

ANKAN BANSAL

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CURRENT RESEARCH INTERESTS

Multi-modal Learning, Scene Understanding, Vision and Language

EDUCATION

Doctorate (PhD), Electrical and Computer Engineering *July 2020*

University of Maryland, College Park, MD, USA

Advisor: Rama Chellappa

Master of Science (MS), Electrical and Computer Engineering *July 2019*

University of Maryland, College Park, MD, USA

Advisor: Rama Chellappa

Master of Technology (M.Tech.), Electrical Engineering *June 2015*

Indian Institute of Technology, Kanpur, India

Bachelor of Technology (B.Tech.), Electrical Engineering *June 2015*

Indian Institute of Technology, Kanpur, India

SELECTED PUBLICATIONS

Visual Question Answering on Image Sets

Ankan Bansal, Yuting Zhang, Rama Chellappa

Under Submission

Spatial Priming for Detecting Human-Object Interactions

Ankan Bansal, Sai Saketh Rambhatla, Abhinav Shrivastava, Rama Chellappa

Under Submission [arxiv:2004.04851](https://arxiv.org/abs/2004.04851)

Suppressing Texture to Build Better Shape Representations

Shlok Mishra, Anshul Shah, Ankan Bansal, Jonghyun Choi, Abhinav Shrivastava, Abhishek Sharma, David Jacobs

Under Submission

Face Recognition from Still Images and Video

Ankan Bansal, Jingxiao Zheng, Rama Chellappa

Encyclopedia of Cryptography, Security and Privacy, 2020

Deep CNN-Based Face Recognition

Ankan Bansal, Rajeev Ranjan, Carlos D Castillo, Rama Chellappa

Computer Vision: A Reference Guide, Springer International Publishing, Cham, 2020

How are attributes expressed in face DCNNs?

Prithviraj Dhar, Ankan Bansal, Carlos D. Castillo, Joshua Gleason, P. Jonathon Phillips, Rama Chellappa

IEEE International Conference on Automatic Face & Gesture Recognition (FG), 2020, [arXiv:1910.05657](https://arxiv.org/abs/1910.05657)

Detecting Human-Object Interactions via Functional Generalization

Ankan Bansal, Sai Saketh Rambhatla, Abhinav Shrivastava, Rama Chellappa

Thirty-Fourth AAAI Conference on Artificial Intelligence, 2020, [arXiv:1904.03181](https://arxiv.org/abs/1904.03181)

A Fast and Accurate System for Face Detection, Identification, and Verification

Rajeev Ranjan, Ankan Bansal, Jingxiao Zheng, Hongyu Xu, Joshua Gleason, Boyu Lu, Anirudh Nanduri, Jun-Cheng Chen, Carlos D. Castillo, Rama Chellappa

IEEE Transactions on Biometrics, Behavior, and Identity Science (T-BIOM), 2019, [arXiv:1809.07586](https://arxiv.org/abs/1809.07586)

Zero-Shot Object Detection

Ankan Bansal, Karan Sikka, Gaurav Sharma, Rama Chellappa, Ajay Divakaran

European Conference on Computer Vision (ECCV), 2018, [link](#)

Crystal Loss and Quality Pooling for Unconstrained Face Verification and Recognition

Rajeev Ranjan, *Ankan Bansal*, Hongyu Xu, Swami Sankaranarayanan, Jun-Cheng Chen, Carlos D Castillo, Rama Chellappa

Pre-print, [arXiv:1804.01159](#)

Deep Features for Recognizing Disguised Faces in the Wild

Ankan Bansal, Rajeev Ranjan, Carlos D. Castillo, Rama Chellappa

IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2018, [link](#)

Predicting Dynamical Evolution of Human Activities from a Single Image

Suhas Lohit, *Ankan Bansal*, Nitesh Schroff, Jaishanker Pillai, Pavan Turaga, Rama Chellappa

IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2018, [link](#)

Proximity-Aware Hierarchical Clustering of Unconstrained Faces

Wei-An Lin, Jun-Cheng Chen, Rajeev Ranjan, *Ankan Bansal*, Swami Sankaranarayanan, Carlos D. Castillo, Rama Chellappa

