The Center of Excellence in Wireless and Information Technology

NEWSLETTER
MAY 2015

CEWIT is an unparalleled resource, advancing the science and technology underlying the next epoch of the information revolution.

WORKSHOPS & SPECIAL EVENTS
UL SEMINAR ✦ TECHNOLOGY ROUNDTABLE

CEWIT2015 CONFERENCE
INTRODUCING BIG DATA TUTORIALS, KEYNOTE ✦ CALL FOR PAPERS

RESEARCH
AKOGLU: A GENERAL FRAMEWORK FOR METHODICAL AND INTERPRETABLE ANOMALY MINING

NEWS
ENTREPRENEUR'S TOOLKIT HOSTS FULL HOUSE ✦ STS GLOBAL LAUNCHED: A RIVAL STARTUP

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Center of Excellence
WIRELESS AND INFORMATION TECHNOLOGY
AT STONY BROOK UNIVERSITY

UL REGULATORY COMPLIANCE SEMINAR

MAY 21, 2015 · 10:00AM · THE CENTER OF EXCELLENCE IN WIRELESS AND INFORMATION TECHNOLOGY (CEWIT)

CEWIT and Underwriters Laboratories are pleased to be running a 2-3 hour seminar to educate small companies on the rules and requirements to meet Regulatory Compliance for Global Markets. The Seminar is free of cost to participating companies, though seating is limited. Interested parties, **please reserve your seat**. The following topics will be covered:

APPLIED SAFETY SCIENCE AND ENGINEERING TECHNIQUES (ASSET) · HAZARD BASED SAFETY ENGINEERING (HBSE)
Instructor: Thomas Lanzisero, P.E. · Lead Engineering Instructor, UL University, UL LLC

Integrating Fundamental Engineering Science with Product Design and Management

UL ASSET (Applied Safety Science and Engineering Techniques) and the ASSET Safety Management Process to Achieve, Maintain and Improve the Level of Safety in Products:
- Scope/Context Determination
- Hazard Identification/Analysis
- Protective Measures for Risk Reduction
- Safety Determination
- Maintaining/Improving Safety through Product Lifecycle

HBSE (Hazard Based Safety Engineering): Principles and Tools to Evaluate Hazards and Protection:
- Three-block Energy Transfer Models for Injury/ No Injury
- Process to Apply Principles to Products
- Fault Tree Analysis (FTA) Models for Injury/Protection

ELECTROMAGNETIC COMPATIBILITY (EMC) CERTIFICATION OVERVIEW
Instructors: Bob Delisi · Project Lead, UL LLC
Joe Danisi · Product Service Specialist, UL LLC

Overview: What is EMC

Country Regulatory Bodies and Regulations:
- ITE Equipment
- Medical Equipment
- Radio Equipment

Market Access:
- MRAs
- In-country Testing

Testing Overview:
- Emissions
- Immunity
- Wireless
- SAR

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EVENTS

TECHNOLOGY ROUNDTABLE · VISUALIZING THE VIRTUAL

JUNE 3, 2015 · 2:30-5:30PM · CEWIT · Dr. Ari Kaufman, Director of the Center of Visual Computing (CVC), of Center of Excellence in Wireless and Information Technology (CEWIT) at Stony Brook University will explain CVC's exceptional visualization technologies while discussing the theory and practice of volume visualization. Dr. Kaufman will lead a tour of the fully immersive Gigapixel Display Reality Deck and the Immersive Cabin Reality Deck. In collaboration, Paul Lipsky, CEO of MindYolk, will discuss practical applications to visually explain complex concepts and technologies, as well as joining the discussion, Long Island Visual Professionals (LIVP), a community of like-minded people in the digital creative landscape. **REGISTER TODAY** for this beneficial information exchange and discussion with the Long Island Community.

CEWIT 2015 CONFERENCE

BIG DATA AND DATA SCIENCE TUTORIALS

The CEWIT2015 Conference program is pleased to again offer Big Data and Data Science Tutorials for conference attendees on **DAY TWO, TUESDAY, OCTOBER 20, 2015**. Two, 3-hour, for-pay, workshops on Python Data Analytics and R Data Mining, instructed by experts from the NYC Data Science Academy Team and certified by The Center for Corporate Education at Stony Brook University.

