Wei-Cheng Wang, Ph.D. Candidate

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Education

2019 – Pres.	🔖 **Ph.D. Candidate in Computer Science Engineering**, Ghent University, Belgium. Thesis title: *Lab to Field: Towards More Robust and Privacy-Friendly Smart Audiovisual Surveillance.* Status: All requirements completed; internal defense scheduled.
2014 – 2016	🔖 **M.Sc. in Computer and Communication Engineering**, National Cheng Kung University, Taiwan. Thesis title: *Spatiotemporal Coherence based Annotation Placement for Surveillance Videos.*
2010 – 2014	🔖 **B.Sc. in Electrical Engineering**, National Cheng Kung University, Taiwan. .

Experience

Research

2018 – 2019	🔖 **Research Assistant**, Computer Vision Lab, Academia Sinica in Taiwan.
2014 – 2016	🔖 **Research Assistant**, NCKU-ARTC Multidisciplinary Joint R&D Project.

Teaching

2021 – 2023	🔖 **Teaching Assistant**, Applied Machine Learning, Ghent University, Belgium.
2015	🔖 **Teaching Assistant,** Data Structure, National Cheng Kung University, Taiwan.

Publications

Journal Articles

1. W.-C. Wang, S. De Coninck, S. Leroux, and P. Simoens, "Embedding-based pair generation for contrastive representation learning in audio-visual surveillance data," *Frontiers in Robotics and AI*, vol. 11, 2025, ISSN: 2296-9144. 🔗 DOI: `10.3389/frobt.2024.1490718`.

2. W.-C. Wang, S. Leroux, and P. Simoens, "Source-free model transferability assessment for smart surveillance via randomly initialized networks," *Sensors*, vol. 25, no. 13, p. 3856, 2025.

3. S. De Coninck, W.-C. Wang, S. Leroux, and P. Simoens, "Privacy-preserving visual analysis: Training video obfuscation models without sensitive labels," *Applied Intelligence*, pp. 1–12, 2024.

4. W.-C. Wang, S. De Coninck, S. Leroux, and P. Simoens, "An opt-in framework for privacy protection in audio-based applications," *IEEE Pervasive Computing*, vol. 21, no. 4, pp. 17–24, 2022. 🔗 DOI: `10.1109/MPRV.2022.3210377`.

5. C.-Y. Chiou, W.-C. Wang, S.-C. Lu, C.-R. Huang, P.-C. Chung, and Y.-Y. Lai, "Driver monitoring using sparse representation with part-based temporal face descriptors," *IEEE Transactions on Intelligent Transportation Systems*, vol. 21, no. 1, pp. 346–361, 2020. 🔗 DOI: `10.1109/TITS.2019.2892155`.

6. C.-R. Huang, W.-C. Wang, W.-A. Wang, S.-Y. Lin, and Y.-Y. Lin, "Useaq: Ultra-fast superpixel extraction via adaptive sampling from quantized regions," *IEEE Transactions on Image Processing*, vol. 27, no. 10, pp. 4916–4931, 2018. 🔗 DOI: `10.1109/TIP.2018.2848548`.

7. W.-C. Wang, C.-Y. Chiou, C.-R. Huang, P.-C. Chung, and W.-Y. Huang, "Spatiotemporal coherence-based annotation placement for surveillance videos," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 28, no. 3, pp. 787–801, 2018. 🔗 DOI: `10.1109/TCSVT.2016.2629340`.

Conference Proceedings

1 S. D. Coninck, W.-C. Wang, S. Leroux, and P. Simoens, "Selective manipulation of disentangled representations for privacy-aware facial image processing," in *4th Workshop on Machine Learning for CyberSecurity at ECML PKDD 2022*, 2022. 🔗 URL: https://arxiv.org/abs/2208.12632.

2 W.-C. Wang, Y.-Y. Lin, H.-W. Cheng, and C.-R. Huang, "Clustering trajectories in heterogeneous representations for video event detection," in *2018 25th IEEE International Conference on Image Processing (ICIP)*, 2018, pp. 933–937. 🔗 DOI: 10.1109/ICIP.2018.8451160.

3 W.-C. Wang, P.-C. Chung, C.-R. Huang, and W.-Y. Huang, "Event based surveillance video synopsis using trajectory kinematics descriptors," in *2017 Fifteenth IAPR International Conference on Machine Vision Applications (MVA)*, 2017, pp. 250–253. 🔗 DOI: 10.23919/MVA.2017.7986848.

4 W.-C. Wang, P.-C. Chung, H.-W. Cheng, and C.-R. Huang, "Trajectory kinematics descriptor for trajectory clustering in surveillance videos," in *2015 IEEE International Symposium on Circuits and Systems (ISCAS)*, 2015, pp. 1198–1201. 🔗 DOI: 10.1109/ISCAS.2015.7168854.

5 W.-C. Wang, R.-Y. Hsu, C.-R. Huang, and L.-Y. Syu, "Video gender recognition using temporal coherent face descriptor," in *2015 IEEE/ACIS 16th International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD)*, 2015, pp. 1–6. 🔗 DOI: 10.1109/SNPD.2015.7176186.

Awards and Achievements

2016 **Best Master's Thesis Award**, The Chinese Image Processing and Pattern Society.

Excellent Master's Thesis Award, The Chinese Institute of Electrical Engineering.

Honourary Member, The Phi Tau Phi Scholastic Honour Society.

2015 **Merit Award**, R&D category, Asia Pacific ICT Alliance Awards .

First Place, MOSTGP category, International ICT Innovative Services Awards.

Second Place, IC1 category, International ICT Innovative Services Awards.

Miscellaneous Experience

2020 – 2022 **President**, Taiwanese Student Association of Ghent University.

Editor, Taipei Representative Office in the EU and Belgium, Science and Technology Division.

Skills

Languages Traditional Chinese (Native proficiency); English (Advanced proficiency)

Coding Python (TensorFlow, PyTorch, scikit-learn, OpenCV), C++, MATLAB, LaTeX, Git

References

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