WestConn Research Day

Celebrate the diversity of student research at WestConn.

April 22, 2005
2 - 5 p.m.
Warner Hall, First Floor
Midtown campus
WESTCONN RESEARCH DAY
APRIL 22, 2005
PROGRAM

I. Opening Address 2:00 p.m. – 2:15 p.m.
First floor, Warner Hall
Dr. James Schmotter, President

II. Poster Presentations 2:15 p.m. – 5:00 p.m.
First floor, Warner Hall
Undergraduate student posters
Graduate student posters

III. Seminar Presentations 2:30 p.m. – 5:00 p.m.
Seminar Session I 2:30 p.m. – 3:30 p.m.
Warner Hall – Room 201
Moderator: Dr. Richard Bassett

Seminar Session II 2:30 p.m. – 3:30 p.m.
Warner Hall – Room 226
Moderator: Dr. Catherine Rice

Seminar Session III 3:45 p.m. – 4:45 p.m.
Warner Hall – Room 201
Moderator: Dr. Robin Flanagan

Seminar Session IV 3:45 p.m. – 4:45 p.m.
Warner Hall – Room 226
Moderator: Dr. Colleen Delaney

Refreshments will be served during the conference on the first floor of Warner Hall.

Compliments of Student Affairs.
Seminar Session I  
2:30 PM – 3:30 PM  
Room 201 Warner Hall  

Faculty Moderator: Dr. Richard Bassett  

COMPUTER FORENSICS:  
AN ESSENTIAL INGREDIENT FOR CYBER SECURITY  
Linda Bass*, Paul O’Brien*  
(Dr. Richard Bassett, Dept. of Management Information Systems)  
(Abstract #24)  

SECURITY AND OWNERSHIP OF PERSONAL ELECTRONIC DEVICES  
Jason Foster*, Rita Mack* and Andrew Swiatlon*  
(Dr. Richard Bassett, Dept. of Management Information Systems)  
(Abstract #27)  

WIFI AND CHEATING IN HIGHER EDUCATION  
Nick Georgakopoulos*, Erin Palomba*, and Jennifer Windels*  
(Dr. Richard Bassett, Dept. of Management Information Systems)  
(Abstract #29)  

LOOSING OUR PRIVACY:  
COOKIES, SPYWARE, AND USER PROFILING  
Brian Gong* and Elpidio Pinto*  
(Dr. Richard Bassett, Dept. of Management Information Systems)  
(Abstract #30)  

* = undergraduate presenters
22. TAX IMPLICATIONS OF THE SALE OF GOVERNMENT GRANTED WATER RIGHTS
   Shaun Wayawetzki (Dr. Michele Gazan, Dept. of Accounting)
   A partnership was granted an allocation of water from a federal irrigation project. After several years the partnership no longer required the water rights and chose to sell them to an adjacent land owner. The tax consequences of this sale depend on the nature of the gain and the partnership's basis in the water rights. Through the use of traditional legal research methods it was determined that the gain on the sale was capital, and the partnership could allocate some of the initial purchase price of the land.

UNDERGRADUATE SEMINAR SESSION PRESENTATIONS

23. VALIDATION OF THE LOCAL ACCURACY OF ATMOSPHERIC RADIATIVE TRANSFER MODELS
   Daniel Aseltin (Dr. J. P. Boyle, Dept. of Physics, Astronomy and Meteorology)
   Detailed characterization of atmospheric infrared radiation is critical for monitoring climate change and assessing the atmospheric energy balance. Ensuring that physics-based computer model predictions closely agree with measured radiation data is important for prediction. In our research, atmospheric temperature and humidity data from Brookhaven NY, Albany NY, and Chatham MA are inputs to radiative transfer models allowing estimation of atmospheric infrared radiation in the Long Island Sound Region. Radiative transfer model calculations are compared to actual shipboard measurements made aboard the R/V Connecticut from 26-30 July 2004.

24. COMPUTER FORENSICS: AN ESSENTIAL INGREDIENT FOR CYBER SECURITY
   Linda Buss, Paul O'Brien (Dr. Richard Bassett, Dept. of Management Information Systems)
   Computer forensics uses computer investigation and analysis techniques to collect evidence regarding computer activity and it admissibility is in a court of law. Computer forensics requires possession of an intricate mix of technical skills, legal knowledge and ethical behavior patterns. Computer forensics specialists use powerful software tools to uncover and sort through data and uncover the important facts that must then be presented appropriately in a court of law. Cyber crime is exploding and computer forensics is the vital discipline that has the power to control this outburst.

25. THE LIFE EXPERIENCES OF PARENTS OF CHILDREN WITH MENTAL DISABILITIES
   Maria Butt (Dr. Steve Ward, Dept. of Social Sciences)
   Parents of children with disabilities are often forced to deal with a host of unforeseen complications in their daily lives. Parenting these children can be far more demanding and time-consuming than parenting children without disabilities. The objective of this research is to understand the daily life experiences of these parents, with particular focus on the ways these parents are treated by schools, friends and family. This research uses in-depth interviews of parents of children with disabilities in the Danbury area to identify common coping strategies utilized by these caregivers, as well as variations that may exist based on social class and other demographic factors.

