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Professional Experience

Associate Professor, 2021 -
Department of Electrical and Computer Engineering
National Yang Ming Chiao Tung University, Taiwan

Assistant Professor, 2016 - 2020
Department of Electrical and Computer Engineering
National Chiao Tung University, Taiwan

Postdoctoral Associate, 2013 - 2016
Robotics, Vision, and Sensor Networks Group & Marine Robotics Group,
Computer Science and Artificial Intelligence Laboratory (CSAIL),
Massachusetts Institute of Technology (MIT), MA, USA.

Education

Ph.D. in Computer Science, University of Massachusetts at Boston. 2012
M.A. in Computer-Aided Engineering, 2003
Department of Civil Engineering, National Taiwan University, Taiwan.
B.S. in Civil Engineering, National Taiwan University, Taiwan. 2001

Research Awards and Robotics Competitions

Awarded the 3th Place in the Maritime RobotX Challenge 2022
Lead Team NCTU to Participate the RobotX Competition in Sydney, Australia
The 7th place in the DARPA Subterranean Challenge 2019
Lead Team NCTU to Participate the Tunnel Circuit in Pittsburgh, USA
Facebook PyRobot: Democratizing Robotics - Research Award 2019
Facebook AI Research (FAIR)
1st Place Spotlight Poster in RobotX Interactive Forum, Singapore 2019
RoboNation, USA
Co-Host The AI Driving Olympics 2018
Neural Information Processing Systems
The 5th Place in the Maritime RobotX Challenge 2018
Lead Team NCTU to Participate the RobotX Competition in Hawaii, USA
WAM-V Award (with 75,000 USD WAM-V Surface Vehicle) 2017
Association for Unmanned Vehicle Systems International, USA
MediaTek Junior Chair Professor 2016
MediaTek and National Chaio Tung University, Taiwan
Outstanding Research Talents, 2015
Ministry of Science and Technology (MOST), Taiwan

Journal Papers

[1]. **H.-C. Wang***, S.-C. Huang, P.-J. Huang, K.-L. Wang, Y.-C. Teng, Y.-T. Ko, D. Jeon and I-C. Wu. (2023) "Curriculum Reinforcement Learning from Avoiding Collisions to Navigating among Movable Obstacles in Diverse Environments," *IEEE Robotics and Automation Letters (RA-L)*, 8(5), 2740-2747. (Corresponding author)

[2].C.-I Huang, Y.-Y. Huang, J.-X. Liu, Y.-T. Ko, **H.-C. Wang***, K.-H. Chiang, L.-F. Yu (2023) "Fed-HANet: Federated Visual Grasping Learning for Human Robot Handovers," *IEEE Robotics and Automation Letters (RA-L)*. (Accepted, Corresponding author)

[3]. F. Zocco, T.-C. Lin, C.-I Huang, **H.-C. Wang**, M. O. Khyam, and M. Van. (2023) "Towards More Efficient EfficientDets and Real-Time Marine Debris Detection," *IEEE Robotics and Automation Letters (RA-L)*, 8(4), 2134-2141.

[4]. C.-L. Lu, J.-T. Huang, C.-I Huang, C.-C. Hsu, P. Chang, Z. Ewe, P.-J. Huang, P.-L. Li, B.-H. Wang, L. Yim, S.-C. Huang, M. Bai, & **H.-C. Wang*** (2022). "A Heterogeneous Unmanned Ground Vehicle and Blimp Robot Team for Search and Rescue using Data-driven Autonomy and Communication-aware Navigation," *Field Robotics* 2, 557-594. (Corresponding author)

[5]. J.-T. Huang, C.-L. Lu, P.-K. Chang, C.-I Huang, C.-C. Hsu, Z. L. Ewe, P.-J. Huang, and **H.-C. Wang*** (2021) "Cross-Modal Contrastive Learning of Representations for Navigation using Lightweight, Low-Cost Millimeter Wave Radar for Adverse Environmental Conditions," *IEEE Robotics and Automation Letters (RA-L)*. 6(2), 3333-3340. (Corresponding author)

[6]. C.-L. Lu, Z.-Y. Liu, J.-T. Huang, C.-I. Huang, B.-H. Wang, Y. Chen, N.-H. Wu, **H.-C. Wang***, L. Giarre, and P.-Y. Kuo, (2021) Assistive Navigation using Deep Reinforcement Learning Guiding Robot with UWB/Voice Beacons and Semantic Feedbacks for Blind and Visually Impaired People, *Frontier in Robotics and AI*. (Corresponding author)

[7]. Huang, H.-K., Lin, N.-C., Barrett, L., Springer, D., **Wang, H.-C.**, Pomplun, M., and Yu, L.-F. Automatic Optimization of Wayfinding Design, *Transactions on Visualization and Computer Graphics (TVCG)*. 2018.