Image and Vision Computing (IVC), 2018

UPSET and ANGRI: Breaking High Performance Image Classifiers

Sayantana Sarkar, *Ankan Bansal*, Upal Mahbub, Rama Chellappa

Pre-print, [arXiv:1707.01159](#)

Deep Learning for Understanding Faces

Rajeev Ranjan, Swami Sankaranarayanan, *Ankan Bansal*, Navaneeth Bodla, Jun-Cheng Chen, Vishal M. Patel, Carlos D. Castillo, Rama Chellappa

IEEE Signal Processing Magazine, 2017, [link](#)

The Do's and Don'ts for CNN-based Face Verification

Ankan Bansal, Carlos Castillo, Rajeev Ranjan, Rama Chellappa

International Conference on Computer Vision (ICCV) Workshops, 2017, [arXiv:1705.07426](#)

UMDFaces: An Annotated Face Dataset for Training Deep Networks

Ankan Bansal, Anirudh Nanduri, Carlos Castillo, Rajeev Ranjan, Rama Chellappa

International Joint Conference on Biometrics (IJCB), 2017, [arXiv:1611.01484](#)

People Counting in High Density Crowds from Still Images

Ankan Bansal, K. S. Venkatesh

International Journal of Computer and Electrical Engineering, 2015 Vol. 7(5), [arXiv:1507.08445](#)

Generation of Future Image Frames for an Image Sequence

Nishchal K Verma, *Ankan Bansal*, Shikha Singh

International Conference on Intelligent Interactive Technologies and Multimedia, 2013

INTERNSHIPS

Salesforce Einstein AI, Palo Alto, USA

Advisors: Nikhil Naik, Richard Socher

September 2019 - November 2019

Topic: Grounding Visual Concepts

Amazon AWS AI, Pasadena, USA

Advisors: Yuting Zhang, Vijay Mahadevan, Stefano Soatto

May 2019 - August 2019

Topic: Visual Question Answering

Amazon AWS Deep Learning, Seattle, USA

Advisors: Joaquin Zepeda, Avinash Ravichandran, Stefano Soatto

May 2018 - August 2018

Topic: Semi-supervised Learning

SRI International, Princeton, USA

Advisor: Ajay Divakaran

May 2017 - August 2017

Topic: Zero-shot Learning

Czech Technical University, Prague, Czech Republic

Advisor: Jiří Matas

May 2013 - July 2013

Topic: Detecting Texture-less 3-D Objects

Indian Institute of Technology, Kanpur, India

Advisor: Nishchal K. Verma

May 2012 - July 2012

Topic: Future Frame Prediction

HONORS AND AWARDS

- Jacob K. Goldhaber Travel Grant, University of Maryland, 2017
- Clark School of Engineering Distinguished Graduate Fellowship, University of Maryland, 2015-2016
- MCM Scholarship, IIT Kanpur, 2010-2014
- National Talent Search Examination (NTSE) scholarship by Government of India, 2008-2010
- CBSE Certificate of Outstanding Academic Performance (top 0.1% in Mathematics), 2008.
- Amul Vidya Bhushan Award for performance in Central Board Higher Secondary Examination, 2008
- Science Student Award by State Government of Uttar Pradesh, 2008
- Certificate of merit in the All India Talent Search Examination (AITSE), 2007.

RELEVANT COURSES

Computer Vision, Deep Learning, Robotics and Perception

Statistical Pattern Classification, Random Processes, Estimation & Detection Theory, Information Theory, Convex Optimization, Kalman Filtering

SKILLS

Programming Languages and Libraries: Python, PyTorch, Tensorflow, Caffe

Human Languages: Hindi (native), English, Spanish (beginner), Russian (beginner)

SERVICE

Reviewer for vision conferences (CVPR, ICCV, AAAI, etc.), and journals (IJCV, TIP, T-BIOM, etc.)

Coordinator, Quiz Events, Antaragni 2012 (inter-collegiate cultural festival of IIT Kanpur)

Coordinator, Crypto, Techkriti 2012 (inter-collegiate technical festival of IIT Kanpur)

Student Guide and Link Student, Counselling Service, IIT Kanpur, 2011-2012

OTHER INTERESTS

I [read](#). I [write](#). I [quiz](#).