC Board and Regional Steering Committee, notably Liz Adams. And the volunteers on this year's Conference Committee have been most generous with their time and expertise. Thank you.

We're also grateful for our sponsors and partners. If you get the chance, please thank them for their support of the teaching of computing.

CCSCE 2009 Sponsors

    ACM – The Association of Computing Machinery

    SIGCSE – ACM Special Interest Group on Computer Science Education

    UPE - Upsilon Pi Epsilon Honor Society

CCSCE National Partners
    Cengage Learning   Pearson Education
    Epic Systems Corporation   RidgeSoft
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25th Annual CCSC Eastern Conference

As of July 27, 2009

Friday Morning, 9:00 AM – 12:00 Noon, Workshops

There are three workshops scheduled at this time. Note that workshops require an additional registration fee. For more information see Workshops below.

Friday Afternoon, 12:00 Noon – 12:45 PM, Lunch

Lunch is "on your own". The Connelly Center, where most of the Conference takes place, includes a coffee shop, an ice cream shop, and a multi-tiered dining facility that serves sandwiches, pizza, salad, and more.

Friday Afternoon, 12:45 PM – 2:00 PM, Welcome / Keynote

Welcome	Conference Chairs: Don Goelman, Villanova University; John Lewis, Virginia Tech
Keynote	Eric Raymond, Author and Troublemaker After the Open-Source Revolution
Location	Cinema

Friday Afternoon, 2:00 PM – 2:45 PM, Break

Break / Vendors

Posters	Poster presentations will be held continuously from 2:15 PM to 4:30 PM
	See below for more information about the posters.

Friday Afternoon, 2:45 PM – 4:00 PM, Concurrent Session 1

Session 1A	The Radnor Room
Panel:	Certification and Standards for Computing Education in Pennsylvania
Panel Chair:	Jean Griffin, University of Pennsylvania
Panel Members:	John P. Dougherty, Haverford College; Tammy R. Pirmann, School District of Springfield Township; Rita Powell, University of Pennsylvania
Session 1B	The St. Davids Room
Tutorial:	Community Empowerment and Service Learning Practices through Computer Science Curricula of a Major Metropolitan University
Presenters:	James Lawler, Jean Coppola, Susan Feather-Gannon, Jonathan Hill, and Pauline Mosley, Pace University
Session 1C	The Bryn Mawr Room
Papers:	Tools
Session Chair:	To be determined
Paper 1:	Selecting and Using Virtualization Solutions – Our Experiences With VMWare and VirtualBox Peng Li, East Carolina University
Paper 2:	Using Subversion as an Aid in Evaluating Individuals Working on a Group Coding Project Curt Jones, Bloomsburg University
Paper 3:	Real-Time Collaboration Tools for Digital Ink Steven Lindell, Haverford College

Friday Afternoon, 4:00 PM – 4:30 PM, Break

Break / Vendors

Friday Afternoon, 4:30 PM – 5:45 PM, Concurrent Session 2

Session 2A	The Radnor Room
Special Session:	Nifty Ideas
Session Chair:	To be determined
Presenters:	To be determined

Session 2B	The St. Davids Room
Invited:	SIGCSE Invited Presentation: Game2Learn: Creating and Evaluating Educational Games for Computing
Presenter:	Tiffany Barnes, UNCC

Session 2C	The Bryn Mawr Room
Papers:	Contextualization
Session Chair:	To be determined
Paper 1:	Improving Believability of Simulated Characters Jere Miles, Wilkes Community College; Rahman Tashakkori, Appalachian State University
Paper 2:	Beyond "Not-Invented-Here": Development Environments for a MultiMedia Computation Course Stephen Carl, Sewanee: The University of the South
Paper 3:	eBay, iTunes, and Propositional Logic: Comparing Expressiveness of Different Query Languages Ian Barland, Radford University

Friday Afternoon, 5:45 PM – 6:30 PM, Reception

Reception in the President's Lounge

Friday Evening, 6:30 PM – 8:00 PM, Banquet

Banquet in the Villanova Room

Friday Evening, 8:00 PM, Banquet Speaker

Thomas Way, Villanova University, will present "The Magic of Computer Science"

Saturday Morning, 7:30 AM – 8:30 AM   Breakfast

A light breakfast will be available at a location yet to be determined.

