Kranti Kumar Parida

CONTACT INFORMATION

School of Computer Science
University of Bristol
United Kingdom

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RESEARCH INTERESTS

Computer Vision, Machine Learning, Multimodal Processing

WORK EXPERIENCE

Postdoctoral Researcher, University of Bristol, UK 08/2023 - present

Research Scientist, TensorTour India Pvt. Ltd. 05/2022 - 06/2023

EDUCATION

Indian Institute of Technology Kanpur, India 2016 - 2023
PhD in Computer Science
Advisors: Dr. Gaurav Sharma, Prof. Manindra Agrawal

Indian Institute of Technology Kharagpur, India 2014-2016
Master of Technology in Medical Imaging and Informatics
Advisors: Dr. Rajiv R. Sahay, Prof. P. K. Dutta

Silicon Institute of Technology, Bhubaneswar, India
Bachelor of Technology in Electronics and Telecommunications 2009-2013

PUBLICATIONS

Patents

[**1**] Gaurav Sharma, Siddharth Srivastava, **Kranti Kumar Parida**. "Methods and systems of noise aware audio visual speech denoising." *US Patent App. 18/586, 187, 2024* link

Journals

[**1**] **Kranti K. Parida**, Gaurav Sharma. "Discriminative Semantic Transitive Consistency for Cross-Modal Learning." *Computer Vision and Image Understanding (CVIU), 2022.* pdf

Conferences

[**5**] **Kranti Kumar Parida**, Siddharth Srivastava, Gaurav Sharma. "Beyond Mono to Binaural: Generating Binaural Audio from Mono Audio with Depth and Cross Modal Attention." *IEEE Winter Conference on Applications of Computer Vision (WACV), 2022.* pdf

[**4**] **Kranti Kumar Parida**, Siddharth Srivastava, Gaurav Sharma. "Beyond Image to Depth: Improving Depth Prediction using Echoes." *IEEE/CVF Conf. on Computer Vision and Pattern Recognition (CVPR), 2021.* pdf

[**3**] Pratik Mazumder, Pravendra Singh, **Kranti Kumar Parida**, Vinay P Namboodiri. "AVGZSLNet: Audio-Visual Generalized Zero-Shot Learning by Reconstructing Label Features from Multi-Modal Embeddings." *IEEE Winter Conference on Applications of Computer Vision (WACV), 2021.* pdf

[**2**] **Kranti Kumar Parida**, Neeraj Matiyali, Tanaya Guha, and Gaurav Sharma. "Coordinated Joint Multimodal Embeddings for Generalized Audio-Visual Zeroshot Classification and Retrieval of Videos." *IEEE Winter Conference on Applications of Computer Vision (WACV), 2020.* pdf

[**1**] Latha H. Narayan, **Kranti K. Parida**, and Rajiv R. Sahay. "Simultaneous blur map estimation and deblurring of a single space-variantly defocused image." *Twenty-third National Conference on Communications (NCC), 2017.*

Workshops

[**1**] **Kranti K. Parida**, Neeraj Matiyali, Siddharth Srivastava, Gaurav Sharma. "Depth Infused Binaural Audio Generation using Hierarchical Cross-Modal Attention" *Sight and Sound Workshop, CVPR 2021.* pdf

RESEARCH EXPERIENCE

University of Bristol 08/23 - present
Research Associate
- Research on multimodal egocentric video understanding with a focus on audio and 3D understanding

TensorTour India Pvt. Ltd. 05/22 - 06/23
Research Scientist
- Research and implementation of audio-visual speech models for tasks like speech denoising and speech superresolution.

Indian Institute of Technology Kanpur 07/16-12/22
Graduate Research Student
- Research on multimodal AI, to help machines use different modalities for understanding the task better as done by the humans

Indian Institute of Technology Kharagpur 07/15-06/16
Master Research Student
- Research on optimization framework for depth and focused image estimation from a stack of microscopic images

All India Institute of Medical Sciences, New Delhi 05/14-06/14
Research Intern
- Worked with real clinical data to segment different layers of OCT images of a region in the foot and generate a 3D model of it.

