



BWAC IAB MEETING

October 17-19, 2023

The University of Arizona
 Student Union Memorial Center
 1303 E. University Blvd.
 Tucson, AZ 85719

broadband.arizona.edu

TUESDAY, OCTOBER 17 (ROOFTOP AT THE GRADUATE HOTEL)

TIME		TITLE
7:00 PM	9:00 PM	Welcome Reception (Rooftop at The Graduate Hotel, 930 E. 2 nd St., Tucson)

WEDNESDAY, OCTOBER 18 (BALLROOM SOUTH, STUDENT UNION CENTER)

TIME		TITLE	SPEAKER/INVESTIGATORS
8:00 AM	9:00 AM	Registration & Breakfast	
9:00 AM	9:15 AM	Introductions and Meeting Agenda	Dr. Marwan Krunz, Center Director
9:15 AM	10:00AM	Keynote 1: Machine Learning for Spectrum Sharing in Next-Generation Wireless Systems	Dr. James Neel, Senior Technologist, Federated Wireless
10:00 AM	10:10 AM	Break	
Proposed Projects – Session I, Chair: Dr. Mark Pierpoint, Keysight (presenters' names indicated with '*')			
10:10 AM	10:25 AM	Adaptive Wireless Video Analytics with Cooperative Perception in Mobile Edge Computing Networks	Hang Liu* (CUA)
10:25 AM	10:40 AM	Synthesizing Coverage Maps for mmWave Communications Using Generative AI	Sopan Sarkar* and Hossein Manshaei (UA)
10:40 AM	10:55 AM	Designing Secure RF Signal Classifiers With Applications in Congested and Contested Spectrum	Marwan Krunz* and Wenhan Zhang (UA)
10:55 AM	11:10 AM	Break	

Proposed Projects – Session II, Chair: Dr. Hang Liu, CUA
(presenter's name indicated with ‘**’)

11:10 AM	11:25 AM	ML-based Detection of Selective Attacks on Wi-Fi Systems	Zhengguang Zhang* (UA)
11:25 AM	11:40 AM	Distributed Beamforming and Phase Prediction for Space-based Smallsat Arrays	Sharif Khalil* (CUA)
11:40 AM	11:55 PM	Secure and Verifiable NextG RAN Resource Management	Loukas Lazos*, Ming Li, and Marwan Krunz (UA)

11:55 PM 1:00 PM Lunch (Silver and Sage Room, Old Main Building)

12:30 PM	2:00 PM	<p>Harnessing Semiconductor Innovations for Next-Gen Wireless Systems</p> <p>A Panel Discussion Exploring Collaboration Opportunities between the UK and USA</p> <p>Co-hosted by UK Science and Innovation Network, UK Department of Business and Trade & BWAC</p>	<p>Moderator: His Majesty's Consul-General, Emily Cloke, UK Consul-General Los Angeles</p> <p>Panelists: Dr. Liesl Folks, VP for Semiconductor Strategy & Director for the Center for Semiconductor Manufacturing, UA Dr. John Goodenough, Chair Microelectronic Systems, Sheffield U. Mr. Stephen Ozoigbo, Director, Emerging Economies, ARM Dr. Mark Pierpoint, Senior Vice President, Keysight Technologies Mr. Jake Stine, General Manager, Advanced Wireless, AT&T Dr. Wayne Johnson, Founder & President, Soundside Partners LLC</p>
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2:00 PM 2:15 PM Break

2:15 PM	3:00 PM	Keynote 2: Challenges in Securing Next-Generation Wireless Systems	David Manzi, Chief Technologist, Raytheon Missiles and Defense
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Summary of Project Outcomes – Session I, Chair: Dr. Marwan Krunz, Univ. of Arizona
(presenter's name indicated with ‘**’)

3:00 PM	3:10 PM	Empowering Large Arrays from Electromagnetics and Optics	Shehla Amir* and Robert W. Heath (NCSU)
3:10 PM	3:20 PM	Stealthy Adversarial Attacks on Machine Learning Classifiers in Wireless Communications	Wenhan Zhang*, Greg Ditzler, and Marwan Krunz (UA)
3:20 PM	3:30 PM	Reinforcement Learning for Efficient Resource Allocation in Cell-Free MIMO	Noel Teku*, Tamal Bose, and Ravi Tandon (UA)

3:30 PM	3:40 PM	Comparison of LTE and Wi-Fi Coverage and Throughput for Air-to-Ground Communications	Donggu Lee*, Ismail Guvenc, and Mihail Sichertiu (NCSU)
3:40 PM	3:50 PM	Modeling Intermodulation Distortion Generated by Reconfigurable Apertures	Hussain Askari* and Jacob J. Adams (NCSU)
3:50 PM	4:00 PM	New Algorithms and Fundamental Limits of Machine Learning Based Decoders	Sudarshan Adiga*, Ravi Tandon, and Tamal Bose (UA)
4:00 PM	4:15 PM	Break	
Summary of Project Outcomes – Session II, Chair: Dr. Ramanarayanan Viswanathan, UMiss (presenter’s name indicated with ‘*’)			
4:15 PM	4:25 PM	Spectrum Sharing and Coexistence With Passive Devices Above 100 GHz	Sopan Sarkar*, Arush Sharma, and Marwan Krunz (UA)
4:25 PM	4:35 PM	Metasurface Cloaks for Reduction of Mutual Coupling in Printed and Slotted Antennas and Antenna Arrays	Shefali Pawar* and Alexander Yakovlev (UMiss)
4:35 PM	4:45 PM	Joint Sensing and Communication in Full Duplex mmWave MIMO Systems	Murat Bayraktar* and Nuria Gonzalez-Prelcic (NCSU)
4:45 PM	6:00 PM	Poster Session	
6:00 PM	8:00 PM	Dinner and Best Poster Awards	

THURSDAY, OCTOBER 19 (KACHINA LOUNGE, STUDENT UNION CENTER)

8:00 AM	9:00 AM	Breakfast
9:00 AM	10:00 AM	Planning for the WISPER Center (IAB Members, BWAC Directors, BWAC Faculty, Industry Guests)
10:00 AM	11:00 AM	IAB Business Meeting (closed session)
11:00 AM	12:00 PM	IAB Technical Input on Presented Projects and Feedback to BWAC Leadership (IAB members, BWAC directors, NSF Program Director, BWAC faculty)
12:00 PM	1:00 PM	Box Lunch and Adjourn