18th Annual

Consortium *for* Computing Sciences *in* Colleges

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Central Plains Conference

OZARKS TECHNICAL COMMUNITY COLLEGE

Springfield, Missouri

March 30-31, 2012

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FRIDAY

9:00 - 12:00

Pre-Conference Workshop
CS Principles and The Beauty and Joy of Computing Curriculum
Daniel D. Garcia Ph.D., Lecturer SOE, UC Berkeley EECS Department

This workshop is for high school and college teachers of general-interest ("CS 0") computer science courses. It presents the programming environment used in two of the five initial AP CS Principles pilot courses.

1:00 - 2:00

Keynote Address
THE BEAUTY AND JOY OF COMPUTING (BJC), AP CS PRINCIPLES, AND THE CS 10K EFFORT
Daniel D. Garcia Ph.D., Lecturer SOE, UC Berkeley EECS Department

BJC was chosen as one of the initial pilots for a new "AP CS: Principles" exam to be introduced in 2015. Under their CE21 initiative, we were funded to provide paid intensive six-week summer workshops for high school teachers. This talk will review the status of all of these projects, the development of Build Your Own Blocks (BYOB), and how faculty, students and high school teachers can engage with these important efforts.

2:10 - 3:10

The Design of an Undergraduate Web Application Development Course Using Free Technologies and Learning Materials
Srikanth Mudigonda & John Buerck, *Saint Louis University*

Workshop
Programming for the Xbox Kinect™ Sensor
Chuck Pheatt & Jeremiah McMullen, *Emporia State University*

Nifty Assignments:
Constructing and Defining Technical Diagrams Used in Software Engineering Projects
Edward Mirielli, *Westminster College*

Teaching and Assessing Ethics in Online Computer Science Courses
Russell Fail, *Kaplan University*

3:15 - 3:45 • Break (light snacks) - Networking - Vendor

3:50 - 4:50

Involving Undergraduate Computer Science Students in the Support of Academic Research: A Project Report
Scott Sigman, Mark Wood, Donald Deeds, Bruce Callen & Charles Allen, *Drury University*

Arduino Based Projects in the Computer Science Capstone Course
Paul Bender & Kay Kussmann, *McNeese State University*

An Affordable Virtual Laboratory Infrastructure to Complement a Variety of Computing Classes
Suleyman Uludag, Stephen W. Turner, Murat Karakus & Evrim Guler, *University of Michigan - Flint*

Workshop
Conducting Departmental Reviews and Serving as a Reviewer
Henry Walker, *Grinnell College*
(this workshop will run from 3:30 - 5:00)

Workshop
An Introduction to Signed and Encrypted E-mail Using a Webmail Interface
John Cigas, *Park University*

4:55 - 5:10 • Break (light snacks) - Networking - Vendor

5:15 - 6:15

Bringing Unity to the Classroom
Michael Rogers, *Northwest Missouri State University*

A Comparison of Objective-C and C#: Implementing CBOX Class
Kailash Chandra, *Pittsburg State University*

Android Authentication and Device Administration API
Ravikant Agarwal & Sergii Bilokhatniuk, *St. Norbert College*

Vendor
VMware's Academic Programs
The vITA (VMware IT Academy) Program introduces college students to VMware technologies and equips the students with VMware technical skills to compliment their chosen fields of study.

Panel Discussion
Engaging Undergraduate Computer Science Students in Academic Research – I Participated in the SaM VIP Project!
Scott Sigman, *Drury University*, Kristen Howell, *Missouri State University*, Robert Knudson, *Black Lantern Studios*, Jason Barnes, *Paperwise*

6:30 - 8:30 • Banquet • "The National Imperative to Advance Science and Engineering Research and Education".
Mr. Scott Lathrop, *Shodor Education Foundation and the National Center for Supercomputing Applications (NCSA)*.

SATURDAY

8:30 - 9:30

Learning theory in Computer Science 1: An Experiment Supporting the Use of Multiple Languages
Tim DeClue, James Cain & Jeff Kimball, *Southwest Baptist University*

Towers of Hanoi Related Problems
Suchindran Maniccam, *Eastern Michigan University*

A Game Design Approach to CS2
Daniel Cliburn, *University of the Pacific*

Vendor
LEGO Education Mindstorms NXT Hands-On Workshop

Come explore the Mindstorms robotics hardware, and program to explore how robotics can be used to bring STEM into the classroom.

Nifty Assignments:
Joplin Relief
Diana Linville, *Northwest Missouri State University*

The Drake Equation
Keith Nelms, *Piedmont College*

Active Learning with Google Presentations
Joni Adkins, *Northwest Missouri State University*

9:35 - 9:55 • Break (light snacks) - Networking - Vendor

10:00 - 11:00

Workshop
Proven Strategies That Increase Participation of High School Students in Computing
Henry Walker, *Grinnell College*

Vendor
LEGO Education WeDo Robotics

Come explore a new elementary robotics platform for 1st-3rd grade. The hands-on workshops will introduce both the hardware, and programming software that allows teachers to bring more math and science into the classroom using technology.

Vendor
Pradeep Natarajan
IBM Informix for a Smarter Planet
As the world gets smarter, we are increasingly dealing with smarter and interconnected devices. As a result, every business/organization/individual seems to be drowning in an ocean of time-dimensional data. In this presentation, the audience can learn about how Informix TimeSeries is helping clients save energy, save money, and save 'Time' in new and creative ways. Examples will include Smart Metering solution using IBM Informix for energy utility companies, Smart Traffic solution for efficient routing to reduce traffic congestion, and Smart freight pick-up delivery solution.

POSTER JUDGING
11:00 - 11:40 • Break - Networking - Vendor – Poster Sessions

11:45 - 12:45

Workshop
Computational Thinking Outreach: Reaching Across the K-12 Curriculum
Kian Pokorny & Nathan White, *McKendree University*

Lego Mindstorm NXT Controller with Peer-to-Peer Video Streaming in Android
Ravikant Agarwal, Christopher Gusman & Derek Harrington, *St. Norbert College*

Silent Partners: Discovering Computer Science in the Missouri K12 Math Curriculum
Tim DeClue, *Southwest Baptist University*; Ashley Copeland, *Macks Creek High School*; Jennifer Ray, *Stockton High School*

Workshop
Unity 3 Tutorial
Michael Rogers
Northwest Missouri State University

Workshop
How to Deliver a Gentle Introduction to LR Parsing
David Middleton
Arkansas Tech University

1:00 - 2:00 • Luncheon & Business Meeting

2:15 - 3:30 • Missouri CSTA Meeting

2:00 - 6:00 • Student Programming Contest