

IEEE 11th HONET-PfE2014 Proceedings



Day 0 - Sunday, Dec 14, 2014

Welcome and Reception

6:00 pm - 8:30 pm

Holiday Inn Charlotte University

8520 University Executive Park Dr Charlotte, NC

**Day 1, Day 2 and Day 3 Technical Programs will be held at
UNC Charlotte, CRI Campus, EPIC Building**

Conference Committees

General Chair(s)

| | | | |
|--|---|--|--|
| <p>Dr. Ian Ferguson Vice Provost & Dean COE & Computing Missouri University of Sc. & Tech Rolla, MO, USA ianf@mst.edu</p> | <p>Dr. Glenn D. Boreman Prof. and Chair, Physics & Optical Science Dir., Center for Optoelectronics & Optical Communications UNC Charlotte, USA gboreman@uncc.edu</p> | | |
|--|---|--|--|

Conference and TPC Chairs

| | | | |
|---|--|--|---|
| <p>Dr. Ziya Arnavut Conf. Co-Chair Prof., Computer Science Department SUNY Fredonia, NY, USA ziya.arnavut@fredonia.edu</p> | <p>Dr. Jim M. Conrad Conf. Co-Chair Prof., ECE Department, UNC Charlotte, NC, USA jmconrad@uncc.edu</p> | <p>Dr. Ahmed E. Kamal TPC Co-Chair Prof., ECE, Iowa State University, Ames, IA, USA kamal@iastate.edu</p> | <p>Dr. Kamal Alameh TPC Co-Chair Prof. & Dir., Electron Science Research Institute, Edith Cowan University, Joondalup, Australia k.alameh@ecu.edu.au</p> |
|---|--|--|---|

Finance Chairs

| | | | |
|--|---|--|--|
| <p>Dr. Michael A. Fiddy, Prof. Electrical & Computer Engineering and Physics & Optical Science Dept., UNC Charlotte Charlotte, NC 28223, USA mafiddy@uncc.edu</p> | <p>Dr. M. Yasin Akhtar Raja, Prof. Ctr. for Optoelectronics & Optical Communications and Physics & Optical Science Dept., UNC Charlotte Charlotte, NC 28223, USA raja@uncc.edu</p> | | |
|--|---|--|--|

| Information Chair(s) | | | |
|--|--|--|--|
| Dr. Burak Kantarci Co-Chair EE&CS, University of Ottawa, ON, Canada kantarci@site.uottawa.ca | Dr. Syed Ali Haider Co-Chair SEECS-NUST, Islamabad, Pakistan ali.haider@seecs.edu.pk | | |
| Publication Committee co- Chairs | | | |
| Dr. M. Yasin Akhtar Raja Phys & Optical Sc. UNC Charlotte, USA raja@uncc.edu | Dr. Syed Ali Haider SEECS, NUST, Islamabad, Pakistan ali.haider@seecs.edu.pk | | |
| Industry Expo co-Chairs | | | |
| Dr Johan Enslin Professor ECE and Director EPIC (energy production infrastructure center) UNC Charlotte, NC, USA jenslin@uncc.edu | Dr. Glenn D. Boreman Prof. & Chair, Phys & Optical Sc. Dir. Ctr. for Optoelectronics & Optical Communications UNC Charlotte, USA gboreman@uncc.edu | | |
| Co-Chairs: Poster Sessions | | | |
| Dr. Asis Nasipuri, | ECE, UNC Charlotte, USA | anasipur@uncc.edu | |
| Dr. Awad Gerges | Phys & Opt.Sc. UNC Charlotte | agerges@uncc.edu | |
| Dr. Tsing-Hua Her | Phys & Opt.Sc. UNC Charlotte | ther@uncc.edu | |
| Steering Committee Chairs and Members | | | |
| Dr. M. Yasin Akhtar Raja, Prof. Ctr. for Optoelectronics & Optical Communication, Physics & Optical Sc. Dept., UNC Charlotte NC 28223, USA; raja@uncc.edu | Dr. Syed M. H. Zaidi Dean, SEECS National University of Science & Technology (NUST), Pakistan drzaidi@seecs.edu.pk | | |