Saturday Morning, 8:30 AM – 9:45 AM, Concurrent Session 3

Session 3A   The Radnor Room

Panel: Incorporating Ethics into the Computer Science Curriculum: Multiple Perspectives

Panel Chair: Frances Bailie, Iona College

Panel Members: Keitha Murray, Smiljana Petrovic, Iona College; Deborah Whitfield, Slippery Rock University

Session 3B   The St. Davids Room

Papers: Object Orientation

Session Chair: To be determined

Paper 1:   Method Assumptions in Object-Oriented Programming
Robert Noonan, College of William and Mary

Paper 2:   Revitalizing CS Hardware Curricula: Object Oriented Hardware Design
Ganesh Baliga, John Robinson, Leigh Weiss, Rowan University

Paper 3:   The Essence of Object Orientation for CS0: Concepts without Code
Raja Sooriamurthi, Carnegie Mellon University

Session 3C   The Bryn Mawr Room

Papers: Community

Session Chair: To be determined

Paper 1:   Perspectives Concerning the Utilization of Service Learning Projects in CS Courses
Richard Scorce, St. John's University

Paper 2:   Motivating Programmers via an Online Community
Michael Kölling, Poul Henriksen, University of Kent; Davin McCall, Deakin University

Paper 3:   Cyber-Politics: Developing an Interdisciplinary Learning Community in an Election Year
Michael Ruth, Adrian Ionescu, Wagner College

Session 3D   The Haverford Room

Vendor Session: Lego Robots

Presenter: To be determined

Saturday Morning, 9:45 AM – 10:15 AM, Break

Break / Vendors

Saturday Morning, 10:15 AM – 11:30 AM, Concurrent Session 4

Session 4A   The Radnor Room

Papers: Curriculum

Session Chair: To be determined

Paper 1:   Implementing a Baccalaureate Program in Computer Forensics
Jigang Liu, Metropolitan State University

Paper 2:   Making Service Oriented Architecture Relevant using a Multidisciplinary Approach
Thomas Way, Vijay Gehlot, Villanova University

Session 4B   The St. Davids Room

Tutorial: Greenfoot - Teaching Java with Games and Simulations

Presenter: Michael Kölling

Session 4C   The Bryn Mawr Room

Tutorial: Introducing Multi-core Programming into the Lower-level Curriculum: An Incremental Approach

Presenter: Timothy J. McGuire, Sam Houston State University

Session 4D   The Haverford Room

Papers: Robots

Session Chair: To be determined

Paper 1:   A State Diagram Creation and Code Generation Tool for Robot Programming
Sambit Bhattacharya, Denny Czejdo, Fayetteville State University

Paper 2:   Robots in the Classroom … And the Dorm Room
Jennifer Kay, Rowan University

Paper 3:   Industrial Robotic Game Playing: An AI Course
Sebastian van Delden, University of South Carolina Upstate

Saturday Morning, 11:30 AM – 12:00 Noon, Break

Break / Vendors

Saturday Afternoon, 12:00 Noon – 1:15 PM, Concurrent Session 5

Session 5A   The Radnor Room

Papers: Perceptions

Session Chair: To be determined

Paper 1:   International Computing Issues as a Freshman Seminar
Christopher Healy, Furman University

Paper 2:   Using Video to Explore Programming Thinking among Undergraduate Students
Carol Wellington, Shippensburg University

Paper 3:   Factors Impacting Student Perceptions of Computing and CIS Majors
Jeffrey Stone, David Kitlan, Pennsylvania State University

Session 5B   The St. Davids Room

Special Session: Lightning Talks

Session Chair: To be determined

Presenters: To be determined

Session 5C   The Bryn Mawr Room

Papers: Teams

Session Chair: To be determined

Paper 1:   Using Peer Led Team Learning to Assist in Retention in Computer Science Classes
Carolee Stewart-Gardiner, Kean University

Paper 2:   Student Evaluation in Monitored Team Projects
Joo Tan, Kutztown University of Pennsylvania

Session 5D   The Haverford Room

Tutorial: Introduction to Cryptography

Presenter: Seth D. Bergmann, Rowan University

Saturday Afternoon, 1:30 PM – 2:30 PM, Luncheon

Luncheon and Awards and Conference Conclusion in the Villanova Room

Saturday Afternoon, 2:45 PM – 5:45 PM, Workshops

There are three workshops scheduled at this time. Note that workshops require an additional registration fee. For more information see Workshops below.

CCSCE 2009 Posters

We invite faculty and graduate students to submit posters on relevant topics or current research. An abstract, of not more than 300 words, is required for consideration. Accepted posters that were submitted prior to April 27, 2009 are shown below. The abstracts for these posters will be included in the published Conference Proceedings.