SESSION I · PYTHON DATA ANALYTICS WORKSHOP
NUMPY, PANDAS, MATPLOTLIB, SCIPY

SESSION II · R DATA MINING WORKSHOP
CARET, RPART, RANDOMFOREST, GBM, BOOSTING

NYC DATA SCIENCE ACADEMY

CEWIT 2015 CONFERENCE

INTRODUCING KEYNOTE SPEAKER

HARRY L. LEIDER, MD, MBA, FACPE
CHIEF MEDICAL OFFICER &
GROUP VICE PRESIDENT
WALGREEN COMPANY

DIGITAL HEALTH – WHERE IS VALUE CREATED AND WHO WILL PAY?

Harry Leider, MD, MBA has over 25 years experience as a physician executive in a variety of innovative healthcare organizations. As Chief Medical Officer and a Group Vice President of Walgreens, he is responsible for developing enterprise-wide health and wellness services that provide customer value and improve patients' lives. Prior to joining Walgreens, Dr. Leider was Chief Medical Officer and Senior Vice President of Ameritox, a national laboratory that provides medication monitoring services to physicians that treat chronic pain and serious mental illness.

In addition to his extensive background in population health, Dr Leider has broad experience in managed care. He served as Chief Medical Officer at XLHealth, a Population Health company and Medicare health plan that served seniors with chronic illnesses. Previously he was Chief Medical Officer for HealthNet, a hospital-owned managed care organization, and a physician executive at Harvard Pilgrim Health Plan.

Dr. Leider speaks frequently to national audiences and is a core faculty member for the American College of Physician Executives, where he was a recent past-President and Board Chairman. His publications appear in journals and books including: the Essentials of Medical Management and Practicing Medicine in the 21st Century. He serves on the editorial boards of: Physician Executive, and the Journal of Population Health Management. Dr. Leider is a founding board member of the Disease Management Association of America and served on the Board of the Institute of Aging at the University of Pennsylvania.

Dr. Leider obtained a BA from Pennsylvania State University, an MD from the University of Pennsylvania, and his MBA from the University Of Washington Foster School Of Business. For six years he was an attending physician at Brigham and Women's Hospital and faculty member at Harvard Medical School.

SEE ALSO: AGENDA · CALL FOR PAPERS · SPONSOR AND EXHIBITOR OPPORTUNITIES

Center of Excellence
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RESEARCH

AKOGLU: A GENERAL FRAMEWORK FOR METHODICAL AND INTERPRETABLE ANOMALY MINING

Leman Akoglu, PhD, an Assistant Professor in the Department of Computer Science at Stony Brook University, has received the prestigious Faculty Early Career Development (CAREER) program award from the National Science Foundation (NSF). Akoglu will receive NSF CAREER funding of $507,000 over the next five years to support her project titled *A General Framework for Methodical and Interpretable Anomaly Mining*. The CAREER Award is given to promising young university faculty who exemplify the role of teacher-scholar through outstanding research, excellent education and the integration of both education and research.

"The NSF CAREER Award is one of the highest honors a junior faculty member can receive nationally, and I congratulate Professor Akoglu on winning the award," said Samuel L. Stanley Jr., MD, President of Stony Brook University. "The funding provided through this award helps young faculty advance their promising research, which adds greatly to the scope of Stony Brook University's STEM research and education initiatives."

Dr. Akoglu's work focuses on anomaly mining, in particular the detection of anomalies in large-scale, heterogeneous and dynamic data environments. Her project impacts security and surveillance in industry, government and society to prevent outsider intrusions, fraud and other threats. The research, in collaboration with Dr. Mark Henry, Chair of Stony Brook's Department of Emergency Medicine, will also enhance capabilities in patient healthcare. Dr. Akoglu will analyze and break down three core research areas in the field of anomaly mining: complex anomaly definitions and algorithms, ensemble methods for anomaly mining, and multi-view anomaly mining.

According to Dr. Akoglu, the educational impact of her research will involve "developing an education plan that trains students to think creatively in formulating and solving problems…and increases the role of women in Computer Science through mentoring and open house events for women in the community."

