

Anand Mishra, PhD

CSE-201

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Employment

- **Indian Institute of Technology** Jodhpur, India
Assistant Professor July 2019 - Present
- **Indian Institute of Science** Bangalore, India
Research Associate (postdoctoral fellow) August 2017 - July 2019
Host: Dr. Partha Pratim Talukdar
Research focus: Knowledge-aware Computer Vision
- **International Institute of Information Technology** Hyderabad, India
Research fellow (postdoctoral fellow) January 2017 - July 2017
Host: Prof. C. V. Jawahar
Research focus: Intelligent Image Matching

Education

- **International Institute of Information Technology** Hyderabad, India
PhD, Computer Science and Engineering (CGPA: 8.6) August 2009 - November 2016
 - **Thesis:** Understanding Text in Scene Images
 - **Advisers:** Prof. C. V. Jawahar (IIIT-H) and Dr. Karteek Alahari (Inria, France)
 - **PhD committee:** Prof. S. Chaudhury (IIT-D/CEERI Pilani), Dr. A. Sharma (IIIT-H), Dr. P. Chaudhuri (IIT-B) and advisers
- **Birla Institute of Technology Mesra** Ranchi, India
M.Tech., Computer Science (CGPA: 8.2) 2006-2008
 - **Thesis:** Image Compression using Weighted Finite Automata
 - **Adviser:** Prof. G. Sahoo
 - **Fellowship:** MHRD GATE Fellowship
- **Guru Ghasidas University (now a central univ.)** Bilaspur, India
M.Sc., Computer Science (Percentage: 68.8) 2004-2006
- **Guru Ghasidas University (now a central univ.)** Bilaspur, India
B.Sc., with Mathematics (Percentage: 72.3) 2001-2004
- **Govt. boys school (MPBSE)** Jashpur Nagar, India
12th. with Physics, Chemistry, Mathematics (Percentage: 76.7) 2001
- **Govt. model school (MPBSE)** Jashpur Nagar, India
10th. (Percentage: 79.0) 1999

Awards/Fellowships

IIT Jodhpur Teaching Excellence Award 2020	August 2020
Google Gift to support travel for AAAI 2019 (Honolulu)	December 2018
First runner-up for the doctoral dissertation award at XRCI Open 2015 (XRCI Open is organized by Xerox Research Centre India, and five Computer Science PhD students from the country were shortlisted as finalists for this year).	Jan 2015
ACM-India Travel Grant to attend ACM-IRISS 2015 (Goa)	Feb 2015
XRCI Travel Grant to attend Xerox Open 2015 (Bengaluru)	Jan 2015
IEEE Student Travel Grant to attend ICCV 2013 (Sydney)	Dec 2013
Microsoft Research India PhD fellowship 2012 Award (One among only four PhD students in the country in year 2012)	Aug 2012
Google India Travel Grant to attend CVPR 2012 (Providence)	April 2012
Microsoft Research India Travel Grant to attend ICDAR 2011 (Beijing)	July 2011
IIIT Institute Fellowship	2009 - 2012
GATE Scholarship	2006 - 2008

Teaching Experience

- **CSL7410: Graph Theory and Applications**
Graduate Course IIT Jodhpur
AY - 2020-21, Trimester - 1
- **CS222: Theory of Computations**
Under graduate course IIT Jodhpur
AY - 2019-20, Semester - 2
- **CS212: Object Oriented Design Analysis**
Under graduate course IIT Jodhpur
AY - 2019-20, Semester - 1
- **UE-101: Algorithms and Programming**
Under graduate course (co-instructor) IISc Bangalore
Monsoon 2018
- **Computer Problem Solving for M.Tech. in Bio-informatics**
graduate course IIIT, Hyderabad
Monsoon 2016
- **Operating Systems**
Under graduate course (visiting instructor) IIIT Sri City
Monsoon 2014

Grants

- Knowledge Discovery from Images Containing Text and its application to Audio-Visual Dialogue
 - PIs: Anand Mishra
 - with Accenture LLC
 - Duration: June 2020 - May 2021
 - Approved Budget: USD 20,000
- Online Education (consultancy project)
 - PIs: Anand Mishra, M. Vatsa
 - with IIT Jodhpur
 - Duration: January 2020- December 2022
 - Approved Budget: 53 Lakh (as on December 10, 2020, more instalments to be approved over next couple of years)

