

7. **OBJECT 3DIT: Language-guided 3D-aware Image Editing**
O. Michel, **A. Bhattad**, E. Vanderbilt, R. Krishna, A. Kembhavi, T. Gupta
NeurIPS 2023
6. **Improving Equivariance in State-of-the-Art Supervised Depth and Normal Predictors**
Yuanyi Zhong, **A. Bhattad**, Y. Wang, D. A. Forsyth
ICCV 2023
5. **Cut-and-Paste Object Insertion by Enabling Deep Image Prior for Reshading**
A. Bhattad, D. A. Forsyth
3DV 2022 (**Spotlight Presentation**)
4. **DIVeR: Real-time and Accurate Neural Radiance Fields with Deterministic Integration for Volume Rendering**
L. Wu, J. Y. Lee, **A. Bhattad**, Y. Wang, D. A. Forsyth
CVPR 2022 (**Oral Presentation**) (**Best Paper Finalist**)
3. **View Generalization for Single Image Textured 3D Models**
A. Bhattad, A. Dundar, G. Liu, A. Tao, B. Catanzaro
CVPR 2021
2. **Unrestricted Adversarial Perturbations via Semantic Manipulation**
A. Bhattad*, M. J. Chong*, K. Liang, B. Li, D. A. Forsyth (* for equal contribution)
ICLR 2020
1. **Improved Style Transfer with Calibrated Metrics**
M. Yeh*, S. Tang*, **A. Bhattad**, C. Zou, D. A. Forsyth (* for equal contribution)
WACV 2020

WORKSHOP PAPERS

3. **MIMIC: Masked Image Modeling with Image Correspondences**
K. Marathe, M. Bigverdi, N. A. Khan, T. Kundu, P. Howe, S. Ranjit, **A. Bhattad**, A. Kembhavi, L. Shapiro, R. Krishna
CVPR-W 2024
2. **Big but Imperceptible Adversarial Perturbations via Semantic Manipulation**
A. Bhattad*, M. J. Chong*, K. Liang, B. Li, D. A. Forsyth (* for equal contribution)
CVPR-W 2019, *Oral Presentation*
1. **Detecting Anomalous Faces with “No Peeking” Autoencoders**
A. Bhattad, J. Rock, D. A. Forsyth
CVPR-W, 2018, *Oral Presentation*

UNDER REVIEW

4. **Intrinsic LoRA: A Generalist Approach for Discovering Knowledge in Generative Models**
X. Du, N. Kolkin, G. Shakhnarovich, **A. Bhattad**
In Submission
3. **Videoshop: Localized Semantic Video Editing with Noise-Extrapolated Diffusion Inversion**
X. Fan, **A. Bhattad***, R. Krishna*
In Submission
2. **Intrinsic ControlNet: Zero-shot Object Compositing from Image Intrinsic**
Z. Zhang, F. Fortier-Chouinard, M. Garon, **A. Bhattad**, JF. Lalonde
In Submission
1. **UrbanIR: Large-Scale Urban Scene Inverse Rendering from a Single Video**
Z. Lin, B. Liu, Y. Chen, D.A. Forsyth, J. Huang, **A. Bhattad**, S. Wang
In Submission

TECHNICAL REPORTS

3. **Blocks2World: Controlling Realistic Scenes with Editable Primitives**
V. Vavilala, S. Jain, R. Vasanth, **A. Bhattad**, D.A. Forsyth
Technical Report, arXiv 2023
2. **Make It So: Steering StyleGAN for Any Image Inversion and Editing**
A. Bhattad, V. Shah, D. Hoiem, D. A. Forsyth
Technical Report, arXiv 2023

1. SIRfyN: Single Image Relighting from your Neighbors

D. A. Forsyth, **A. Bhattad**, P. Asthana, Y. Zhong, Y. Wang

Technical Report, arXiv 2021

STUDENTS MENTORING

Doctoral Students

- Xiao Zhang (University of Chicago; 2023-present) | Project on Latent Intrinsic
- Xiaodan Du (TTI-Chicago; 2023-present) | Paper Under Review (see UR#4)
- Xiang Fan (University of Washington; 2023-present) | Paper Under Review (see UR#3)
- Zitian Zhang (Université Laval; 2023-present) | Paper Under Review (see UR#2)
- Ayush Sarkar (UIUC; 2023-present) | Paper at CVPR (see CP#10)
- Kalyani Marathe (University of Washington; 2023-present) | Paper at CVPR-W (see WP#1)
- Zhi-Hao Lin (UIUC; 2023-present) | Paper Under Review (see UR#1)