| | | | |
|--------------------------------|--|--|--|
| Dr. Hussein Mouftah | University of Ottawa, Canada | mouftah@site.uottawa.ca | |
| Dr Hasan AMCA | EMU, N. Cyprus | hasan.amca@emu.edu.tr | |
| Dr. M Manshad Satti | ITBUtler, Dubai, UAE | msatti@itbutler.com.au | |
| Dr M Asghar Hashmi | IUB, Pakistan | mhashmi@iub.edu.pk | |
| Dr. Ray Tsu | UNC Charlotte, USA | tsu@uncc.edu | |
| Dr. John Zavada | NSF, Arlington, USA | jzavada@nsf.gov | |
| Dr. Justin Schwartz | ECE, NC State, USA | justin_schwartz@ncsu.edu | |
| Dr. Janakiraman Kumar | Anna University, Chennai, India | marsjk@gmail.com | |
| Dr. Abdallah Ougazzaden | Dir., G.Tech-Lorraine; VP Lafayette Institute, France | abdallah.ougazzaden@ece.gatech.edu | |
| Dr. Asif Khan | USC, Columbia, USA | asif@cec.sc.edu | |
| Dr. Mahmood Nagrial | University of Western Sydney, Australia | M.Nagrial@uws.edu.au | |
| Dr. Ram Gopal | University of Allah Abad, India | profrgopal@gmail.com | |
| Dr. M. Ilyas | FAU, Boca Raton, FL, USA | ilyas@fau.edu | |

DAY 1- Monday, Dec 15, 2014

Venue: EPIC G-287

| | | |
|----------------------------|---------------|---|
| Plenary Session | 08:00 – 08:30 | Registration at EPIC Atrium |
| | 08:30 – 08:40 | Opening Remarks, Dr. Joan Lorden, Provost , UNC Charlotte, NC,USA |
| | 08:40 – 08:50 | M. Yasin Akhtar Raja, Steering Chair/Glenn Boreman & Ian Ferguson General Chairs HONET, USA |
| | 08:50 – 09:10 | Keynote 1: Rajendra Singh, Distinguished Prof. Clemson University, SC, USA: <i>Emerging Revolutionary Role Of Photovoltaics (PV) in Energy Sector and R &D Directions for Further Cost-Reduction of Electricity Generated by PV</i> |
| | 09:10 – 09:30 | Keynote 2: Hussain T. Mouftah, Distinguished Prof. SITE Univ Ottawa, Canada: <i>Connected Electric Vehicles in Smart Cities</i> |
| | 09:30 – 09:50 | Keynote 3: Young Min Song & Yong Tak Lee, Director APRI, GIST, South Korea: <i>Nano-engineered High-efficiency Solar Cells</i> |
| | 09:50 – 10:10 | Keynote 4: Karen R. Forsten, Director Power Delivery & Utilization EPRI, USA: <i>The Integrated Grid, Realizing the Full Potential of Central and Distributed Resources</i> |
| | 10:10 – 10:30 | Keynote 5: Mirsad Hadzikadic, Director Complex Sys Institute, CCI, UNC Charlotte, NC, USA: <i>Big Data and UNC Charlotte</i> |
| COFFEE BREAK 10:30- 11:00 | | |