Arie Kaufman, PhD, Distinguished Professor and Chair of the Department of Computer Science at Stony Brook, strongly supported Dr. Akoglu's CAREER proposal. "She continues to shine in her research and teaching activities, working diligently to build a research agenda and to secure funding," wrote Dr. Kaufman in a letter to the NSF. "Because Dr. Akoglu's proposed work targets anomaly mining in complex environments, it has the potential to effectively reduce the attack surface area of modern communications, intelligence and computer systems," Kaufman said. "Moreover, the research could have substantial impact on a wide range of real applications, such as insider threat, cybersecurity and systems monitoring." *-Department of Computer Science, Stony Brook University, May 2015*

NEWS

ENTREPRENEUR'S TOOLKIT WORKSHOP HOSTS FULL HOUSE

CEWIT and Sensor CAT welcomed a full house to the April 21 Workshop featuring presenters Gavin Grusd of Silverman Acampora, Anthony Bennett of Hoffmann & Baron, Lori Hoberman of Hoberman Law Group, Gary Kane of Chimera Strategies, Alon Kapen of Farrell Fritz, Neil Kaufman of Abrams Fensterman, Daniel Magnus of KLD Labs, Inc., Andrew Hazen

(Serial Entrepreneur), and Leslie Whatley of START-UP NY discussing technology agnostic information as seed funding, crowd funding, profile of a fundable company, intellectual property, types of corporate entities, and other relevant topics.

The Entrepreneur's Toolkit is a chapter in CEWIT's series of "how to" workshops for entrepreneurs, early phase companies, and inventors. The next section will be held at the CEWIT2015 Conference on October 19 & 20, 2015 at the Melville Marriott Long Island.

Above: Whatley addresses the audience on the long-term benefits New York State's START-UP NY program will bring to both participating companies and the economy statewide. *-Photo Credit: Newsday / John Paraskevas, April 2015*

NEWS

STS GLOBAL LAUNCHED · A RIVAL STARTUP

Veteran Long Island CEO & Globecomm Founder, David Hershberg, launches a rival startup, STS Global Inc., at Stony Brook University's CEWIT Incubator. As part of the START-UP NY program, STS Global is a dynamic satellite communications + telecommunications company where great engineering minds and outstanding experience intersect. The company provides custom products, networks and services leveraging mainstream applications with wireless technology for clients worldwide. STS is starting as an eight-person operation in 900 square feet at the 100,000-square-foot Center. *-Newsday, LIBN, April 2015*

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Call for Papers: The 12th International Conference & Expo on Emerging Technologies for a Smarter World (CEWIT2015)
Melville Marriott Long Island | Melville, New York | October 19 & 20, 2015

Scope of the Conference

We cordially invite you to submit your contribution to the 12th International Conference & Expo on Emerging Technologies for a Smarter World (CEWIT2015). Originally known as the International Conference on Cutting-Edge Wireless & Information Technologies, this conference is organized by the New York State Center of Excellence in Wireless and Information Technology (CEWIT) located at Stony Brook University in New York.

CEWIT2015 is the premier international forum on the applications of emerging technologies in infrastructure, healthcare, and energy, which are three of the most critical components of a smarter global environment. Specific topics of interest include, but are not limited to, the following:

Area 1 – The Internet of Things (IoT)
- Wireless Sensor Networks
- Intelligent Sensors/Devices
- Collaborative Signal/Image Processing
- IoT Applications and Services
- Device and Circuit Design for IoT
- Architecture and Systems Design for IoT
- Interface and Control Systems for IoT
- IoT Data Analytics
- Mobile IoT
- IoT Testbed and Standards

Area 2 – Cybersecurity
- Mobile Security
- Internet of Things (IoT) Security
- Defenses against Zero-day and Targeted Attacks
- Defenses against Insider Threats
- Online Privacy and Anonymity
- Vulnerability Analysis and Software Protections
- Digital Forensics
- Privacy Enhancing Technologies
- Anonymity Domain Abuse and Trademark Dilution

