





# 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: Image/Video Reconstruction, Person Re-Identification

## EDUCATION

### University of California, Riverside, CA, USA

- Ph.D. in Electrical and Computer Engineering
- Adviser: Prof. Amit K. Roy-Chowdhury
- GPA: 3.84 / 4.00

Sep 2018 – Present

### National Institute of Technology, Tiruchirappalli, Tamil Nadu, India

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

2016 – 2018

### Biju Patnaik University of Technology, India

- B.Tech. in Electronics and Communication Engineering
- Thesis: Target Tracking using Parametric Spectral Estimation Methods
- Supervisor: Prof. Utpal K. Dash
- GPA: 9.02 / 10.00

2011 – 2015

## RESEARCH EXPERIENCE

### United Imaging Intelligence, America, Cambridge

MA, USA

- Research Intern
- Group: Vision and Robotics Group
- Mentors: Dr. Ziyang Wu, Dr. Srikrishna Karanam, Dr. Meng Zheng
- Focus: Supervised Video-based Person Re-Identification.

Jun 2020 – Present

### University of California, Riverside

CA, USA

- Graduate Student Researcher
- Group: Video Computing Group
- Supervisor: Prof. Amit K. Roy-Chowdhury
- Focus: Computer Vision and Deep Learning.

Sep 2018 – Present

### National Institute of Technology, Tiruchirappalli

Tamil Nadu, India

- Research Scholar
- Group: Signal and Image Processing Lab.
- Supervisor: Prof. P. Palanisamy
- Focus: Array Signal Processing, Compressed Sensing.

Feb 2016 – Apr 2018

### Silicon Institute of Technology, Bhubaneswar

Odisha, India

- Research Assistant
- Supervisor: Prof. Utpal K. Dash
- Focus: Array Signal Processing.

May 2014 – Aug 2015

## TEACHING EXPERIENCE

### University of California, Riverside

CA, USA

- Teaching Assistant
- Under-Graduate Course: Senior Design Project (Computer Vision) (EE175A/EE175B)
- Supervisor: Prof. Amit K. Roy-Chowdhury

Sep 2019 – Mar 2020

### National Institute of Technology, Tiruchirappalli

Tamil Nadu, India

- Teaching Assistant
- Graduate Course: Digital Signal and Image Processing Lab. (EC610)
- Supervisor: Prof. P. Palanisamy

Jan 2018 – Apr 2018

## SELECTED PUBLICATIONS

- [1] Akash Gupta, Abhishek Aich, and Amit K. Roy-Chowdhury, “ALANET: Adaptive Latent Attention Network for Joint Video Deblurring and Interpolation”, *ACM International Conference on Multimedia (ACM MM)*, 2020.
- [2] Abhishek Aich\*, Akash Gupta\*, Rameswar Panda, Rakib Hyder, M. Salman Asif, and Amit K. Roy-Chowdhury, “Non-Adversarial Video Synthesis with Learned Priors”, *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020. (\* joint first authors)

- [3] Akash Gupta, Abhishek Aich, Kevin Rodriguez, G. Venugopala Reddy, and Amit K. Roy-Chowdhury, “Deep Quantized Representation for Enhanced Reconstruction”, *ISBI 2020 Workshop*, 2020.
- [4] Abhishek Aich, and P. Palanisamy, “A Novel CS-Beamformer root-MUSIC Algorithm and its Subspace Deviation Analysis”, *IEEE Region 10 Conference (TENCON)*, 2017.
- [5] Abhishek Aich, and P. Palanisamy, “On Application of OMP and CoSaMP Algorithms for DOA Estimation Problem”, *IEEE International Conference on Communication and Signal Processing (ICCSP)*, 2017. (Oral)
- [6] Abhishek Aich, and P. Palanisamy, “A Strict Bound for Dimension of Measurement Matrix for CS-Beamformer MUSIC Algorithm”, *IEEE Region 10 Conference (TENCON)*, 2016. (Oral)

<b>AWARDS &amp; SCHOLARSHIPS</b>	<ul style="list-style-type: none"> <li>▪ <b>Deans Distinguished Fellowship Award</b>, University of California, Riverside</li> <li>▪ <b>MHRD Scholarship</b>, Govt. of India</li> <li>▪ <b>Scholar’s Club</b>, Silicon Institute of Technology, Bhubaneswar <ul style="list-style-type: none"> <li>• For being in the Top 3 of the Electrical and Communication Engineering Department</li> </ul> </li> <li>▪ <b>e-Medhabruti Scholarship</b>, Govt. of Odisha</li> </ul>	2018 – 2019 2016 – 2018 2012 – 2015 2012 – 2015
<b>TECHNICAL SKILLS</b>	<ul style="list-style-type: none"> <li>▪ <b>Programming Skills:</b> Python, MATLAB</li> <li>▪ <b>Deep Learning Libraries:</b> PyTorch</li> <li>▪ <b>Scientific Computing Libraries:</b> numpy, scipy, sciKit-learn, matplotlib</li> <li>▪ <b>Others:</b> L<sup>A</sup>T<sub>E</sub>X, MS Office, OpenCV, Jupyter</li> </ul>	
<b>GRADUATE COURSES</b>	<ul style="list-style-type: none"> <li>• 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</li> </ul>	
<b>PROFESSIONAL ACTIVITIES</b>	<p><b>Conference Reviewer:</b>  IEEE CVPR2020–NAS, IEEE ECCV2020–MVA, IEEE TENCON 2016/2017</p> <p><b>Journal Reviewer:</b>  IEEE TIP, IEEE TSP, TF IJEL, IET SP</p> <p><b>Program Committee Member:</b>  IEEE CVPR2020–NAS, IEEE ECCV2020–MVA</p>	