| | | | |
|---|---|---|---|
| <h1>HS1</h1> | HONET SESSION – 1 KEYNOTE/INVITED SPEAKERS Hall: EPIC G-287 | | Local Chair: <i>Dr. Michael A. Fiddy, Dir. Metamaterials Center, UNC Charlotte, USA</i> Int'l Chair: <i>Dr. Syed M. H. Zaidi, Dean, SEECS-NUST, PK</i> |
| | HS1-1 11:00 – 11:30 | Keynote 6: Alex Gurary, Principal Development Engineer, Veeco Corporation, USA: <i>New single wafer reactor MOCVD platform for GaN based Power Devices</i> | |
| | HS1-2 11:30 – 11:50 | Invited: Dr. Johan Enslin, Director EPIC, UNC Charlotte, NC, USA <i>DER and Microgrids - A Sure thing or a Fading Myth?</i> | |
| | HS1-3 11:50 – 12:10 | Invited: Dr. Benjamin Klein, Prof. Physics and Astronomy, Georgia Tech, Atlanta, GA <i>Piezo-Phototronic effect in ZnO nanowire LEDs</i> | |
| | HS1-4 12:10 – 12:30 | Invited: Dr. Raphael Tsu, Distinguished Prof. Emeritus , ECE Dept., UNC Charlotte, NC, USA <i>ISM: Integrated-Superlattice-Met material</i> | |
| LUNCH BREAK, 12:30 – 13:30 (EPIC Multiple Rooms) | | | |
| <h1>HS2</h1> | HONET SESSION – 2 Invited Speakers Hall: EPIC G-287 | | Local Chair: <i>Dr. Badrul Chowdhury , Prof ECE/EPIC, UNC Charlotte, NC, USA</i> Int'l Chair: <i>Dr. Mahmood Nagrial, UWA, Sydney, Australia</i> |
| | HS2-1 13:30 – 13:50 | Invited: Mr. Thomas Fenimore, Technology Development Manager Duke Energy Corp., Charlotte, USA: <i>Overcoming the Challenges of Inverter Only Based Microgrids on Distribution circuits</i> | |
| | HS2-2 13:50 – 14:10 | Invited: Dr. Nikolaus Dietz , Optics and Photonics (Group Chair), Georgia State University, USA: <i>Development and integration of indium-rich group III-nitrides for energy generation / utilization</i> | |
| | HS2-3 14:10 – 14:30 | Invited: Dr. Arindam Maitra, Principal Technical Lead EPRI, Charlotte, NC,USA: <i>Utility Deployed Grid Interactive Microgrid controller for Resilient Communities</i> | |
| TEA BREAK 14:30- 15:00 | | | |

| | | | |
|--|--|--|--|
| <h1>HS3</h1> | HONET SESSION - 3 Communication Networks & Cyber Security Hall: EPIC G-287 | | Local Chair: <i>Dr. Ziya Arnavut, Prof. CSE, SUNY, Fredonia, NY, USA</i> Int'l Chair: <i>Dr. Sahar Idwan, Assoc Dean, Engg, American University of Ras' Al-Khaimah, UAE</i> |
| | <u>HS3-1</u> 15:00 – 15:15 | Arash Deylamsalehi, Thilo Schöndienst and Vinod Vokkarane. <i>Real-time Energy Price Aware Network Routing</i> | |
| | <u>HS3-2</u> 15:15 – 15:30 | Syeda Areeba Nasir, Muhammad Mustaqim and Dr. Bilal A. Khawaja. <i>Antenna Array for 5th Generation 802.11ac Wi-Fi Applications</i> | |
| | <u>HS3-3</u> 15:30 – 15:45 | Asghar Abbas Razzaqi, Muhammad Mustaqeem and Khawaja Bilal Ahmed. <i>Antenna Array Design for Multi-UAVs Communication in Next Generation Flying Ad-Hoc Networks (FANETs)</i> | |
| | <u>HS3-4</u> 15:45 – 16:00 | Wilmer Arellano, Imad Mahgoub and Mohammad Ilyas. <i>Veins Extensions to Implement a Message Based Algorithm for Dynamic Traffic Assignment in VANETs Simulations</i> | |
| | <u>HS3-5</u> 16:00 – 16:15 | Fehmida Usmani, Syed M. H. Zaidi, A. Awais and M. Yasin Akhtar Raja. <i>Efficient Dynamic Bandwidth Allocation Schemes in Long-Reach Passive Optical Networks- a Survey</i> | |
| | <u>HS3-6</u> 16:15 – 16:30 | Khaled Harfoush. <i>On the Practicality of Elliptic Curve Cryptography for Medical Sensor Networks</i> | |
| | <u>HS3-7</u> 16:30 – 16:45 | Diab Alhamad and Khurram Kazi. <i>Light weight HTTP protocol for transport and content sharing in 5G cellular networks</i> | |
| | <u>HS3-8</u> 16:45 – 17:00 | Nabil Naas, Burak Kantarci and Hussein T. Mouftah. <i>Green Realistic Design of Multi-Granular Optical Core Networks</i> | |
| | <u>HS3-9</u> 17:00 – 17:15 | Khaled Maamoun and Hussein Mouftah. <i>Progressive Shifting Geographic Midpoint – An Enhanced Constraint-based Trail Routing Protocol for All- Optical Networks</i> | |
| <u>HS3-10</u> 17:15 – 17:30 | S. G. Roy and M. Kudenov <i>Snapshot Imaging Fraunhofer Line Discriminator</i> | | |
| RECEPTION and POSTER SESSION 18:30 – 20:30 EPIC Building and Grigg Building | | | |