- Part Detection and Knowledge-aided Zero-shot Part Classification
 - PIs: A. Chakraborty, Partha Pratim Talukdar, Anand Mishra
 - with Siemens Corporation India
 - Duration: January 2019 - November 2020
 - Approved Budget: 32 Lakhs

Publications

Note– Total citations: 1069, h-index: 12, i10-index: 12. (Source: Google Scholar, December 31, 2020)

Journals:

1. **Anand Mishra**, *DHFML: Deep Heterogeneous Feature Metric Learning for Matching Photo-Cartoon Pairs*, International Journal of Multimedia Retrieval, pages 1–8, 2018,
2. **Anand Mishra**, Karteek Alahari, C. V. Jawahar, *Unsupervised refinement of color and stroke features for text binarization*, International Journal on Document Analysis and Recognition, Volume 20(2), pages 105–121, 2017
3. **Anand Mishra**, Karteek Alahari, C. V. Jawahar, *Enhancing Energy Minimization Framework for Scene Text Recognition with Top-Down Cues*, Computer Vision and Image Understanding, volume 145, pages 30–42, 2016

Conferences:

1. Aditay Tripathi, Rajath Dani, **Anand Mishra**, Anirban Chakraborty, *Sketch-guided Object Localization in Natural Images*, **ECCV 2020** (spotlight)
2. Ajeet Kumar Singh, **Anand Mishra**, Shashank Shekhar, Anirban Chakraborty, *From String to Things: Knowledge-enabled VQA Model that can read and reason*, **ICCV 2019** (oral)
3. **Anand Mishra**, Ajeet Kumar Singh, Shashank Shekhar*, Anirban Chakraborty, *OCR-VQA: Visual Question Answering by Reading Text in Images*, **ICDAR 2019**
4. Sanket Shah*, **Anand Mishra***, Naganand Y., Partha Pratim Talukdar, *KVQA: Knowledge-aware Visual Question Answering*, **AAAI 2019** (*: equal contribution).
5. **Anand Mishra** and Ajeet K. Singh, *Deep Embedding using Bayesian Risk Minimization with Application to Sketch Recognition*, ACCV 2018
6. Ashutosh Mishra, Shyam N. Rai, **Anand Mishra**, C. V. Jawahar, *IIIT-CFW: A benchmark database for Cartoon Faces in the Wild*, ECCVW 2016 (oral)
7. Ajeet K. Singh, **Anand Mishra**, Pranav Dabaral, C. V. Jawahar, *A Simple and Effective Solution for Script Identification in the Wild*, DAS 2016
8. Swetha Sirnam, **Anand Mishra**, G. M. Hegde, C. V. Jawahar, *Efficient Object Annotation for Surveillance and Automotive Applications*, WACV Workshop 2016.
9. Udit Roy, **Anand Mishra**, Karteek Alahari, C. V. Jawahar, *Scene Text Recognition and Retrieval for Large Lexicons*, ACCV 2014.
10. **Anand Mishra**, Karteek Alahari, C. V. Jawahar, *Image Retrieval using Textual cues*, **ICCV 2013**.

11. Vibhor Goel, **Anand Mishra**, Karteek Alahari, C. V. Jawahar, *Whole is Greater than Sum of Parts: Recognizing Scene Text Words*, ICDAR 2013.
12. Vijay Kumar, Amit Bansal, Gautom Hari Tulsian, **Anand Mishra**, Anoop Namboodari, C. V. Jawahar, *Sparse Document Image Coding for Restoration*, ICDAR 2013.
13. **Anand Mishra**, Naveen T.S., Viresh Ranjan, C. V. Jawahar, *Automatic Localization and Correction of Line Segmentation Errors*, DAR 2012 (Oral).
14. Deepan Gupta*, Vaidehi Chhajer*, **Anand Mishra**, C. V. Jawahar, *A Non-local MRF model for Heritage Architectural Image Completion*, ICVGIP 2012 (*: equal contribution).
15. **Anand Mishra**, Karteek Alahari, C. V. Jawahar, *Scene Text Recognition using Higher Order Language Priors*, BMVC 2012 (Oral).
16. **Anand Mishra**, Karteek Alahari, C. V. Jawahar, *Top-down and Bottom-up cues for Scene Text Recognition*, **CVPR 2012**.
17. **Anand Mishra**, Karteek Alahari, C. V. Jawahar, *An MRF Model for Binarization of Natural Scene Texts*, ICDAR 2011 (Oral).
18. Dheeraj Mundhra, **Anand Mishra**, C. V. Jawahar, *Automatic Localization of Page Segmentation Errors*, J-MOCR-AND 2011 (Oral).

