Tentative Program

NATIONAL CONFERENCE ON ADVANCES IN ENVIRONMENTAL SCIENCE AND TECHNOLOGY

Thursday, September 12, 2013

Alumni Foundation Events Center
North Carolina A&T State University
Greensboro, North Carolina

www.ncat.edu/~wmi
**Thursday, September 12, 2013**  
**8:40 – 9:25 am**  
**Keynote Speakers**  
Steven E. Sullivan, CEO and Chairman of the Board Sullivan International Group, Inc  
Greg Green  
United States Environmental Protection Agency

### CONCURRENT SESSION I

<table>
<thead>
<tr>
<th>Time</th>
<th>Authors</th>
<th>Title of the paper</th>
<th>Main Topic</th>
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</thead>
</table>
| 9.30-9.50    | Nana Abayie Boakye-Boaten, Shuangning Xiu, Abolghasem Shahbazi  
NC A&T SU Greensboro, NC | Separate hydrolysis and fermentation of untreated and pretreated alfalfa cake to produce ethanol |                                      |
| 9.50-10.10   | William G. “Gus” Simmons  
Cavanaugh & Associates,  
P.A., Wilmington, NC | Next generation manure technology – waste to energy and environmental revenues |                                      |
| 10.10-10.30  | Ubani O, Atagana H I  
University of South Africa,  
Pretoria, Gauteng, South Africa | Compost bioremediation of oil refinery sludge by using different manures in a laboratory condition. | Waste Management |
| 10.30-10.50  | Emmanuel Ansah, Hui Wang, Lijun Wang, Abolghasem Shahbazi, Gudigopuram B. Reddy  
NCA&T SU Greensboro, NC | Technical and economic analysis of the pyrolysis of municipal solid waste into bio-oil | Sustainable Energy |
| 10.50-11.00  | Break                                                                  |                                                                                     |                                      |
| 11.00-11.20  | Shahrzad Hosseinnezhad, Elham Fini, Mufeed M. Basti  
NCA&T SU Greensboro, NC | Preparation and characterization of bio-adhesive produced from animal waste to be used as asphalt binder |                                      |
| 11.20-11.40  | Vereda Johnson Williams  
NCA&T SU Greensboro, NC | Scrap tires air emissions in North Carolina |                                      |
| 11.40-12.00  | Zakiya Leggett and Eric Sucre  
Southern Timberlands Technology, Weyerhaeuser Company, Vanceboro, NC | Evaluating environmental effects of managing pine plantations intercropped with switch grass for biofuel production | Sustainable Energy |
| 12.00-1.30   | LUNCHEON  
**SPEAKER:** Barry B. Edwards, P.E., Director of Utilities and Engineering Catawba County, North Carolina |                                                                                     | Sustainable Energy |
| 1.30-1.50    | Nihal AlRaees, Nabil Nassif  
NCA&T SU Greensboro, NC | The effect of ventilation control strategy and economizer on energy consumption for air source heat pump | Sustainable Energy |
| 1.50-2.10    | Thomas Gardler and V. N. Kabadi  
NCA&T SU Greensboro, NC | Chemical and thermo-physical characterization of aviation fuels |                                      |
| 2.10-2.30    | John P. Kizito  
NCA&T SU Greensboro, NC | Minimization of water consumption in power generation |                                      |
| 2.30-2.50    | Somsubhra Chattopadhyay, Manoj K. Jha  
NCA&T SU Greensboro, NC | Assessment of climate change impact on watershed hydrology |                                      |
<p>| 2.50-3.00    | Break                                                                  |                                                                                     |                                      |</p>
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| 3.00-3.20 | Tony Nguyen, Nabil Nassif  
*NCA&T SU Greensboro, NC*               | Optimization of HVAC System Using Genetic Algorithm                              |                          |
| 3.20-3.40 | Christopher L. Hal, Dante’ Freeland, Nabil Nassif  
*NCA&T SU Greensboro, NC* | Optimizing ice thermal storage to reduce energy cost                             |                          |
| 3.40-4.00 | Raymond Tesiero, Nabil Nassif, Harmohinder Singh  
*NCA&T SU Greensboro, NC*          | Artificial intelligent approaches for modeling and optimizing HVAC systems       |                          |
| 4.00-4.20 | Gwendolyn Mcfadden, Nabil Nassif  
*NCAT SU Greensboro, NC* | Tax policy’s role in promoting sustainability                                   | Economics & Environmental Justice |
| 4.20-4.40 | Godfrey A. Uzochukwu, Vereda J. Williams  
*NCA&T SU Greensboro, NC*            | Disaster preparedness, resilience and waste management in underrepresented communities |                          |
| 4.40-5.00 | Godfrey Ejimakor, Obed Quaicoe and Kingsley Bonsu  
*NCA&T SU Greensboro, NC*        | Economic and environmental tradeoffs in sustainable food production               |                          |