Area 3 – Health Technologies and Medical Devices
- Advanced Medical Imaging
- Mobile Health
- Computer-Aided Diagnostics
- Wireless Telemedicine
- Noninvasive Health Monitoring
- Teleradiology
- Personal Medical Devices
- Implantable Sensors
- Medication Adherence
- Asset Tracking and Monitoring
- Implantable Prosthetics

Area 4 – Big Data Analytics and Visualization
- Model Driven Data Analysis
- Data Mining in Business Intelligence
- Text Mining & Sentiment Analysis
- Visual Analytics
- Biomedical and Healthcare Informatics
- Distributed Robotics and Real-Time Data Analytics
- Virtual and Augmented Reality
- Immersive Interface
- Tiled Displays
- Human Computer Interaction
- GPU Clustering

Area 5 – Smart Urban Systems
- Securing the Transportation Infrastructure
- Transportation Infrastructure Sensing
- Traffic Simulation & Visualization
- Interaction between Vehicles and the Environment
- Integrated Management Technology for Ubiquitous City
- Sensor Network for Water and Electric Utilities
- Urban Pollution

Area 6 – Smart Energy
- Distributed Sensor Networks for Smart Grid
- Advanced Metering Infrastructure
- Energy Efficient Computing
- Advanced Sensor and RFID Technologies
- Smart Grid Interoperability
- Simulation and Modeling

Area 7 – Information Technology and Society
- Worldwide Economic Impact of IT
- IT in Education
- IT as the Job Creation Engine
- Social Media
- Information Dissemination
- Global Impact

Submission Guidelines

CEWIT2015 is primarily interested in serving as a venue for the discussion of technical contributions highlighting end-to-end technical solutions, applications and systems, even if available only in prototype form. Therefore, we strongly encourage authors to submit abstracts describing their contributions in an application-oriented context.

Abstracts will be evaluated by conference program committee members and external reviewers. Submissions will be judged on validity, originality, technical strength, practical significance, quality of presentation, and relevance to the conference topics. We encourage submissions from a variety of fields where in-depth application-centric ideas addressing important challenges related to the conference theme are discussed. Authors of accepted oral presentations may submit a full paper to be included in the conference proceedings.

In addition to the oral presentations, we encourage participation in the poster session to present on-going research and innovative application projects. A judging panel of industry and academic experts will evaluate the posters and determine the winners of Best Poster and Best Student Poster Awards.

Please submit your abstract electronically at www.cewit.org/conference2015. Submission guidelines and other information will be provided on the conference website.

Important Dates

Abstract Submission Deadline: *July 1, 2015*
Notification of Acceptance: *August 1, 2015*
Camera-Ready Paper & Presentation Materials: *September 1, 2015*

Contact Information

For more information about CEWIT2015, please visit www.cewit.org/conference2015 or contact the conference general chair Dr. Shmuel Einav or the program committee chair Dr. Rong Zhao at +1 631-216-7000 or email conference@cewit.org.

Venue

CEWIT2015 will be held at the Melville Marriott Long Island, the largest full-service hotel in Suffolk County with a 5,000-square-foot atrium-enclosed lobby and 369 spacious guest rooms. In addition, this breathtaking Melville hotel's amenities include a Concierge Level, 24-hour fitness facility, sparkling indoor pool, and a full-service restaurant and lounge. Guests at the hotel can also enjoy 21,000 square feet of state-of-the-art meeting space, dedicated event professionals and impeccable catering services for business meetings and social celebrations. The Melville Marriott is conveniently situated just 20 miles from Islip Airport, 30 miles from JFK Airport and 30 miles from LaGuardia Airport. For more information please visit http://www.marriott.com/hotels/travel/nycml-melville-marriott-long-island/.

IEEE *CEWIT2015 is technically co-sponsorship by IEEE Region 1 and its Long Island section. Peer reviewed conference papers will be submitted for inclusion in the IEEE Xplore online database and EI.*

SAVE THE DATE

OCTOBER 19 & 20, 2015

The 12th International Conference & Expo on Emerging Technologies for a Smarter World (CEWIT2015)

Melville Marriott Long Island, Melville, New York

FOR MORE INFORMATION & TO REGISTER:
WWW.CEWIT.ORG/CONFERENCE2015