Peer-reviewed Conference Proceeding Papers

[8]. L. S. Yim, Q. T. Vo, C.-I. Huang, C.-R. Wang, W. McQueary, **H.-C. Wang***, H. Huang, and L.-F. Yu, (2022) "WFH-VR: Teleoperating a Robot arm to Set a Dining Table across the Globe via Virtual Reality," *IEEE/RSJ International Conference on Intelligent Robots and Systems* (IROS 2022). (Corresponding author)

[9]. N.-C. Lin, Y.-C. Hsiao, Y.-W. Huang, C.-T. Hung, T.-K. Chuang, P.-W. Chen, J.-T. Huang, C.-C. Hsu, A. Censi, M. Benjamin, C.-F. Chen, **H.-C. Wang*,** "Duckiepond: An Open Education and Research Environment for a Fleet of Autonomous Maritime Vehicles," *IEEE/RSJ International Conference on Intelligent Robots and Systems* (IROS 2019). (Corresponding author)

[10]. Y.-S. Su, S.-H. Lu, P.-S. Ser, W.-T. Hsu, W.-C. Lai, B. Xie, H.-M. Huang, T.-Y. Lee, H.-W. Chen, L.-F. Yu, **H.-C. Wang***, "Pose-aware Placement of Objects- Brandname-based Affordance Prediction and Cooperative Dual-Arm Active Manipulation," *IEEE/RSJ International Conference on Intelligent Robots and Systems* (IROS 2019). (Corresponding author)

[11].R. Alghofaili, Y. Sawahata, H. Huang, **H.-C. Wang**, T. Shiratori, L.-F. Yu. "Lost in Style: Gaze-driven Adaptive Aid for VR Navigation," *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2019)*, Glasgow.

[12].T.-K. Chuang, N.-C. Lin, J.-S. Chen, C.-H. Hung, Y.-W. Huang, Chunchih Teng, Haikun Huang, L.-F. Yu, Laura Giarre, and **H.-C. Wang***. "Deep Trail-Following Robotic Guide Dog in Pedestrian Environments for People who are Blind and Visually Impaired - Learning from Virtual and Real Worlds," *IEEE International Conference on Robotics and Automation (ICRA 2018)*, Australia. (Corresponding author)

[13].**H.-C. Wang***, R. Katzschmann, S. Teng, B. Araki, L. Giarré, and D. Rus, "Enabling independent navigation for visually impaired people through a wearable vision-based feedback system," in *Robotics and Automation (ICRA), IEEE International Conference on*, 2017. (Corresponding author)

[14].L. Paull, J. Tani, H. Ahn, J. Alonso-Mora, L. Carlone, M. Cap, Y. F. Chen, C. Choi, J. Dusek, Y. Fang, D.

Hoehener, S.-Y. Liu, M. Novitzky, I. F. Okuyama, J. Pazis, G. Rosman, V. Varricchio, **H.-C. Wang**, D. Yershov, H. Zhao, M. Benjamin, C. Carr, M. Zuber, S. Karaman, E. Frazzoli, D. D. Vecchio, D. Rus, J. How, J. Leonard, and A. Censi, "Duckietown: an Open, Inexpensive and Flexible Platform for Autonomy Education and Research," in *Robotics and Automation (ICRA), IEEE International Conference on*, 2017.

[15]. D. Jeon, N. Ickes, P. Raina, **H.-C. Wang**, and A.-P. Chandrakasan, "A 0.6V, 8 mW 3D Vision Processor for a Navigation Device for the Visually Impaired," *IEEE International Solid-State Circuits Conference (ISSCC 2016)*, San Francisco, USA.