DAY 2- Tuesday , Dec 16, 2014

| | | |
|--------------|--|---|
| HS4 | HONET SESSION – 4 Photonics for Energy and Novel Materials-A Hall: EPIC G-287 | Local Chair: <i>Dr. Abasifreke Ebong, Prof. ECE/EPIC UNC Charlotte, NC, USA</i> Int'l Chair: <i>Dr. Kamal Alameh, Dir. Edith Cowan University, Australia</i> |
| | HS4-1 08:00 – 08:30 | Keynote7: (SPIE Spl),Colin J. McKinstrie, Applied Communication Sciences, Red Bank, New Jersey, USA <i>Physics and applications of optical parametric devices</i> |
| | HS4-2 08:30 – 08:45 | Invited: Yong Zhang, UNC Charlotte, USA <i>The roles of point and extended defects in semiconductors, and the interplay of point defects, extended defects, and carrier localization in the quantum efficiency droop in InGaN QW LEDs</i> |
| | HS4-3 08:45 – 09:00 | Invited: Arshad Mahmood, Director Fab Labs, NILOP, Islamabad, Pakistan <i>Implantation Effects of transition metal in GaN epitaxial films prepared by RF-Plasma assisted MBE</i> |
| | HS4-4 09:00 – 09:15 | Angy Ortiz, Dawn Marin, Jennifer Kassel, Emily Schmidt and Michael Walter. <i>Linking Molecular Structure and Singlet Exciton Diffusion Length in Organic Porphyrin Chromophore Thin Films</i> |
| | <u>HS4-5</u> 09:15 – 09:30 | Prakash Mishra, Rahi Patel, Babar Hussain, Justin Stansell, Bahadir Kucukgok, M. Yasin Akhtar Raja, Na Lu and Ian Ferguson: <i>Spatial Analysis of ZnO Thin Films Prepared by Vertically Aligned MOCVD</i> |
| | <u>HS4-6</u> 09:30 – 09:45 | M. Baig, Aslam Farooq, S Shehri, Mohammad S Al-Salhi, M Al Garawi, S Al-Ghamdi and M. Atif <i>Study of radiation induced variation in structural and Optical properties of Polyallyl diglycol carbonate Polymer</i> |
| | <u>HS4-7</u> 09:45 – 10:00 | Mohamed Adel Gouda Shemis, Mohammad Ashraf Gondal, E. Alkhazraji, M. Najmi, M. A. Abalkhail, I. Khan, T. B. Susilo, S. G. Rashid and M. A. Alsunaidi: <i>Synthesis and Photoluminescence of Metal Coated ZnO Nanoparticles</i> |
| | <u>HS4-8</u> 10:00 – 10:15 | Nicolas Kudsieh, Muhammad Khizar and M. Yasin Akhtar Raja: <i>Novel Graphene heat spreaders for the thermal management of Micro-LED arrays for optical communication</i> |
| | COFFEE BREAK 10:15 – 10:30 | |
| HS4-9 | Qiong Chen and Yong Zhang: | |