Invited Talks

- Vision India, ICVGIP 2020, IIT Jodhpur (virtual) (December 2020)
- SPCOM 2020, IISc Bangalore (virtual) (July 2020)
- Department of Computer Science and Engineering, IIT Guwahati (June 2019)
- IIIT Bangalore (March 2019)
- BLIPAR, Bengaluru (May 2017)
- Visual Learning and Intelligence lab, department of CSE, IIT-Hyderabad, India (September 2015)
- ACM-IRISS 2015, Goa, India (February 2015)
- XRCI Open 2015, Bengaluru, India (January 2015)
- Amazon-ML group, Bengaluru, India (December 2014)
- Mysore Workshop on Machine Learning - 2012

Students (Only students who have worked more than six months are listed here.)

PhD:

1. **Abhirama P.**
IIT Jodhpur *2019-Present*
2. **Neelu Verma (MTech-PhD)**
IIT Jodhpur *2019-Present*

Masters:

1. **Pratik Somwanshi**
IIT Jodhpur *2019-Present*
2. **Megha Kumari**
IIT Jodhpur *2019-Present*
3. **Kena Hemmani**
IIT Jodhpur *2019-Present*
4. **Gaurav Pilankar**
IIT Jodhpur *2019-Present*

Undergraduate:

1. **Revant Teotia, B. Tech. from IIT Kanpur**
Hosted at IIT Jodhpur *2020-Present*
2. **Vibhor Mishra, B. Tech. student at IIT Jodhpur**
Hosted at IIT Jodhpur *2019-Present*
3. **Mayank Maheswari, B. Tech. student at IIT Jodhpur**
Hosted at IIT Jodhpur *2019-Present*
4. **Anjali Shenoy, B. Tech. from IIIT Hyderabad**
Hosted at IISc Bangalore *2018-2019*
5. **Shashank Shekhar, B. Tech. from IIT (ISM) Dhanbad**
Hosted at IISc Bangalore, co-advisor: Dr. Anirban *2018-2019*
6. **Ashutosh Sharma, B. Tech. student at IIIT Sri City**
Hosted at IIIT Sri City, co-advisor: Prof. Jawahar *2015-2016*
7. **Shyam N Rai, B. Tech. student at IIIT Sri City**
Hosted at IIIT Sri City, co-advisor: Prof. Jawahar *2015-2016*
8. **Vibhor Goel, B. Tech. student at IIIT Hyderabad**
Hosted at IIIT Hyderabad, co-advisor: Prof. Jawahar *2013-2014*
9. **Pranab Dabral, B. Tech. student at VIT Vellore**
Hosted at IIIT Hyderabad, co-advisor: Prof. Jawahar *2013-2014*
10. **Dheeraj Mundhara, B. Tech. student at IIT Kharagpur**
Hosted at IIIT Hyderabad, co-advisor: Prof. Jawahar *2011-2011*

Professional service

- Moderated a panel on Higher Education as Career Strategy with the following panelists: Divya Pitta (Google), Danish (CMU) and Somesh (MIT), 2020.
- Co-organized: “Knowledge Bases and Multiple Modalities (KBMM)” at Automated Knowledge Base Construction (AKBC) 2019/2020.
- Reviewer: AAAI 2021, IJCAI 2020, ECCV 2020, CVPR 2020, AAAI 2020, ICCV 2019, IJCAI 2019, ICDAR 2019, NCVPRIPG 2019, IEEE TPAMI, IJCV, IEEE TKDD, CVIU, IJDAR, Pattern Recognition.
- Co-ordinated 2018 Summer Intern Selection Process at MALL lab, IISc. We received 630 applications and selected 5 summer interns.

References

Available on request.

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