

RICHARD J. RADKE

Principal Investigator (PI)

Professor, Department of Electrical, Computer, and Systems Engineering
Rensselaer Polytechnic Institute

PROFESSIONAL PREPARATION

Rice University, Houston, TX Mathematics, Computational and Applied Mathematics (dual) B.A., 1996
Rice University, Houston, TX Computational and Applied Mathematics M.A., 1996
Princeton University, Princeton, NJ Electrical Engineering M.A., 1998
Princeton University, Princeton, NJ Electrical Engineering Ph.D., 2001

APPOINTMENTS

Professor, Department of Electrical, Computer, and Systems Engineering, Rensselaer Polytechnic Institute, Troy, NY, June 2013-date.

Associate Professor, Department of Electrical, Computer, and Systems Engineering, Rensselaer Polytechnic Institute, Troy, NY, May 2007-June 2013.

Assistant Professor, Department of Electrical, Computer, and Systems Engineering, Rensselaer Polytechnic Institute, Troy, NY, August 2001-May 2007.

PRODUCTS

Closely Related to Proposal

- Li Jia and Richard J. Radke. “Using Time-of-Flight Measurements for Privacy-Preserving Tracking in a Smart Room”, *IEEE Trans. on Industrial Informatics*, Vol. 10, No. 1, pp. 689–696, February 2014.
- Indrani Bhattacharya and Richard J. Radke, “Arrays of Single Pixel Time-of-Flight Sensors for Privacy Preserving Tracking and Coarse Pose Estimation”. *IEEE Winter Conference on Applications of Computer Vision 2016*, March 2016.
- Sina Afshari, Tianna-Kaye Woodstock, Toufiq Imam, Sandipan Mishra, Arthur C. Sanderson, and Richard J. Radke, “The Smart Conference Room: An Integrated System Testbed for Efficient, Occupancy-Aware Lighting Control”. *ACM International Conference on Embedded Systems for Energy-Efficient Built Environments (BuildSys) 2015*, November 2015.
- Ziyang Wu, Yang Li, and Richard J. Radke, “Viewpoint Invariant Human Re-Identification in Camera Networks Using Pose Priors”, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 37, No. 5, pp. 1095-1108, May 2015.
- Ziyang Wu and Richard J. Radke, “Improving Counterflow Detection in Dense Crowds with Scene Features”. *Pattern Recognition Letters*, Special Issue on Pattern Recognition and Crowd Analysis, Vol. 44, pp. 152–160, July 15, 2014.

Other Significant Products

- Richard J. Radke. *Computer Vision for Visual Effects*, Cambridge University Press, November 2012.
- Ziyang Wu and Richard J. Radke. “Real-Time Airport Security Checkpoint Surveillance Using a Camera Network”, *Workshop on Camera Networks and Wide Area Scene Analysis, in conjunction with CVPR 2011*, March 2011.
- Dhanya Devarajan, Zhaolin Cheng, and Richard J. Radke. “Calibrating Distributed Camera Networks”, *Proceedings of the IEEE, Special Issue on Distributed Smart Cameras*, Vol. 96, No. 10, pp. 1625–1639, October 2008.
- Anil M. Cheriyyadath and Richard J. Radke. “Detecting Dominant Motions in Crowds”, *IEEE Journal of Special Topics in Signal Processing, Special Issue on Distributed Processing in Vision Networks*, Vol. 2, No. 4, pp. 568–581, August 2008.

- Richard J. Radke, Srinivas Andra, Omar Al-Kofahi, and Badrinath Roysam. “Image Change Detection Algorithms: A Systematic Survey”, *IEEE Transactions on Image Processing*, Vol. 14, No. 3, pp. 294–307, March 2005.

SYNERGISTIC ACTIVITIES

- **Deputy Director**, *NSF Engineering Research Center for Smart Lighting* (August 2015—present); Controls Thrust Lead, January 2013—present.
- **Associate Director**, *NSF Engineering Research Center for Subsurface Sensing and Imaging* (October 2010-August 2012).
- **Senior Area Editor**, *IEEE Transactions on Image Processing*.
- **Affiliated Faculty**, NSF Engineering Research Center for Smart Lighting; DHS Center of Excellence for Awareness and Localization of Explosives-Related Threats (ALERT); NSF Engineering Research Center for Subsurface Sensing and Imaging Systems (CenSSIS); RPI Center for Automation Technologies and Systems (CATS); RPI Experimental Media and Performing Arts Center (EMPAC); RPI Cognitive and Immersive Systems Laboratory (CISL)
- **YouTube Channel**. Over 60 fully annotated video lectures for Digital Signal Processing, Digital Image Processing, and Computer Vision for Visual Effects with over 4600 subscribers and 400,000 views.