| | | | |
|--|--|--|---|
| | 10:30 – 10:45 | <i>Spatially resolved characterization of CZTSe materials and solar cells</i> | |
| | HS4-10 10:45 – 11:00 | Jianwei Wang, Yong Zhang, Lok C. Lew Yan Voon and Morten Willatzen. <i>New 2-D material phosphorene: electronic structure and strain effect studied by density-functional theory calculations</i> | |
| | HS4-11 11:00 – 11:15 | J. K. Marmona, Yong Zhang, Satish Chandra Rai, Kai Wang, Jiajun Chen and Weilie Zhou. <i>Laser-induced changes in a nearly lattice matched all wurtzite CdSe/ZnTe type II core-shell nanowire with epitaxial interface for photovoltaic application</i> | |
| | HS4-12 11:15 – 11:30 | L. Su, Yong Zhang, Yifei Yu and Linyou Cao. <i>Interaction between 2-D materials and supporting substrates: MoS2 and WS2</i> | |
| LUNCH BREAK 11:30 – 13:00 (CRI-PORTAL Building) | | | |
| HS5A | | HS5B | |
| Cloud Computing & Software Defined Networks Hall: EPIC G-287 | | Smart- and Micro-Grids Hall: EPIC G-222 | |
| Local Chair: <i>Dr. Khurram Kazi, L-3 Communications, NJ, USA</i> Int'l Chair: <i>Dr. Habib Fathallah, ECE, KSU, Riyadh, Saudi Arabia</i> | | Local Chair: <i>Dr. Yong Zheng, Distinguished Prof. ECE/EPIC, UNC Charlotte, NC, USA</i> Int'l Chair: <i>Dr. Syed M. H. Zaidi, Dean, SEECS-NUST, Islamabad, PK</i> | |
| HS5A-1 13:00 – 13:15 | Invited: Dr. Mohammad Ilyas, Dean COE and Computer Sciences, FAU, Boca Raton, FL, USA <i>Sensor Networks and Smart Systems</i> | HS5B-1 13:00 – 13:15 | Invited: Manohar Chamana and Badrul Chowdhury. <i>Impact of Smart Inverter Control with PV systems on Voltage Regulators in Active Distribution Networks</i> |
| HS5A-2 13:15 – 13:30 | Brian Bouterse, Harry Perros and David Thuente. <i>Multiobjective Cloud Capacity Planning for Time-Varying Customer Demand</i> | HS5B-2 13:15 – 13:30 | Ravil Bikmetov, M. Yasin Akhtar Raja, Khurram Kazi, Syed M. H. Zaidi and Badrul Chowdhury. <i>Role of PONs with the Conventional Communication Systems used in Today's Smart- and MicroGrids</i> |
| HS5A-3 13:30 – 13:45 | Muhammad Aslam, Ahsan Nabi Khan, Afraz Z. Syed and Ana Maria Martinez Enriquez. <i>Visualizing Norm Polarities for Ethical Filtering: Using color-encoded Normative Tag Cloud</i> | HS5B-3 13:30 – 13:45 | Sam Shue and James Conrad. <i>Development of a Portable XBee C Library and RSSI Triangulation Localization Framework</i> |
| HS5A-4 | Moayad Aloqaily, Burak Kantarci and Hussein | HS5B-4 | Shota Yokojima and Hitoshi Hayashi. |

