



Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Gellért Sándor, Mátyus**
Address(es) Remote Sensing Technology Institute (IMF)
German Aerospace Center (DLR)
Oberpfaffenhofen
D-82234 Wessling
Germany
Telephone(s) +49-8153-28-2181
E-mail Gellert.Mattyus@dlr.de; mattyusgege@gmail.com
Nationality Hungarian
Gender male

Desired employment / Occupational field

Computer Vision Research

Work experience

Dates	2011 - today
Occupation or position held	Research Engineer
Main activities and responsibilities	Research and software development in the following topics and projects: Road layout parsing and vehicle detection on aerial images, image geolocalization and orthorectification without GPS and IMU and software development for data transmission from airplane to ground station in DLR project VABENE (Real time monitoring of natural disasters, mass events, and large traffic disasters). Car tracking in German project BZ-mod (Airborne real time system for undercover car tracking). Automatic vessel detection on satellite images for the European Maritime Safety Agency.
Name and address of employer	German Aerospace Center (DLR), The Remote Sensing Technology Institute, Photogrammetry and Image Analysis (PB)
Type of business or sector	Research Organisation
Dates	2010-2011
Occupation or position held	Embedded software developer
Main activities and responsibilities	Development and maintenance of Ericsson Mini-Link (microwave radio link installed with embedded Linux).
Name and address of employer	Ericsson Hungary R&D
Type of business or sector	Research and Development department of a private company
Dates	2008– 2010
Occupation or position held	Student researcher, developer

Main activities and responsibilities Research in image processing and computer vision. Multi target tracking on aerial videos. The algorithms were implemented in C++ and Matlab.
Thesis: *Motion trajectory recognition in video image-sequences*

Name and address of employer Computer and Automation Research Institute of the Hungarian Academy of Sciences (MTA SZTAKI), Budapest, Hungary

Type of business or sector Research Institute

Education and training

Dates 2004 – 2010

Title of qualification awarded Diploma in Electrical Engineering

Principal subjects/occupational skills covered Electrical Engineering, Embedded Systems, Signal Processing, Image Processing, Computer Vision

Name and type of organisation providing education and training Budapest University of Technology (BME), Budapest, Hungary

Level in national or international classification Hungarian equivalent to MSc.

Grades average 4.92 (5.0 is the best)

Prizes 2005: Physics competition of the faculty: 2nd prize

2006: „Electrical Signals and Systems” competition of the faculty: 3rd prize

2006-2007: "Scholarship of the Hungarian Republic" for excellent school achievements

Dates 2013 - 2016 July (expected graduation)

Title of qualification PhD

Name and type of organisation providing education and training University of Technology, Munich (TUM), Munich, Germany. Chair of Remote Sensing Technology.

Supervisors Professor Richard Bamler, Dr. Friedrich Fraundorfer

Topic Joint Information Augmentation of Road Maps, Aerial Imagery and Ground Images

Dates 2014 July and August, 2015 February and March, 2015 August and September

Title of qualification Visiting PhD student

Name and type of organisation providing education and training Department of Computer Science, University of Toronto

Supervisors Professor Raquel Urtasun

Topic Enhancing World Maps by Parsing Aerial and Ground Images

Self-assessment
European level ()*

English

German

Spanish

Understanding		Speaking		Writing	
Listening	Reading	Spoken interaction	Spoken production		
C1	C1	C1	C1	C1	C1
C1	C1	C1	C1	C1	C1
A2	A2	A2	A2	A2	A2

(*) *Common European Framework of Reference for Languages*

Social skills and competences Working in national and international teams and projects. Project planning.

Organisational skills and competences Guide for trainees, master thesis supervisor.

Technical skills and competences	Basic electrical engineering skills: electrical and signal measuring, Verilog hardware description language: design on Xilinx FPGA-s
Computer skills and competences	User skills: MS Windows, MS Office, Linux, Latex. Developer skills: Software development on Windows, Linux, embedded Linux and embedded operation systems. Computer languages: C, C++, C#, Java, Python, Matlab, Bash script, Windows batch script. Computer Network knowledge and skills. Image processing, computer vision and machine learning knowledge and skills: object detection, tracking, image based localization, image registration, deep neural networks, graphical models.
Driving licence	Category B
Additional information	<p>Publications:</p> <p>Mattyus, Gellert; Wang, Shenlong; Filder, Sanja and Urtasun, Raquel: HD Maps: Fine-grained Road Segmentation by Parsing Ground and Aerial Images. In: Conference on Computer Vision and Pattern Recognition (CVPR) 2016.</p> <p>Mattyus, Gellert; Wang, Shenlong; Filder, Sanja and Urtasun, Raquel: Enhancing Road Maps by Parsing Aerial Images Around the World. In: IEEE International Conference On Computer Vision (ICCV) 2015.</p> <p>d'Angelo, Pablo; Mattyus, Gellert and Reinartz, Peter: Skybox image and video product evaluation. In International Journal of Image and Data Fusion, vol. 6, Nov. 2015</p> <p>Liu, Kang; Mattyus, Gellert: Fast Multiclass Vehicle Detection on Aerial Images. In Geoscience and Remote Sensing Letters, IEEE , vol.12, no.9, pp.1938,1942, Sept. 2015</p> <p>Mattyus, Gellert : Near real-time automatic vessel detection on optical satellite images. In: ISPRS Hannover Workshop, Volume XL-1/W1, pp. 233-237. ISPRS Archives. ISPRS Hannover Workshop 2013, 21 May - 24 May 2013, Hannover, Germany.</p> <p>Mattyus, Gellert; Kurz, Franz; Rosenbaum, Dominik and Meynberg, Oliver: A real-time optical airborne road traffic monitoring system. In: Hungarian Association for Image Processing and Pattern Recognition, pp. 645-656. Hungarian Association for Image Processing and Pattern Recognition. KEPAF 2013, 29 Jan - 01 Feb 2013, Bakonybel, Hungary.</p> <p>Mattyus, Gellert; Benedek, Csaba and Sziranyi, Tamas: MULTI TARGET TRACKING ON AERIAL VIDEOS, ISPRS Istanbul Workshop 2010 on Modeling of optical airborne and spaceborne sensors, WG I/4, Oct. 11-13, IAPRS Vol. XXXVIII, part 1/W4.</p> <p>Awards: IEEE Geoscience and Remote Sensing Society 2016 Letters Prize Paper Award</p>

Oberpfaffenhofen, 16.05.2016