

Forum Bildverarbeitung / Image Processing Forum 2022

Program November 24, 2022

<i>time</i>	<i>autor</i>	<i>organisation</i>	<i>titel</i>
09:30	Registration and distribution of conference documents with welcome coffee		
10:00	Welcome and opening		
Image acquisition 1			
10:15	Marcus Petz	TU Braunschweig	Multi-wavelength method for structured illumination
10:40	Rujia Li	ITO Uni-Stuttgart	Physics enhanced neural network for phase imaging using two axially displaced diffraction patterns
11:05	Postersession L. Carrilero Bernd Jähne	ETSIME (UPM) Madrid IWR Uni-Heidelberg	Blurred image resolution enhancement by graphene nanoplates Release 4 of the EMVA 1288 Standard: Adaption and Extension to Modern Image Sensors
11:20	Coffee break and poster presentation		
Image acquisition 2			
11:35	Daniel Garten	GFE/TU Ilmenau	Innovative Quality Assurance based on Deep Learning
12:00	Tobisa Haist	ITO Uni-Stuttgart	Two-dimensional multispectral sensor with variable selection of spatial and spectral sampling
12:25	Postersession Lucas Reinhart Christian Kinzig	FHWS-IDEE KIT-MRT	Augmented virtuality to generate semi-artificial image data for instance segmentation Multi-Image Vignetting Compensation and Exposure Correction for Image Stitching
12:40	Lunch break and poster presentation		
Quality assurance			
13:40	Tim Zander	KIT-IES	Optimal human labelling for anomaly detection in industrial inspection
14:05	Julia Hartung	TRUMPF Laser GmbH	Quality control of laser welds based on the weld surface and the weld profile
14:30	Dennis Haitz	KIT-IPF	Semantic segmentation with small training datasets
14:55	Coffee break and poster presentation		
Sorting			
15:15	Georg Maier	Fraunhofer IOSB	Machine Learning-based Multiobject Tracking for Sensor-based Sorting
15:40	Simon Wezstein	MSTVision GmbH	Introducing fast and comprehensive FPGA based BLOB analysis with the Hybrid-BLOB concept
16:05	Coffee break		
16:15	Xavier Vidal	Fraunhofer IAF	Plenary lecture: Quantum Sensing
17:15	End of the first day		
19:00	Reception and evening event in the Torbogensaal of the Botanical Garden Karlsruhe		

Program November 25, 2022

<i>time</i>	<i>autor</i>	<i>organisation</i>	<i>titel</i>
Image processing			
09:00	Alexander Geng	Fraunhofer ITWM	An Introduction of Quantum Image Processing on Real Superconducting Quantum Computers
09:25	Josh Perske	Fraunhofer FHR	High-performance image reconstruction algorithm in CUDA C++ for ultra wideband multi-channel MIMO radar systems
09:50	Bernd Jähne	IWR Uni-Heidelberg	Image Compression Suitable for Subsequent Image Processing Without the Need for Decompression
10:15	Markus Michen	Fraunhofer IIS	Deep learning and active learning based semantic segmentation of 3D CT data
10:40	Coffee break and poster presentation		
Event Based Vision			
11:10	Introduction and panel discussion: science meets users, moderator Michael Heizmann		
12:00	Lunch break and poster presentation		
Vehicles			
13:00	Martina Scheffler	DHBW Mannheim	A signal processing pipeline for an autonomous electric race car
13:25	Alexander Braun	HS Düsseldorf	Spatial Recall Index - Where is the performance?
13:50	O. Ramírez-Agudelo	Aerospace Center	Indoor Floorplan Estimation from 3D point clouds for Scan-to-BIM
14:15	Coffee break		
Measurement and Automatization Technology			
14:30	Felix Endres	FH W-S IDEE	Reconstruction of the packing pattern of cardboard boxes in intralogistics
14:55	Andreas Heinrich	Uni-Aalen	Locally and temporally resolved image-based determination of the refractive index distribution during additive manufacturing of optical components
15:20	Best Paper Award, Summary and conclusion		
15:40	End		