| | | | |
|---|--|--|--|
| 13:45 – 14:00 | Mouftah. <i>On the impact of Quality of Experience (QoE) in a vehicular cloud with various providers</i> | 13:45 – 14:00 | <i>High-speed Start-up and Low-power Encoding Circuit for Sensor Networks</i> |
| <u>HS5A-5</u> 14:00 – 14:15 | Muhammad Adnan, Muhammad Afzal, Muhammad Aslam, Roohi Jan and Ana Maria Martinez Enriquez. <i>Minimizing Big Data Problems using Cloud Computing Based on Hadoop Architecture</i> | <u>HS5B-5</u> 14:00 – 14:15 | Mingkui Wei and Wenye Wang. <i>Combat the Disaster: Communications in Smart Grid Alleviate Cascading Failures</i> |
| <u>HS5A-6</u> 14:15 – 14:30 | Asad Malik, Kashif Bilal, Khurram Aziz, Dzmitry Kilazovich, Nasir Ghani, Samee Khan and Rajkumar Buyya. <i>CloudNetSim++: A Toolkit for Data Center Simulations in OMNET++</i> | <u>HS5B-6</u> 14:15 – 14:30 | Syed Khawar Hussian Shah, Ali Hellany, Mahmmod Nagrial and Jamal Rizk. <i>Power Quality Improvement Factors: An Overview</i> |
| <u>HS5A-7</u> 14:30 – 14:45 | Sahar Idwan, Ebaa Fayyumi, Hiba Muhareb, Izzeddin Matar and Obaidah Rawashdeh. <i>Achieving Extended Displays Prototype via Wi-Fi Direct Technology</i> | - | |
| SHORT TEA BREAK 14:45- 15:00 | | | |
| HS6A Big Data Analytics, Transport and Storage Hall: EPIC G-287 | | HS6B Internet for e-Health and e-Applications Hall: EPIC G-222 | |
| Local Chair: <i>M. Yasin Akhtar Raja, Physics & Optical Sc., UNC Charlotte, NC, USA</i> Int'l Chair: <i>Dr. Hitoshi Hayashi, Sophia University, Yotsuya Campus, Chiyoda-ku Tokyo Japan</i> | | Local Chair: <i>Dr. Susan Trammel, Physics & Optical Sc., UNC Charlotte, USA</i> Int'l Chair: <i>Ms. Shamila Kiani, UM Trust, Islamabad, Pakistan</i> | |
| <u>HS6A-1</u> 15:00 – 15:15 | Invited: Sarbani Roy, Natwar Darak and Asis Nasipuri <i>A Game Theoretic- Approach for Channel Selection in Multi-channel Wireless Sensor Networks</i> | <u>HS6B-1</u> 15:00 – 15:15 | Saman Iftikhar, Muhammad Kamran and Zahid Anwar. <i>A Novel and Robust Fingerprinting Technique for Digital Data based on Genetic Algorithm</i> |
| <u>HS6A-2</u> 15:15 – 15:30 | A. Ragheb, H. Fathallah, H. Fischer, A. Doberstein, H. Haisch, S. Alshebeili and S. Alhumaidi <i>384Gb/s Per Carrier Quad-DAC Based Dual-</i> | <u>HS6B-2</u> 15:15 – 15:30 | Ar Kar Kyaw and Dr Brian Cusack. <i>Security Challenges in Pervasive Wireless Medical Systems and Devices</i> |

