

# TONG WEI

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## EDUCATION

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**Czech Technical University in Prague (CVUT)**  
*Computer Science PhD candidate*  
Robust Estimation; Computer Vision; Deep Learning.

*Sep. 2022 – present, Czech Republic*  
**Supervisor: Jiří Matas, Daniel Barath**

**Eötvös Loránd University (ELTE)**  
*Computer Science MSc. (AI Specialisation)*  
AI Principles; Methods and Tools for AI Applications; 3D Computer Vision; AI Robotics; Machine Learning.

*Sep. 2020 – Jun. 2022, Hungary*  
**Score: 4.36/5, Excellent graduate (5/5)**

**Liaoning Technical University (LNTU)**  
*Communication Engineering BSc.*  
C++ Programming; Advanced Mathematics; Probability Theory and Statistics; Information Theory.

*Aug. 2015 – Jun. 2019, China*  
**Score: 3.19/4.5**

## PUBLICATIONS

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- [1] **T. Wei**, G. Tolias, J. Matas, and D. Barath. **Global-Aware Edge Prioritization for Pose Graph Construction.** *[CVPR'2026]*
- [2] **T. Wei**, P. Lindenberger, J. Matas, and D. Barath. **Breaking the Frame: Visual Place Recognition by Overlap Prediction.** *[WACV'24][code]*
- [3] **T. Wei**, Y. Patel, A. Shekhovtsov, J. Matas, and D. Barath, **Generalized Differentiable RANSAC.** *[ICCV'23][code]*
- [4] **T. Wei**, J. Matas, and D. Barath, **Adaptive Reordering Sampler with Neurally Guided MAGSAC.** *[ICCV'23][code]*
- [5] Z. Tao, **T. Wei**, J. Li, **Wavelet Multi-level Attention Capsule Network for Texture Classification.** IEEE Signal Processing Letters, 2021, 28: 1215-1219. *[SPL'21]*
- [6] S. Lin, K. Chi, **T. Wei**, and Z. Tao, **Underwater Image Sharpening Based on Structure Restoration and Texture Enhancement.** Applied Optics, 2021, 60 (15): 4443-4454. *[Optica'21]*

## PROJECTS & VISITING

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**Academic Guest at CVG, ETH Zurich, Oct. to Dec.** *ETH Zurich, 2024*  
*Minimal spanning tree-based image pair retrieval for Structure from Motion.*

**International Computer Vision Summer School (ICVSS)** *Italy, 2023*

**Semester Project: Habit Tracker in Software Technology** *ELTE, 2021*  
*Collaborated on developing a habit tracking system with personalized recommendations and motivational quotes for diverse users. Implemented back-end services using FastAPI (Python).*

**National Project: Research on Common Key Technologies of Testing and Evaluation Services** *LNTU, 2020*  
*Focusing on point cloud classification algorithms using attention mechanisms and point projection-based features.*

**Bachelor Intern Project: 3D Object Detection for Self-Driving Vehicles** *China, 2019*  
*Working on learning-based 3D object detection algorithms using multiple sensors at Machine Vision and Pattern Recognition Group, Haixi Institutes, Chinese Academy of Sciences.*

## INVITED TALKS & SUPERVISION

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<b>Supervisor of a semester project at Mixed Reality course, ETH Zurich</b>	<i>Where am I? Interactive indoor localization and navigation on Magic Leap 2 hardware.</i>	<i>Switzerland, 2024</i>
<b>Invited talk at Computer Vision Winter Workshop (CVWW) 2024</b>	<i>Learning-based RANSAC scoring functions</i>	<i>Slovenia, 2024</i>
<b>Invited talk at Computer Vision Winter Workshop (CVWW) 2023</b>	<i>Differentiable RANSAC components and applications</i>	<i>Austria, 2023</i>

## AWARD AND SCHOLARSHIP

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Recipient of the Stipendium Hungaricum Master's Scholarship.	2020–2022
Honored as an Excellent Master's Student, the first semester, LNTU.	2021
First Prize (Band A), National English Competition for College Students (NECCS).	2020
Best Bachelor Thesis Award “3D Object Detection Network for Point Cloud Classification”, LNTU.	2019

## OTHERS

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<b>Review Experience:</b>	CVPR, ECCV, NeurIPS, ICLR
<b>Technical Skills:</b>	Computer Vision, 3D Reconstruction, Structure from Motion, Pose Graph Construction, Robust Estimation, Image Processing, Image Retrieval, Feature Matching, Deep Learning, Representation Learning
<b>Programming Skills:</b>	Python, C/C++, PyTorch, Keras, Korina, OpenCV
<b>Language Skills:</b>	English (fluent), Chinese (native)