SIYANG CAO

+1-520-621-4521
caos@email.arizona.edu

Department of Electrical and Computer Engineering
The University of Arizona
1230 E. Speedway Blvd., Tucson, AZ 85721-0104

EDUCATION

Ph.D., December 21, 2014, Electrical and Computer Engineering, The Ohio State University Columbus, Ohio
Dissertation Title: "Radar Sensing Based on Wavelets"
Advisor: Dr. Yuan F. Zheng

M.S., May 4, 2014, Electrical and Computer Engineering, The Ohio State University Columbus, Ohio

M.S., July 1, 2010 in Electronics and Information, South China University of Technology Guangzhou, China

B.S., July 1, 2007, Electronic Information Engineering, Xidian University Xi'an, China

EMPLOYMENT

Assistant Professor *(tenure-track)*, August 2015 – Present
Department of Electrical and Computer Engineering
The University of Arizona, Tucson, Arizona, USA

Automotive Radar System Engineer in Radar Core Team, September 2014 – July 2015
Delphi Electronics and Safety
Kokomo, Indiana, USA

Graduate Research Associate, January 2011 – December 2014
Department of Electrical and Computer Engineering
The Ohio State University Columbus, Ohio, USA

Graduate Teaching Assistant, September 2010 – December 2010
Department of Electrical and Computer Engineering
The Ohio State University Columbus, Ohio, USA

Software Quality Analyst in Digital Home Group, March 2009 – March 2010
Intel Asia-Pacific Research and Development Ltd.
Shanghai, China

PUBLICATIONS

Journal Articles

S. Cao, Y. F. Zheng, and R. L. Ewing, "A Wavelet-Packet-Based Radar Waveform for High Resolution in Range and Velocity Detection," IEEE Transactions on Geoscience and Remote Sensing, vol. 53, no. 1, pp. 229-243, January 2015.

S. Cao, Y. F. Zheng, and R. L. Ewing, "Wavelet-BasedWaveform for Effective Sidelobe Suppression in Radar Signal," IEEE Transactions on Aerospace and Electronic Systems, vol. 50, no. 1, pp. 265-284, January 2014.

S. Cao and Y. F. Zheng, "Recent Developments in Radar Waveforms," Journal of Radars, vol. 5, no. 5, pp. 603-621, October 2014.

Conference Proceedings

S. Cao, Y. F. Zheng, and R. L. Ewing, "From Phase Array to Holographic Radar," in Proc. IEEE Aerospace and Electronics Conference, June 2015.

S. Ding, S. Cao, Y. Li, Y. F. Zheng, and R. L. Ewing, "Two Viewing Angles for Holographics in Radar and Light," in Proc. IEEE Aerospace and Electronics Conference, June 2015.

S. Cao, Y. F. Zheng, and R. L. Ewing, "Transform Sensing of Phased Array Radar," in Proc. IEEE Aerospace and Electronics Conference, June 2014.

S. Cao, Y. F. Zheng, and R. L. Ewing, "Wavelet-based Gaussian Waveform for Spotlight Synthetic Aperture Radar," in Proc. IEEE Aerospace and Electronics Conference, June 2014.

S. Cao, Y. F. Zheng, and R. L. Ewing, "S-band radar Based on Lyrtech Software Defined Radio," in Proc. IEEE Aerospace and Electronics Conference, June 2014.

S. Cao, Y. F. Zheng, and R. L. Ewing, "On the Doppler effect to the wavelet-based radar waveform," in Proc. IEEE Aerospace and Electronics Conference, June 2014.

S. Cao, Y. F. Zheng, and R. L. Ewing, "Transform Sensing of Phased Array Radar," in Proc. IEEE Radar Conference, May 2014.

A. Sikdar, S. Cao, Y. F. Zheng, and R. L. Ewing, "Radar Depth Association with Vision Detected Vehicles on a Highway," in Proc. IEEE Radar Conference, May 2014.

S. Cao, Y. F. Zheng, and R. L. Ewing, "A Wavelet-Packet-Based Radar Waveform for High Resolution in Range and Velocity Detection," in Proc. IEEE Radar Conference, May 2014.

S. Cao, Y. F. Zheng, and R. L. Ewing, "Wavelet-based Radar Waveform Adaptable for Different Operation Conditions," in Proc. IEEE European Radar Conference, October 2013.

S. Cao, Y. F. Zheng, and R. L. Ewing, "Scaling Function Waveform for Effective Side-lobe Suppression in Radar Signal," in Proc. IEEE Aerospace and Electronics Conference, July 2011.

Invited Talks

"From Phase Array to Holographic Radar," National Aerospace & Electronics Conference (NAECON), Dayton, Ohio, June 18, 2015.

"Transform Sensing of Phased Array Radar," National Aerospace & Electronics Conference (NAECON), Dayton, Ohio, June 25, 2014.

"Wavelet-based Gaussian Waveform for Spotlight Synthetic Aperture Radar," National Aerospace & Electronics Conference (NAECON), Dayton, Ohio, June 27, 2014.

"Transform Sensing of Phased Array Radar," Radar Conference (RadarCon), Cincinnati, Ohio, May 21, 2014.

"Wavelet-based Radar Waveform Adaptable for Different Operation Conditions," European Radar Conference (EuRAD), Nuremberg, Germany, October 11, 2013.

"Scaling Function Waveform for Effective Side-lobe Suppression in Radar Signal," National Aerospace & Electronics Conference(NAECON), Dayton, Ohio, July 21, 2011.

REVIEWER

IEEE Transactions on Signal Processing

IEEE Transactions on Aerospace and Electronic Systems

Measurement - Journal – Elsevier