

Radim Tyleček

CONTACT INFORMATION	Institute of Perception, Action and Behaviour School of Informatics University of Edinburgh 10 Crichton Street EH8 9AB Edinburgh United Kingdom	<i>Tel:</i> +44 7561 899 409 <i>Website:</i> homepages.inf.ed.ac.uk/rtylecek/ <i>E-mail:</i> radim.tylecek@ed.ac.uk <i>Profile:</i> www.linkedin.com/in/radimtylecek/
CITIZENSHIP	Czech Republic (EU)	
RESEARCH INTERESTS	Computer Vision, Machine Perception, 3D Vision for Robotics, Sensor Fusion, Object Detection, Regular Structures, Probabilistic Modeling	
EDUCATION	Czech Technical University in Prague, Faculty of Electrical Engineering Ph.D., Artificial Intelligence and Biocybernetics (2009 – 2015) <ul style="list-style-type: none">• Thesis: <i>Probabilistic Models for Symmetric Object Detection in Images</i>• Supervisor: Associate Professor Radim Šára• Area of Specialization: Machine Perception Ing. (equivalent to MSc.), Electrical Engineering and Informatics, 2002 – 2008 <ul style="list-style-type: none">• Thesis: <i>Representation of Geometric Objects for 3D Photography</i>	
INTERNATIONAL EXPERIENCE	International Computer Vision Summer School, Sicily, Italy Universitat Rovira i Virgili, School of Engineering (ETSE), Tarragona, Spain <i>Erasmus scholarship</i>	2010 2007 - 2008
AWARDS	Czech Technical University, Faculty of Electrical Engineering <ul style="list-style-type: none">• Dean's Award for Outstanding Master Thesis, 2008	
PROFESSIONAL EXPERIENCE	CADTeam s.r.o., Prague, Czech Republic <i>Software Developer</i> <ul style="list-style-type: none">• Development of applications for automated modeling and management of parts in 3D CAD systems (Siemens)• Participation in international projects (Germany, USA) Čekia a.s., Prague, Czech Republic <i>Software Developer</i> <ul style="list-style-type: none">• Development of a database client	2001 – 2008 2000 – 2001
SKILLS	<i>Programming:</i> C#/.NET, C++, Matlab, Python, ROS <i>Languages:</i> English (fluent), German (intermediate), Spanish (intermediate), Czech (native)	

ACADEMIC
EXPERIENCE

University of Edinburgh, School of Informatics

Research Associate

2016 – 2019

- Project: TrimBot2020
 - Prototype the first outdoor trimming robot, European Union Horizon 2020.
 - Responsible for evaluation workpackage, vision integration, sensor fusion for localization and obstacle detection.
- Project: Robot Assistant
 - 3D vision for assistive applications with robot arm.
 - Sensor registration, fusion, visual servoing.
- Supervised MSc Projects:
 - 3D Motion Prediction from Multiple RGB-D Sensors
 - Alignment of 3D Semantic Maps to Point Clouds of Outdoor Scenes

Czech Technical University, Faculty of Electrical Engineering

Research Assistant

2009 – 2016

- Projects:
 - Structural and Semantic Modeling of Architecture as an Image Interpretation Problem, Czech Science Foundation, 2012-2014.
 - 3D Photography. Czech Science Foundation, 2007-2008.

Teaching Assistant

2009 – 2016

SELECTED
PUBLICATIONS

Pu, C., Song, R., Tyleček, R., Li, N. and Fisher, R. SDF-MAN: Semi-supervised Disparity Fusion with Multi-scale Adversarial Networks. *Remote Sensing*, February 2019.

Tyleček, R., Sattler, T., Le, H-A., Brox, T., Pollefeys, M., Fisher, R. B. and Gevers, T., The Second Workshop on 3D Reconstruction Meets Semantics. *European Conference on Computer Vision*, October 2018 (workshop organizer).

Strisciuglio, N., Tyleček, R., Petkov, N., Biber, P., Hemming, J., van Henten, E., Sattler, T., Pollefeys, M., Gevers, T., Brox, T. and Fisher, R. TrimBot2020: An Outdoor Robot for Automatic Gardening. *International Symposium on Robotics*, September 2018.

Cuevas Velasquez, H., Li, N., Tyleček, R., Fisher, R., Saval-Calvo, M. Hybrid Multi-camera Visual Servoing to Moving Target. *International Conference on Intelligent Robots and Systems*, October 2018.

Maniatis, C., Saval-Calvo, M., Tyleček, R. and Fisher, R. Best Viewpoint Tracking for Camera Mounted on Robotic Arm with Dynamic Obstacles *International Conference on 3D Vision*, October 2017.

Tyleček, R., and Šára, R.,. Spatial Pattern Templates for Recognition of Objects with Regular Structure. *German Conference on Pattern Recognition*, September 2013 (oral).

Tyleček, R., and Šára, R.,. Stochastic Recognition of Regular Structures in Facade Images. *IPSJ Trans. Computer Vision and Applications*, 4, May 2012. Presented at *Asian Conference on Computer Vision*, in November 2010 (oral).

Tyleček, R., and Šára, R.,. Refinement of Surface Mesh for Accurate Multi-view Reconstruction. *International Journal of Virtual Reality*, 9(1):45–54, March 2010.

Tyleček, R., and Šára, R.,. Depth Map Fusion with Camera Position Refinement. *Computer Vision Winter Workshop*, pages 59–66, Vienna University of Technology, Austria, February 2009.