TEACHING EXPERIENCE

Tutor, ***Introduction to Programming***, IIT Kanpur 08/19-11/19

TA, ***Introduction to Machine Learning***, IIT Kanpur 08/18-11/18

TA, ***Introduction to Natural Language Proc.***, IIT Kanpur 01/18-04/18

TA, ***Online Learning and Optimization***, IIT Kanpur 01/17-04/17

TA, ***Intro. to Programming***, IIT Kanpur 08/17-11/17,01/19-04/19

WORKSHOPS & CONFERENCES

Winter Conference on Applications of Computer Vision 2022
Waikoloa, Hawaii (Virtual)

Computer Vision and Pattern Recognition 2021
Virtual

Graduate Symposium by Google Research India 2021
Symposium for selected Ph.D. Students in the Asia-Pacific region

Indian Conf. on Computer Vision, Graphics & Image Proc. 2020
IIT Jodhpur, India (Virtual)

Winter Conference on Applications of Computer Vision 2020
Snowmass Village, Colorado, USA

Vision and Sports Summer School 2017
Czech Technical University, Prague, Czech Republic

Summer School on Machine Learning: Deep Learning 2017
CVIT, IIIT Hyderabad, India

Summer School on Recent Advances in Computer Vision 2017
CVIT, IIIT Hyderabad, India

Indian Conf. on Computer Vision, Graphics & Image Proc. 2016
IIT Guwhati, India

Indian Workshop in Machine Learning(IwML) 2016
IIT Kanpur, India

AWARDS & FELLOWSHIPS

Recognized as **Outstanding Reviewer** at ICML 2022

Selected for **Doctoral Consortium** at CVPR 2021
Presented my phd research work

Qualcomm Innovation Fellowship 2021 India Finalist
36 teams selected out of 95

Won **Indian Driving Dataset (IDD)** challenge
ICVGIP 2020, India

Travel Grant from Research I Foundation, CSE, IIT Kanpur
Participating and presenting paper at WACV 2020, Colorado, USA

Director's Appreciation Letter for exceptional rating
as a Tutor in the course of Fundamentals of Computing (2019-20, Sem.-I)

Visvesvaraya PhD Fellowship, 2016-21
Ministry of Electronics & IT, Government of India

Post Graduate Fellowship for M.Tech, 2014-16
AICTE, Govt. of India

PROFESSIONAL ACTIVITIES

Organizer, ICVGIP Contest 2021

Reviewer, ICASSP '24; Eurographics '24; TAPMI '23; CVPR '24, '23, '22; ICCV '23, ECCV '24, ICML '22; WACV '25, '24, '23, '22; AAAI '22; ICPR '22

Public Repository, Maintaining awesome audio-visual list @ github link
Collection of audio-visual papers accepted at major conferences and journals

Student Volunteer, International Confernece on Systems in Medicine and Biology 2016, IIT Kharagpur, India

Volunteer, Machine Vision and Learning Spring School 2016, Dept. Of Electrical Engg., IIT Kharagpur

Member, Student Activity Committee, IEEE Engineering in Medicine and Biology Student Club, IIT Kharagpur, 2015-16

TALKS & SEMINARS

Making Computers Intelligent: The Way Forward July 2024
Invited Talk, Institute Lecture Series
Kendrapara Auto. College, Odisha, India

ML for audio-visual processing Nov. 2023
Faculty Development Programme on **Recent trends in Machine Learning for Engineering Applications**
Organized by Vellore Institute of Technology, Vellore, India

Audio-Visual Binauralization Jan. 2022
Presented Poster and Short Talk
WACV 2022, Virtual

Beyond Image to Depth Dec. 2021
Invited Talk
ICVGIP 2021, Virtual

Audio-Visual Depth Estimation June 2021
Presented Poster and Short Talk
CVPR 2021, Virtual

Basics of PyTorch and CNN Jan. 2021
Faculty Development Programme on **Optimization and Deep Learning**
Organized by NIT Patna & Techno Main Salt Lake, Kolkata, India

Audio-Visual Zero-shot Learning Feb. 2020
Presented Poster and Short Talk
WACV 2020, Colorado, USA

TECHNICAL SKILLS

Python, PyTorch, C/C++, MatLab, LaTeX

REFERENCES

Available upon Request