Faculty Posters

Toward a Source Code Comment Mentoring System

Author: Peter DePasquale

Using Virtualization in the Computer Lab to Solve Sticky Problems

Author: William Thomas

Revised Content and Format of CS Associate-Level Curricular Guidelines

Authors: Elizabeth K. Hawthorne, Robert D. Campbell, Karl J. Klee, Anita M. Wright

BLOGGING: A TEACHING TECHNIQUE FOR THE TWENTY-FIRST CENTURY

Authors: Barbara Zimmerman, Najib Nadi

PALMS for CS1: Building Problem-Solving through Animated Learning Modules

Authors: Jeffrey A. Stone, Tricia Clark

Student Posters

A Multithreaded Satisfiability Solver with Load Balancing

Authors: Bethany R. Branco, Andrea F. Lobo

CCSCE 2009 Workshops

Workshops are intended to provide an in-depth review of a topic of interest, designed to be immediately useful in the classroom. We are offering three workshops on Friday morning, immediately before the conference, and three workshops on Saturday afternoon, immediately after the conference. Workshop attendance requires payment of a nominal fee: $6 for early registration (by 9/30), $8 for regular registration, and $10 for on-site registration.

Friday Morning Workshops：9:00 AM to 12:00 Noon

Workshop 1: Computer Science Unplugged

Dr. Thomas Cortina, Carnegie Mellon University

The Radnor Room

Computer Science Unplugged is a book containing a set of fun activities that teachers from K-12 (and beyond) can use to illustrate computer science principles without using a computer. This workshop will allow participants to learn how to run a number of the activities with additional discussion on variations that can be used and issues to be aware of when these are presented to students. Audience participation will be a major focus of this workshop. After a number of activities are demonstrated and discussed, participants will work together to create a new activity suitable for the Unplugged theme.

Workshop 6: Teaching a Female Friendly RPRCC (Real Projects for Real Clients Course) Introduction to Software Development at the Middle School, High School or Freshman College Level

David Klappholz, Stevens Institute of Technology

The St. Davids Room

Middle/high-school teacher attendees will learn, hands-on, how to teach a Real Projects for Real Clients Course (RPRCC) in which students work in teams to perform the interpersonal-interaction-intensive activities involved in doing the pre-programming work of designing/prototyping software to provide services to or solve problems for socially relevant clients. They will also learn how to recruit project clients, how to manage clients' expectations, and how to have the software implemented in later courses at their institutions, or by college-level teams involved in the RPRCC Initiative. For more information about the attractiveness of RPRCCs to girls and young women, see http://sites.google.com

Workshop 2: Puzzle-Based Learning

Raja Sooriamurthi, Carnegie Mellon University; Nickolas Falkner, Zbigniew Michalewicz, University of Adelaide

The Bryn Mawr Room

Puzzle-based learning (PBL) is a new and emerging model of teaching critical thinking and problem solving. In this interactive workshop we will examine a range of puzzles, brainteasers, and games. What general problem solving strategies can we learn from the way we solve these examples? A learning goal of PBL is to distill domain independent transferable heuristics for

tackling problems. In the past year we have created and taught new courses on PBL in three countries under different academic settings. In this hands-on workshop we will introduce PBL and discuss our goals and experience.

Saturday Afternoon Workshops： 2:45 PM to 5:45 PM

Workshop 5: Turning a 14 Week Non-Major Class into a 7 Week Fast Forward Class

Barbara Zimmerman, Villanova University

The Radnor Room

Challenges are faced when a full semester undergraduate non-CS major course is taught as a 7 week fast forward course. The format was downsized to one weekly 2½ hour night session. Changing from traditional undergraduate students to adult students meant an additional goal of keeping the students interested in the materials after they have worked a full day. What worked or did not and what lessons were drawn are to be discussed. Instructors who teach or will teach adults will gain from attending this workshop. Together we will explore the challenges and solutions of condensing a course and teaching the adult learner.

Workshop 4: The Animated Database Courseware (ADbC)

Mario Guimaraes and Meg Murray, Kennesaw State University

The St. Davids Room

This workshop demonstrates a set of software animations, called Animated Database Courseware (ADbC), which are designed to support the teaching of database concepts. Areas covered include database design, SQL, transactions and database security. ADbC is freely available from http://adbc.kennesaw.edu. The animations are not tailored to any specific product or textbook nor are they intended to substitute for them. Instead, they provide a means to facilitate student learning resulting in an opportunity to include more depth or breadth to the concepts covered in a database course. The workshop will explore different ways the software may be incorporated into the classroom environment.

Workshop 3: Cooperative Learning for CS1 and Beyond: Making It Work for You

Leland Beck, Alexander Chizhik, San Diego State University

The Bryn Mawr Room

Cooperative learning is a well-known instructional strategy with many significant benefits for students. This workshop will help you make the most effective use of cooperative learning in your courses. We will focus on course planning, classroom management, and other concerns brought up by participants, combining a theoretical framework with actual experiences from the classroom. The cooperative learning principles and workshop activities will be applicable throughout the curriculum. Workshop participants will also receive a complete set of class-tested cooperative learning activities that have raised test scores in CS1 by 25% at our institution. No prior experience with cooperative learning is necessary.