**THURSDAY, SEPTEMBER 12, 2013: CONCURRENT SESSION II**

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<th>Time</th>
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| 9.30-9.50 | Wei Tao, Junming Chen, Jing Zhang, Xiangdong Zhang  
*NCA&T SU Greensboro, NC  
*International Arctic Research Center, University of Alaska Fairbanks (UAF), Fairbanks, AK* | Arctic storms and their impacts on the surface wind over Chukchi-Beaufort seas | Climate Change          |
| 9.50-10.10 | Mohammad Sayemuzzaman, Manoj K Jha  
*NCA&T SU Greensboro, NC* | Trend of climate variability in North Carolina during the past decades |                          |
| 10.10-10.30 | Jing Zhang  
*NCAT Greensboro* | Modeling cold land surface processes with the NOAH land surface model |                          |
| 10.30-10.50 | Saeed A. Hayek, Aboghasem Shahbazi, Mulumebet Worku, Salam A. Ibrahim  
*NCA&T SU Greensboro, NC* | Enzymatic activities of lactobacillus grown in a sweet potato base medium | Food Bioprocessing      |
| 10.50-11.00 | **BREAK** | |                          |
| 11.00-11.20 | Saeed A. Hayek, Aboghasem Shahbazi, Salam A. Ibrahim  
*NCA&T SU Greensboro, NC* | Impact of different metal ions on the enzymatic activity of lactobacillus reuteri growing in a sweet potato base medium |                          |
| 11.20-11.40 | Rabin Gyawali, Amira Ayad, Aboghasem Shahbazi, Salam A. Ibrahim  
*NCA&T SU Greensboro, NC* | Antimicrobial activity of copper or ascorbic acid alone and in combination with organic acid to decontaminate Escherichia coli O157:H7 from fresh produce |                          |
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<tr>
<td>11.40-12.00</td>
<td>D.A. Gad El-Rab, Aboghasem Shahbazi, Amira Ayad, Salam A. Ibrahim NC A&amp;T SU <em>NCA&amp;T SU Greensboro, NC</em></td>
<td>Improve acid tolerance response of lactobacillus sp. by adaptive evolution during acid stress</td>
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<td><strong>12.00-1.30</strong></td>
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<td><strong>LUNCH</strong></td>
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<tr>
<td>1.30-1.50</td>
<td>Godwin Appiah Assumaning, Shou-Yuh Chang <em>NCA&amp;T SU Greensboro, NC</em></td>
<td>Application of Kalman filter embedded with neural network in subsurface contaminant transport modeling</td>
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<td>1.50-2.10</td>
<td>Fengjing Liu, Dandan Huang, John Yang, Guolu Zheng, Bin Hua <em>Lincoln University, Jefferson City, MO</em></td>
<td>Land use change and stream water quality in Hinkson creek watershed</td>
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<tr>
<td>2.10-2.30</td>
<td>Shou-Yuh Chang, Anup Saha <em>NCA&amp;T SU Greensboro, NC</em></td>
<td>Application of 3D VAR ensemble Kalman filter in a subsurface contaminant transport model with a continuous pollutant source</td>
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<td>2.30-2.50</td>
<td>Jenberu Feyyisa, Manoj K. Jha, Shou-Yuh Chang <em>NCA&amp;T SU Greensboro, NC</em></td>
<td>Extent and fate of contaminant in the shallow aquifer of Buffalo Creek, Greensboro</td>
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<td>2.50-3.00</td>
<td><strong>BREAK</strong></td>
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<td>3.00-3.20</td>
<td>Mahdi Sadeghi Pour Marvi, Ahmad Ali Pour Babaei <em>University of Tehran, Iran</em></td>
<td>Novel PHB production using nitrogen fixation biotechnology</td>
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<td>3.20-3.40</td>
<td>Richard Crume, Yoko Crume, <em>US EPA and NC A&amp;T SU</em></td>
<td>Social services agencies in Japan engage clients in renewable energy activities and inspire the community</td>
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<tr>
<td>3.40-4.00</td>
<td>Rawfin Zaman, William Edmonson <em>NCA&amp;T SU Greensboro, NC</em></td>
<td>Designing remote in-situ soil moisture sensor network for small satellite data retrieval</td>
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<td>4.00-4.20</td>
<td>A. Abusalih, I. McGill, K. Kosaraju, J. Yan, S. Aravamudhan <em>NCA&amp;T SU Greensboro, NC</em></td>
<td>Detection of carbon nanotubes in environmental samples</td>
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| 1   | Bernice D. Karlton-Senaye, Aboghasem Shahbazi, Salam A. Ibrahim  
*NCA&T SU Greensboro, NC* | Impact of gums on the growth of probiotic microorganisms | Food Bioprocessing |
| 2   | Temitayo O. Obanla, Rabin Gyawali, Aboghasem Shahbazi, Salam A. Ibrahim  
*NCA&T SU Greensboro, NC* | Interaction between bifidobacteria strains and medical drugs |  |
| 3   | Saeed A. Hayek, Aboghasem Shahbazi, Saddam S. Awaish, Nagendra P. Shah, Salam A. Ibrahim  
*NCA&T SU Greensboro, NC* | Using sweet potatoes as a basic component to develop a medium for cultivation of lactobacilli |  |
| 4   | Quazi Rahman, Bo Zhang, Lijun Wang and Abolghasem Shahbazi  
*NCA&T SU Greensboro, NC* | Simultaneous saccharification and fermentation of green microalgae and biomass into ethanol and acetic acid | Sustainable Energy |
| 5   | Shou-Yuh Chang, Elvis B. Addai  
*NCA&T SU Greensboro, NC* | An adaptive Kalman filtering scheme to improve the efficiency of a groundwater contaminant transport model | Fate and transport of contaminants |
| 6   | Shou-Yuh Chang, Torupallab Ghoshal  
*NCA&T SU Greensboro, NC* | Ensemble square root Kalman filter in a 3-D subsurface contaminant transport model |  |

**EXHIBITORS**

Sullivan International Group, Inc

The Interdisciplinary Waste Management Institute

CDM Smith

VHI

Cape Fear River Assembly

United States Environmental Protection Agency

Department of Energy – Savannah River Operations Office

Energy and Environmental Systems PhD Program

Waste Disposal Solutions

City of Greensboro