26. A NEW FUNCTIONAL PROGRAMMING LANGUAGE WITH DYNAMIC SYNTAX
   Tianran Chen (Dr. Garcho Ganchev, Dept. of Computer Science)
   The syntax of most programming languages is static and usually cannot be changed substantially by programmers. In this research, a new functional programming language was developed with no keywords and fully dynamic syntax. This allows programmers to choose their favorite style of programming – from pure functional to pure imperative – and thus may lead to more productivity. In particular, we believe that using functional style in imperative context helps write concise, elegant and well maintainable programs. The full control of the programmer over the language syntax may also result in program statements in non-English languages. A demonstration will be provided.

27. SECURITY AND OWNERSHIP OF PERSONAL ELECTRONIC DEVICES
   Jason Foster, Rita Mack and Andrew Swaton (Dr. Richard Bassett, Dept. of Management Information Systems)
   Love them or leave them – and do we ever leave them – everywhere, as in lost or stolen. What are they? Those ubiquitous devices more commonly known as cell phones, Blackberries, portable computers, PDAs and, jump or flash drives. These devices carry confidential information, that when mishandled, may cause financial, corporate and personal problems.
28. **TBICO (THE BRIDGE TO INDEPENDENCE & CAREER OPPORTUNITIES): A NONPROFIT ORGANIZATION SERVING THE 'WORKING POOR' IN THE DANBURY AREA**
*Ron Gainer and Dan Ryan (alumni) (Dr. Karen L. Kaza, Dept. of Marketing, and LouAnn Bloomer, President & CEO, TBICO)*

"In today's cutthroat job market, the bottom rung is as high as most workers will ever get (Business Week, May 31, 2004)." The working poor accounts for approximately 4.7% of our population (Census 2000), the majority being single women with children. TBICO assists individuals (primarily single women with children) by offering training, education, and placement services, enabling them to earn a livable wage with benefits, and hence, allowing them to break the poverty cycle affecting many families in the Danbury area. In order for TBICO to continue to successfully serve their market, they need to grow their relationships with various stakeholders (i.e., funders, volunteers, corporations, potential clients). Our study contributes to TBICO by helping this organization write and implement a marketing plan, strategically directing this organization for success within their market.

29. **WIFI AND CHEATING IN HIGHER EDUCATION**
*Nick Georgiopoulos, Erin Palomba, and Jennifer Windels (Dr. Richard Bassett, Dept. of Management Information Systems)*

Technological advances devised to make life more convenient for students are also making it easier for them to cheat. New technological devices are allowing students to pass answers to one another during exams, use the internet to copy and paste information, and use the rationale that "everyone cheats" to validate their unethical behavior. A US News and World Reports study found that 90% of students believe that cheaters are either never caught or have never been appropriately disciplined. We will identify the tools currently being used for cheating and the measures instructors and institutions must take to overcome this issue.

30. **LOOSING OUR PRIVACY: COOKIES, SPYWARE, AND USER PROFILING**
*Brian Gong and Elpidio Pinto (Dr. Richard Bassett, Dept. of Management Information Systems)*

Do you ever have the feeling that someone is watching when you are browsing the web? The truth is that your internet browser records a variety of information about you. Personal information such as your name, billing/shipping address, credit card information, social security number, and so on, are kept in a special file called "cookie." Despite the harmless name, a cookie offers the potential to track, profile, and monitor users on the internet. The extensive collection of cookies in someone's computer is considered a valuable marketing tool by marketing companies who gather this information, mostly without user's permission and/or knowledge.

31. **EXPLICITLY CORRELATING ALTRUISM AND SUCCESS TO INFLUENCE MOTIVATION FOR HELPING OTHERS**
*Laura Skrip and Morgan McClain (Dr. Robin Flanagan, Dept. of Psychology)*

Eighteen female undergraduates from Western Connecticut State University participated in a study investigating whether or not their awareness of a situation in which altruistic behavior was greatly, moderately, or slightly correlated to job success would influence their own willingness to engage in voluntary, altruistic acts. Each participant was randomly assigned to one of three conditions, varying only in the degree of this correlation between altruism and job rewards. Individuals' responses to a researcher-generated "Willingness Scale" were calculated and compared using a one-way, between-subjects analysis of variance. Although the statistical results revealed no significant link between the participants' independent variable levels and their willingness to engage in "help-others," volunteer acts, such results were suggestive enough for further research to be conducted in this area of job rewards and motivated altruism.

32. **CLOUD FORCING INFLUENCE ON DOWNWELLING INFRARED RADIATION**
*Robert Tabor (Dr. J.P. Boyle, Dept. of Physics, Astronomy & Meteorology)*

Clouds affect the amount of insolation as well as the likelihood of precipitation. Clouds also influence the amount of downwelling atmospheric infrared radiation received at the surface. Greater cloud coverage and a lower cloud deck results in more downwelling infrared radiation. In our research, data (cloud coverage and height as well as temperature and relative humidity) from National Weather Service ground stations and Long Island Sound buoys were inputted into several parameterizations. Preliminary results indicated good agreement between parameterizations and measurements. A better ability to measure cloud coverage and extent would be useful to improve accuracy.
WestConn Research Day is co-sponsored by
The Office of Academic Affairs and The Office of Student Affairs

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Dr. Susan Maskel, Biology Department
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Dr. Paula Secondo, Chemistry Department