| | | | |
|---|--|--|--|
| | <i>Polarization Software Defined Optical Transmitters</i> | | |
| <u>HS6A-3</u> 15:30 – 15:45 | M. Zeeshan, S. A. Khan and Z. Mehtab <i>Data Aided Algorithm for Burst Detection in Wideband Networking Waveform with FPGA Implementation on SDR Platform</i> | <u>HS6B-3</u> 15:30 – 15:45 | Basar Koc, Ziya Arnavut and Huseyin Kocak. <i>Lossless Compression of DNA Microarray Images with Inversion Coder</i> |
| <u>HS6A-4</u> 15:45 – 16:00 | R. Bikmetov, M. Y. A. Raja and K. Kazi <i>400Gb/s in a single spectral channel of hybrid optical transmission system with 100 digital channels</i> | <u>HS6B-4</u> 15:45 – 16:00 | Shamila Keyani, Ahmad Mumtaz and Ashfaq Ahmad. <i>Hepatitis Surveillance System for rural Pakistan through web and mobile based technologies</i> |
| <u>HS6A-5</u> 16:00 – 16:15 | W. Saif, S. Aldosari, R. Djemal and H. Fathallah <i>Parallel FPGA Implementation of Incoherent OCDMA Systems</i> | <u>HS6B-5</u> 16:00 – 16:15 | Mohamed Adel Gouda Shemis, Mohammed Ashraf Gondal and Ahmad Assad Ibrahim Khalil. <i>Development of Laser Induced Breakdown Spectrometer for Detection of Carcinogenic Metals in Gall Bladder Stones</i> |
| <u>HS6A-6</u> 16:15 – 16:30 | Gamal Attia, NRIAG, Cairo, Egypt <i>Contribution of Helwan's Laser Ranging Station in the international Laser Ranging services</i> | <u>HS6B-6</u> 16:15 – 16:30 | M. Atif, Ms. Alsalhi, S. Devanesan, V Masilamani, K Farhat and D Rabah. <i>Spectral characterization of Breast Cancer</i> |
| <u>HS6A-7</u> 16:30 – 16:45 | F. Amin, A. Ali and M. Zubair <i>Energy-efficient clustering scheme for multihop wireless sensor network (EECSMH)</i> | <u>HS6B-7</u> 16:30 – 16:45 | Aslam Farooq, Walid Tawfik, Saad Bin Qasim, Abdullah Aldwayya, Atif Muhammad, Kaleem Imam and Mohammad S Al-Salhi. <i>Qualitative analysis of dental nano-composite restorative material using Laser Induced Breakdown Spectroscopy and SEM EDS analysis.</i> |
| CONFERENCE BANQUET 18:30 – 21:30 (CRI-PORTAL Building) | | | |

DAY 3- Wednesday, Dec 17, 2014

7:15-8:00 am: Breakfast (Sponsored by SPIE/OSA Students Groups)

| | | |
|----------------------------------|--|---|
| HS7 | SESSION – 7 Photonics for Energy and Novel Materials-B Hall: EPIC G-287 | Local Chair: <i>Dr. Tsing-Hua Her, Phys & Opt Sc. UNC Charlotte.</i> Int'l Chair: <i>M. Baig, Prof. Physics & Astronomy, King Saud University, Riyadh, Saudi Arabia</i> |
| | HS7-1 08:00 – 08:30 | Keynote 7(ii): (SPIE Spl), Colin J. McKinstrie, Applied Communication Sciences, Red Bank, New Jersey, USA <i>Physics and applications of optical parametric devices</i> |
| | HS7-2 08:30 – 09:00 | Keynote 8: Dr. Kamal Alameh, Prof. & Director ESR Institute, Edith Cowan, University, Australia: <i>Solar Energy Harvesting Clear Glass for Building-Integrated Photovoltaics</i> |
| | <u>HS7-3</u> 09:00 – 09:20 | Invited: Michael A. Fiddy, OSE &ECE, Director Metamaterials Center, UNC Charlotte, NC, USA: <i>Engineering the properties of metamaterials and some novel applications</i> |
| | <u>HS7-4</u> 09:20 – 09:35 | Kamal Alameh, Mikhail Vasiliev, Ramzy Alghamedi, Mohammad Nur-E-Alam and Victor Rosenberg. <i>Solar Energy Harvesting Clear Glass for Building-Integrated Photovoltaics</i> |
| | <u>HS7-5</u> 09:35 – 09:50 | Nian Chen, Ahrar A. Chowdhury, and Abasifreke U Ebong. <i>Comprehensive Empirical Model for Evaluation of the Series Resistance of a Solar Cell</i> |
| | <u>HS7-6</u> 09:50 – 10:05 | Tao Sheng and Haitao Zhang. <i>Scalable Seeded Growth of Tungsten Oxide Nanowires for Energy Applications</i> |
| | <u>HS7-7</u> 10:05 – 10:20 | Hossein Alisafae and Michael Fiddy. <i>Photovoltaics with Dielectric Nanoantennas</i> |
| COFFEE BREAK 10:20- 10:45 | | |

