

## Education

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**Ph.D.**, Computer Science, University of Massachusetts Amherst Sep 2015 - Jun 2021  
**M.S.**, Computer Science, University of California San Diego Sep 2013 - Jun 2015  
**B.S.**, Electrical Engineering, National Taiwan University Sep 2008 - Jun 2012

**Research experiences:** computer vision, machine learning, object recognition, semi-/self-supervised/few-shot/transfer learning, object detection, generative models, vision and language, representation learning.

**Programming Languages and Libraries:** Python, Matlab, PyTorch, Tensorflow, NumPy, OpenCV

## Work Experience

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**NEC Laboratories America**, Researcher Jan 2023 - Present  
Created automatic data systems for autonomous driving tasks such as 2D/3D perception, prediction, and planning.  
Built the data pipeline that identifies the issue, auto-labels known and novel objects, and updates with continual learning.

**Meta AI**, Research Scientist Jul 2021 - Nov 2022  
AI Research for Monetization - Increased revenue with ads ranking models using content understanding features.  
AI Commerce - Worked on visual search which includes object detection, classification, and retrieval.  
Improved classification and retrieval accuracy by 5% using hierarchical predictions in the label space with 10k categories.

**Computer Vision Lab, UMass Amherst** Research Assistant Sep 2015 - Jun 2021  
Published research paper on transfer/semi-/self-supervised/few-shot learning, domain adaptation, and vision and language.  
Worked intensively on fine-grained object recognition, created benchmarks and pushed sota on semi-supervised learning.

**Facebook AI** Research Intern Jun 2020 - Aug 2020  
AI commerce - Developed generative models for generating catalog images of clothing items using organic images.

**NEC Laboratories America** Summer Research Assistant Jun 2018 - Aug 2018  
Proposed methods for domain adaptation and active learning, applied to object classification, detection, and segmentation.

**Amazon Web Services** Applied Scientist Intern Jun 2017 - Aug 2017  
Worked on an alternative solution of generative models using GANs and nearest neighbor search in the deep learning team.

## Teaching Experience

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**Teaching Assistant**  

- UMass Amherst COMPSCI 682, Neural Networks: A Modern Introduction Spring 2018, Fall 2018, Fall 2020
- UMass Amherst COMPSCI 370, Introduction to Computer Vision Spring 2021
- UCSD CSE 250B, Machine Learning Winter 2015
- UCSD CSE 150, Introduction to Artificial Intelligence Summer 2014

## Professional activities

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Organizer: FGVC{7,8,9,10} workshop at CVPR {2020, 2021, 2022, 2023}  
Area Chair: WACV 2024  
Conference Reviewer: CVPR, ICCV, ECCV, NeurIPS, ACCV, and WACV, since 2018  
Journal Reviewer: PAMI, IJCV, IROS, ICRA, and TOMM  
Graduate Student Representative, UMass Amherst CICS 2020-2021

## Awards

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Doctoral Consortium, CVPR 2021  
Outstanding Reviewer: CVPR 2018  
Outstanding TA Award, UMass Amherst CICS, 2021

## Publications

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### Conference

1. **Tell Me What Happened: Unifying Text-guided Video Completion via Multimodal Masked Video Generation**  
Tsu-Jui Fu, Licheng Yu, Ning Zhang, Cheng-Yang Fu, **Jong-Chyi Su**, William Yang Wang, Sean Bell  
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.
2. **RoPAWS: Robust Semi-supervised Representation Learning from Uncurated Data**  
Sangwoo Mo, **Jong-Chyi Su**, Kevin Chih-Yao Ma, Mido Assran, Ishan Misra, Licheng Yu, Sean Bell  
*International Conference on Learning Representations (ICLR)*, 2023.
3. **Semi-Supervised Learning with Taxonomic Labels**  
**Jong-Chyi Su**, Subhransu Maji  
*British Machine Vision Conference (BMVC)*, 2021.
4. **The Semi-Supervised iNaturalist Challenge at the FGVC8 Workshop**  
**Jong-Chyi Su**, Subhransu Maji  
*The eighth Workshop on Fine-Grained Visual Categorization (FGVC8) at CVPR*, 2021.
5. **On Equivariant and Invariant Learning of Object Landmark Representations**  
Zezhou Cheng, **Jong-Chyi Su**, Subhransu Maji  
*International Conference on Computer Vision (ICCV)*, 2021.
6. **A Realistic Evaluation of Semi-Supervised Learning for Fine-Grained Classification**  
**Jong-Chyi Su**, Zezhou Cheng, Subhransu Maji  
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR) (oral)*, 2021.
7. **When Does Self-supervision Improve Few-shot Learning?**  
**Jong-Chyi Su**, Subhransu Maji, Bharath Hariharan  
*European Conference on Computer Vision (ECCV)*, 2020.
8. **The Semi-Supervised iNaturalist-Aves Challenge at FGVC7 Workshop**  
**Jong-Chyi Su**, Subhransu Maji  
*The seventh Workshop on Fine-Grained Visual Categorization (FGVC7) at CVPR*, 2020.
9. **Active Adversarial Domain Adaptation**  
**Jong-Chyi Su**, Yi-Hsuan Tsai, Kihyuk Sohn, Buyu Liu, Subhransu Maji, Manmohan Chandraker  
*Winter Conference on Applications of Computer Vision (WACV)*, 2020.
10. **A Deeper Look at 3D Shape Classifiers**  
**Jong-Chyi Su**, Matheus Gadelha, Rui Wang, Subhransu Maji  
*Second Workshop on 3D Reconstruction Meets Semantics at ECCV*, 2018.
11. **Reasoning about Fine-grained Attribute Phrases using Reference Games**  
**Jong-Chyi Su\***, Chenyun Wu\*, Huaizu Jiang, Subhransu Maji  
*International Conference on Computer Vision (ICCV)*, 2017.
12. **Adapting Models to Signal Degradation using Distillation**  
**Jong-Chyi Su**, Subhransu Maji  
*British Machine Vision Conference (BMVC)*, 2017.

### Journal

1. **Depth Estimation and Specular Removal for Glossy Surfaces Using Point and Line Consistency with Light-Field Cameras**  
Michael Tao, **Jong-Chyi Su**, Ting-Chun Wang, Jitendra Malik, and Ravi Ramamoorthi  
*IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, Volume 38 Issue 6, June 2016.