Masters Students

- Hanlin (Asher) Mai (UIUC; 2023-present) | Paper at CVPR (see CP#10)
- Seemandhar Jain (UIUC; 2023-2024) | Project on Latent Intrinsic | Next: PhD Student at UCSD
- Frédéric Fortier-Chouinard (Université Laval; 2023-present) | Paper Under Review (see UR#2)
- James Soole (UIUC; 2023) | Paper at CVPR (see CP#9)
- Feiran Wang (UIUC; 2023) | Project on NeRF + Illumination Physics
- Kexuan (Klaus) Zou (UIUC; 2019-2020) | Next: Software Engineer at NVIDIA

Bachelors Students

- Joshua Ahn (University of Chicago; 2024-present) | Project on NeRF w/o Positional Encoding
- Amitabh Mahapatra (UIUC; 2023-present) | Paper at CVPR (see CP#10)
- Kuan-Sheng Chen (UIUC; 2023) | Project on Generative Models with Intrinsic Images
- Oscar Michel (AI2; 2023) | Paper at NeurIPS (see CP#7) | Next: PhD Student at NYU
- Liwen Wu (UIUC; 2022) | Paper at CVPR (see CP#4) | Next: PhD Student at UCSD
- Brian Chen (UIUC; 2020-2022) | REU at CMU's Robotics Institute
- Anchu Zhu (UIUC; 2018-2019) | Next: MS in CS at USC

TEACHING EXPERIENCE

Past Meets Present: A Tale of Two Visions, TTIC; *Course Instructor* Spring 2024

- Designed and developed a new course on Computer Vision, combining historical and modern approaches
- Taught a class of 20+ students from TTIC and UChicago, fostering an engaging learning environment

Computer Science, UIUC; *Graduate Teaching Assistant*

Jan 2016 – Dec 2018

- Applied Machine Learning (CS498 AML), Fall 2018
 - Designed and implemented Kaggle competitions to enhance student learning and engagement
- Data Structures (CS 225), Spring 2017
 - Developed assignments, exams, and labs to assess and reinforce student understanding
- Introduction to Computing (CS 101), Spring 2016 & Fall 2016
 - Recognized as an **Excellent TA** for effective teaching and student support

INVITED TALKS

What do Generative Image Models Know?

- IIIT Hyderabad, India; Vision Seminar Jan 2024
- TTI-Chicago; Research@TTIC Oct 2023
- Exactech, Inc.; Tech Talk Oct 2023

Exploring Knowledge in Generative Models

- Stanford University in Jiajun Wu's group June 2023
- University of Tübingen, Autonomous Vision Group May 2023

What do Generative Models know about Geometry and Illumination?

- UC Berkeley: Vision Seminar Apr 2023
- NVIDIA Research Apr 2023
- MIT: Vision and Graphics Seminar Apr 2023
- CMU: VASC Seminar Mar 2023

- UW: Vision Seminar Mar 2023

Learning about Light without Labeled Data

- UMD: Vision Seminar Mar 2023
- UCSD: Pixel Cafe Seminar Feb 2023
- TTIC: Research Talk Feb 2023

SERVICES & LEADERSHIP

Lead Organizer, ECCV-W on “Knowledge in Generative Models” Sept 2024

Lead Organizer, CVPR-W on “CV 20/20: A Retrospective Vision” June 2024

Lead Organizer, CVPR-W on “Scholars & Big Models: How Can Academics Adapt?” June 2023

Lead Organizer, UIUC Vision Workshop at Allerton April 2023

Organizer, UIUC External Speaker Series and Vision Lunch Jan 2021 – May 2023

Reviewer, Computer Vision Conferences Nov 2018 – Present

- Serving as reviewer for CVPR, NeurIPS, ECCV and ICCV conferences and workshops.
- **Outstanding Reviewer** for ICCV 2023
- **Outstanding Emergency Reviewer** for CVPR 2021

Program Committee Jun 2019

- Adversarial Machine Learning in Real-World Computer Vision Systems, CVPR 2019 Workshop
- Security and Privacy in Machine Learning, ICML 2019 Workshop

Organizer, Vision Coffee, Urbana-Champaign *May’18 - Aug’18*

- Vision and Deep Learning paper/topic weekly discussion group
- Finalized agenda/topic, location and initiated discussions

Co-Founder, SchoolEngg *Apr’13 - May’15*

- Forum for high-school students; providing firsthand knowledge of all engineering disciplines
- Currently, renamed as *PrepLift*, an education counselling start-up in India