Abhishek Aich

WCH 371, University of California Riverside, CA 92521, USA
aaich001@ucr.edu • 🏠 • 🔗 • 🐙

RESEARCH INTERESTS	Computer Vision, Deep Learning, and Sparse Signal Optimization • Specific Interests: Video Reconstruction, Continual Learning, Person Re-identification

EDUCATION

University of California, Riverside, CA, USA

■ Ph.D. in Electrical and Computer Engineering   Sep 2018 – Present
  - Adviser: Dr. Amit K. Roy-Chowdhury
  - GPA: 3.84 / 4.00

National Institute of Technology, Tiruchirappalli, Tamil Nadu, India

■ M.S. in Electronics and Communication Engineering   2016 – 2018
  - Thesis: Exploiting Sparsity for Direction of Arrival Estimation Algorithms in Linear Array
  - Adviser: Dr. P. Palanisamy
  - GPA: 8.80 / 10.00

Biju Patnaik University of Technology, Rourkela, Odisha, India

■ B.Tech. in Electronics and Communication Engineering   2011 – 2015
  - Thesis: Target Tracking using Parametric Spectral Estimation Methods
  - GPA: 9.02 / 10.00

RESEARCH EXPERIENCE

Graduate Student Researcher   Sep 2018 – Present

■ University of California, Riverside   CA, USA
  - Group: Video Computing Group
  - Supervisors: Dr. Amit K. Roy-Chowdhury
  - Focus: Computer Vision and Deep Learning.

Research Scholar   Feb 2016 – Apr 2018

■ National Institute of Technology, Tiruchirappalli   Tamil Nadu, India
  - Group: Signal and Image Processing Lab.
  - Supervisor: Dr. P. Palanisamy
  - Focus: Array Signal Processing, Compressed Sensing.

Research Assistant   May 2014 – Aug 2015

■ Silicon Institute of Technology, Bhubaneswar   Odisha, India
  - Supervisor: Prof. Utpal K. Dash
  - Focus: Array Signal Processing.

TEACHING EXPERIENCE

Teaching Assistant   Sep 2019 – Mar 2020

■ University of California, Riverside   CA, USA
  - Under-Graduate Course: Senior Design Project (Computer Vision) (EE175A/EE175B)
  - Supervisor: Dr. Amit K. Roy-Chowdhury

Teaching Assistant   Jan 2018 – Apr 2018

■ National Institute of Technology, Tiruchirappalli   Tamil Nadu, India
  - Graduate Course: Digital Signal and Image Processing Lab. (EC610)
  - Supervisor: Dr. P. Palanisamy

SELECTED PUBLICATIONS

[1] <u>Abhishek Aich</u>*, Akash Gupta*, Rameswar Panda, Rakib Hyder, Salman Asif, and Amit Roy-Chowdhury, "Non-Adversarial Video Synthesis with Learned Priors," In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)* Seattle, USA, pp. 6090–6099, 2020. (* joint first authors)

[2] Akash Gupta, <u>Abhishek Aich</u>, Kevin Rodriguez, G. Venugopala Reddy, and Amit Roy-Chowdhury, "Deep Quantized Representation for Enhanced Reconstruction," ISBI 2020 Workshop, 2020.

[3] <u>Abhishek Aich</u>, and P. Palanisamy, "A novel CS beamformer root-MUSIC algorithm and its subspace deviation analysis," in *IEEE Region 10 Conference (TENCON)*, Penang, Malaysia, pp. 1404–1408, 2017.

[4] <u>Abhishek Aich</u>, and P. Palanisamy, "On application of OMP and CoSaMP algorithms for DOA estimation problem," in *IEEE International Conference on Communication and Signal Processing (ICCSP)*, Chennai, India, 2017. (*Oral*)

[5] <u>Abhishek Aich</u>, and P. Palanisamy, "A strict bound for dimension of measurement matrix for CS beamformer MUSIC algorithm," in *IEEE Region 10 Conference (TENCON)*, Singapore, pp. 2602–2605, 2016. (*Oral*)

AWARDS & SCHOLARSHIPS	▪ **Deans Distinguished Fellowship Award**, University of California, Riverside	2018 – 2019
	▪ **MHRD Scholarship**, Govt. of India	2016 – 2018
	▪ **Scholar's Club**, Silicon Institute of Technology, Bhubaneswar	2012 – 2015
	• For being in the Top 3 of the Electrical and Communication Engineering Department	
	▪ **e-Medhabruti Scholarship**, Govt. of Odisha	2012 – 2015

TECHNICAL SKILLS

- **Programming Skills**: Python, MATLAB
- **Deep Learning Libraries**: PyTorch
- **Scientific Computing Libraries**: numpy, scipy, sciKit-learn, matplotlib
- **Others**: LaTeX, MS Office, OpenCV, Jupyter

GRADUATE COURSES

● Introduction to Deep Learning ● Adv. Computer Vision ● Machine Learning ● Information Theory ● Convex Optimization ● State and Parameter Estimation Theory ● Stochastic Processes ● Sparsity, Structure, and Inference ● Math. Methods for EE ● Adv. Digital Signal Processing

PROFESSIONAL ACTIVITIES

Conference Reviewer:
IEEE TENCON 2016, IEEE TENCON 2017, IEEE CVPR(W) 2020
Journal Reviewer:
IEEE Transactions on Signal Processing, Taylor & Francis International Journal of Electronics Letters, IET Signal Processing