| | | | |
|---|---|---|---|
| HS8 | SESSION – 8 Photonics for Energy and Novel Materials-C Hall: EPIC G-287 | | Local Chair: <i>Dr. Haitao Zhang, ME Department, UNC Charlotte, NC, USA</i> Int'l Chair: <i>Dr. Gamal Attia, NRIAG, Cairo, Egypt</i> |
| | <u>HS8-1</u> 10:45 – 11:00 | Mohammad Nur-E-Alam, Vladimir Belotelov, Mikhail Vasiliev, Evgeni Bezus and Kamal Alameh. <i>Magneto-Plasmonic Crystals with Buried Metal Layers for High Speed Optical Switching</i> | |
| | <u>HS8-2</u> 11:00 – 11:15 | Mark Green, Zeba Naqvi, Krista Smith and Tsing-Hua Her. <i>Fabrication and characterization of uniform conformal thin films of SiO₂ and SiN_x on optical fibers</i> | |
| | <u>HS8-3</u> 11:15 – 11:30 | Baofu Ding and Kamal Alameh. <i>Impact of the LiF/Al/Au and stacked phase tuning layers on the viewing angle of high contrast-ratio tandem organic light emitting devices</i> | |
| | <u>HS8-4</u> 11:30 – 11:45 | Prakash Mishra, Brianna Monroe, Babar Hussain and Ian Ferguson. <i>Temperature Optimization for MOCVD-Based Growth of ZnO Thin Films</i> | |
| Getting Ready for Final Session 11:45 – 12:00 | | | |
| HS9 | SESSION – 9 CONCLUDING SESSION Venue: EPIC G-287 | | |
| | 12:00 – 12:20 | ADDRESS / REVIEW BY HONET CHAIR(S) | |
| | 12:20 – 12:40 | VOTE OF THANKS AND RECOGNITIONS, <i>HONET Organizing Team</i> | |
| | 12:40 – 13:00 | CLOSING ADDRESS/CEREMONY/ ANNOUNCEMENTS, | |
| | 13:00 – 14:00 | LUNCH BREAK AND DEPARTURE OF DELEGATES/TOUR ETC. | |

Poster Papers
Dec 15, 2014
18:30 – 20:30 (EPIC Building)

| | |
|-----|--|
| P1 | Nazir Hossain, Guojian Wang and Dongming Mei. Design of A Novel Cryogenic Cryostat for High Purity Germanium Radiation Detector |
| P2 | Felesia Stukes and Mirsad Hadzikadic. Communities of Purpose |
| P3 | Adnan Ali, Khalid Mahmood and Mohammed Ali Hasan. Effect of annealing environment on optical, electrical and thermoelectric properties of MBE grown ZnO |
| P4 | Khalid Mahmood, M. Asghar Hashmi, M. Yasin Akhtar Raja and Ian Ferguson. Enhancement of Seebeck Coefficient of MBE grown un-doped ZnO by thermal annealing |
| P5 | Bahadir Kucukgok, Na Lu and Ian T. Ferguson. III-Nitrides as a Thermoelectric Material |
| P6 | Murad Ahmed and Syed Haider. Virtual Network Migration for Test-bed Environments |
| P7 | Joseph Peller, Aubrey Shipley and Susan Trammell. Spectroscopy of Pancreatic and Lymphatic Tissue |
| P8 | Farah Elmawas and Mirsad Hadzikadic. Behavioral Health Stigma - Breaking the code with Stigma Index |
| P9 | Jason Case and Susan Trammell. Analyzing thermal transit time and surface profiles to determine the size and depth of computationally modeled embedded blood vessels in muscle |
| P10 | Seyed Ghasem Sedaghat and Abasifreke Ebong. Design and Simulation of PV Inverter Topologies for a Typical Residential Application |