CHIH-HUI (JOHN) HO

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EDUCATION

University of California San Diego, La Jolla, CA 09/2017 - Now
PhD Candidate in Electrical and Computer Engineering (Advisor: Nuno Vasconcelos)
M.S. in Computer Science, GPA: 3.87/4.0

University of Illinois at Urbana-Champaign, Champaign, IL 01/2016 - 05/2016
Exchange student in Computer Science, GPA: 3.71/4.0

National Chiao Tung University, Hsinchu, Taiwan 09/2012 - 06/2016
B.S. in EECS Honor Program, GPA: 4.15/4.3

RESEARCH INTEREST

Deep Learning & Computer Vision: 14 papers during PhD across broad topics, including visual language foundational model, self-supervised learning, anomaly detection, 3D vision and adversarial attack

SELECTED PUBLICATION

- **Chih-Hui Ho***, Tz-Ying Wu*, Nuno Vasconcelos, "ProTeCt: Prompt Tuning for Hierarchical Consistency", *Preprint*.
- **Chih-Hui Ho***, Yuwei Zhang*, Nuno Vasconcelos, "Toward Unsupervised Realistic Visual Question Answering", In *International Conference on Computer Vision (ICCV)*, 2023.
- **Chih-Hui Ho**, Nuno Vasconcelos, "DISCO: Adversarial Defense with Local Implicit Functions", *NeurIPS*, 2022.
- **Chih-Hui Ho**, Srikar Appalaraju, Bhavan Jasani, R. Manmatha, Nuno Vasconcelos, "YORO - Lightweight End to End Visual Grounding", *ECCV* Workshop, 2022.
- Brandon Leung, **Chih-Hui Ho**, Nuno Vasconcelos, "Black-Box Test-Time Shape REFINEment for Single View 3D Reconstruction", *CVPR* Workshop, 2022.
- **Chih-Hui Ho**, Nuno Vasconcelos, "Contrastive Learning with Adversarial Examples", *NeurIPS*, 2020.
- Tz-Ying Wu, Pedro Morgado, Pei Wang, **Chih-Hui Ho**, Nuno Vasconcelos, "Solving Long-tailed Recognition with Deep Realistic Taxonomic Classifier", *ECCV*, 2020.
- **Chih-Hui Ho**, Bo Liu, Tz-Ying Wu, Nuno Vasconcelos, "Exploit Clues from Views: Self-Supervised and Regularized Learning for Multiview Object Recognition", *CVPR*, 2020.
- **Chih-Hui Ho**, Pedro Morgado, Amir Persekian, Nuno Vasconcelos, "PIEs: Pose Invariant Embeddings", *CVPR*, 2019.
- **Chih-Hui Ho***, Brandon Leung*, Erik Sandstrom, Yen Chang, Nuno Vasconcelos, "Catastrophic Child's Play: Easy to Perform, Hard to Defend Adversarial Attacks", *CVPR*, 2019.
- Jen-Hui Chuang, **Chih-Hui Ho**, Ardian Umam, HsinYi Chen, Mu-Tien Lu, Jenq-Neng Hwang, Tai-An Chen, "Geometry-based Camera Calibration Using Closed-form Solution of Principal Line", *TIP*, 2019.

PROFESSIONAL EXPERIENCE

Graduate Student Researcher, Statistical Visual Computing Lab, UCSD 01/2018 - Now
- Working on large foundational models, self-supervised learning and anomaly detection
- Collaborating with Korean Polytechnic University and PCB/tire company on anomaly detection

Mitsubishi Electric Research Lab, Research Intern 06/2023 - 09/2023
- Conducted research on anomaly detection using visual language foundational model

Amazon AWS, Applied Scientist Intern 06/2021 - 09/2021
- Published a visual grounding transformer paper with 1.3x smaller size and 3x faster speed

Research Assistant, NCTU Computer Vision Research Center 11/2016 - 06/2017
- Developed a bill serial number recognition system and a camera calibration algorithm for prototype

Software Engineer Internship, Industrial Technology Research Institute 01/2015 - 12/2015
- Developed a prototype to calibrate robotic arm with an industrial camera

ACADEMIC SERVICES AND AWARD

- **Outstanding Reviewer:** CVPR, ICML **Reviewer:** NeurIPS, ECCV, ICCV, TPAMI, ICLR, ACCV, WACV, ICIP
- **Award:** 2022 NeurIPS Scholar Award, 2022 Amazon Post-Internship Award, 2021 Qualcomm Innovation Award Finalist

SKILLS

Languages & Library: Python, C/C++ , MATLAB, Pytorch, OpenCV, Docker, Kubernetes, LaTeX