Low-Cost Smart Antennas for Satellite Communications and Terrestrial Mobile Communications

Speaker: Professor Steven Gao

IEEE Distinguished Lecturer Program
Chair of RF and Microwave Engineering, School of Engineering and Digital Arts, University of Kent, UK

LOCATION: University of Arizona, Room ECE 530
DATE: Monday, May 25, 2015, 6:00 pm
Refreshments Provided (pizza and soft drinks)

ABSTRACT

Smart antenna is the key technology for advanced satellite communications and terrestrial mobile communication systems as well as radars. The traditional smart antenna systems, or adaptive arrays or active phased arrays, have high cost, large size, heavy weight and high power consumption. For commercial applications, it is critical to reduce the size, mass, power consumption and cost of smart antennas. This IEEE DL talk will give some recent examples of low-cost smart antennas, such as smart antennas for Ka-band Satellite Communications on the Move, low-cost small smart antennas for wireless communications, phased arrays for synthetic aperture radars, broadband active integrated arrays, etc.

BIOGRAPHY

Steven Gao is a Professor and Chair of RF and Microwave Engineering at University of Kent, UK. His research covers smart antennas, phased arrays, space antennas, RF/microwave and mm-wave/THz circuits and systems, satellite communications, synthetic-aperture radars, UWB radars and GNSS receivers. He is a Distinguished Lecturer of IEEE AP Society (2014-2016), General Chair of LAPC’2013, UK, and Chair of Special Session at CSNDSP’2012, etc. He is a Guest Editor of IEEE Transactions on Antennas and Propagation for a Special Issue on "Antennas for Satellite Communication"(April 2015 issue). He is a Keynote Speaker at AES’2014, an Invited Speaker at IWAT’2014 (Sydney), SOMIRES’2013 (Japan), APCAP’2014 (Harbin), etc. He is an Associate Editor of Radio Science and also the Editor-in-Chief of Book Series in Microwave and Wireless Technologies, John Wiley & Sons. He is a Fellow of Institute of Engineering and Technology, UK. He has two books including Space Antenna Handbook (Wiley, 2012) and Circularly Polarized Antennas (Wiley & IEEE Press, 2014), over 200 technical papers and holds several patents in smart antennas and RF.
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The Tucson section has several open volunteer opportunities for the right volunteer. There are lots of benefits to volunteering:

- You get to help decide on the activities and programs that will make a difference in our community over the next year
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- You get to learn new skills
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**Recording Secretary** is responsible for documenting the activities of our administrative council. This typically includes keeping minutes of committee meetings, submitting reports as required, and participating in any votes that come up.

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**PACE Chair (Professional Activities Committee for Engineers)** helps arrange professional development activities, usually supported by the larger IEEE PACE foundation. This could include career-related seminars, job fairs, project management training, and more.

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Applications can be found online. You will need the references of three current senior members or fellows. If you need assistance, contact Joseph Wu at joewu@ieee.org.
Save the date....
The next meeting will come sometime in the fall!

We usually hold meetings at the same time the University is in session. That means we likely won’t have any meetings during the summer.

In the meantime, sign up the listserv to keep up on Tucson IEEE activities. Details are below!

U of A Student Branches

In the Tucson Section, there are active student branches. The Student Branch Chapter of the MTT frequently brings in speakers from the distinguished lecturer series. The U of A main student branch is also active. They have been running an open lab space in the ECE department. They have been running their own meetings and occasionally have game nights. If you’re interested in finding out what they do, or want to help out with a donation go to:

- http://uaieee.com
- http://www2.engr.arizona.edu/~mtt/

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Other News
Upcoming Conferences

2015 IEEE MTT-S International Microwave Symposium (IMS2015)
16 May - 22 May 2015
Phoenix Convention Center, Phoenix, AZ
www.ims2015.org

2015 IEEE Radio Frequency Integrated Circuits Symposium (RFIC)
17 May - 19 May 2015
Phoenix Convention Center, Phoenix, AZ
www.rfic-ieee.org

2015 85th ARFTG Microwave Measurement Conference (ARFTG)
22 May 2015
Hyatt Regency Phoenix, Phoenix, AZ
www.arftg.org/conferences/85th_conference.html

2015 IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU)
13 Dec - 17 Dec 2015
Firesky Resort and Spa
Scottsdale, AZ
www.asru2015.org

2016 Annual Reliability and Maintainability Symposium (RAMS)
25 Jan - 28 Jan 2016
Lowes Ventana Canyon Resort
Tucson, AZ
http://www.rams.org
We need to hear from you!

How can we make IEEE a better organization? We can only do it with your help. As a volunteer organization, IEEE depends on your participation to accomplish all of our goals.

As you can see from this newsletter, there are lots of activities where you can actively contribute. Are you good at organization? Volunteer to head one of our Chapters or to help organize our general meetings. Want to show off or improve your internet skills? Volunteer to help with our Web site. Interested in promoting our field to the next generation of engineers? Help with Engineers Week, or as a judge for any of our student competitions.

Even if you only have a little bit of time, there's sure to be an IEEE opportunity that will interest you. Even if you have no free time at all, but have ideas for meetings or activities that promote engineering and the IEEE, let us know! We’d like to hear from you. Please contact Joseph Wu at joewu@ieee.org.

Tucson Section, Institute of Electrical and Electronics Engineers
2626 E Malvern St.
Tucson, AZ 85716

Section Chair: Joseph Wu (joewu@ieee.org)
Joint AP/MTT/Com/EMC Chapter Chair: Hao Xin (hxin@ece.arizona.edu)
Newsletter Editor: Joseph Wu (joewu@ieee.org)
Section Website:
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