

3D-NordOst 2021

02 - 03 DECEMBER 2021, BERLIN-ADLERSHOF

23. ANWENDUNGSBEZOGENER WORKSHOP
ZUR ERFASSUNG, MODELLIERUNG, VERARBEITUNG
UND AUSWERTUNG VON 3D-DATEN



Gesellschaft zur Förderung angewandter Informatik e. V.

REGISTRATION / FEES

The workshop 3D-NordOst 2021 will be held as a hybrid event. You can take part in the event at the GFaI (Rule vaccinated/recovered!) or online (we will send you the corresponding access data).

Registration at:

www.gfai.de/en/news/events/workshop-3d-nordost/registration

The conference fees (incl. proceedings):

PRESENCE

Regular 60,- Euro Reduced 40,- Euro

ONLINE

Regular 40,- Euro Reduced 20,- Euro

(Main) Speakers: Free participation. **GFaI members** and employees of institutions and companies located in **Berlin-Adlershof** pay a reduced fee. Free participation of **students** is possible, but limited (without conference proceedings, registration is required).

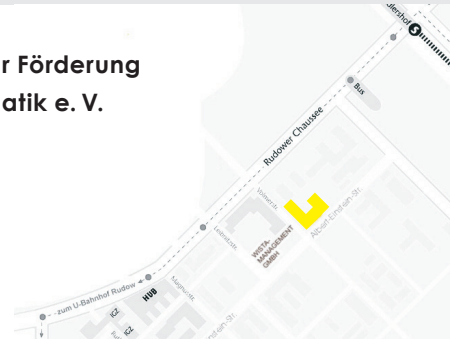
The conference fee is VAT free acc. §4 No. 22a UStG.

CONTACT

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PROGRAM

3D-NordOst 2021

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www.3d-nordost.de

23TH APPLICATION-ORIENTED WORKSHOP
ON MEASURING, MODELING, PROCESSING
AND ANALYSIS OF 3D-DATA

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23TH APPLICATION-ORIENTED WORKSHOP
ON MEASURING, MODELING, PROCESSING
AND ANALYSIS OF 3D-DATA

OBJECTIVE / WORKSHOP PROGRAM, 02 DEC 2021

Objective

The workshop series 3D-NordOst is targeting the transfer of topical know-how in 3D-data and image processing to industrial sectors as well as to cultural and medical applications and practice. The workshop provides a platform for developers and users to discuss the broad spectrum of 3D related topics.

Interested authors are invited to submit algorithm- and application-oriented papers. Contributions focusing on sensor calibration, algorithmic optimization, visualization and presentation of 3D content are also welcome.

Workshop Program

10:00 F. Weckend (Geschäftsführer der GFal):

Opening

3D Measurement

10:15 S. Georgi, T. Eckhard (Chromasens GmbH, Konstanz): **Estimation of Surface Normals Based on Line-Scan Camera Images Processed on a Graphical FPGA Programming Platform**

10:40 R. Abayev, A. v. Gladiss, D. Paulus (AGAS, Institut für Computervisualistik, Universität Koblenz-Landau, Koblenz): **Eigenschaften verschiedener Solid-State-LIDAR-Systeme**

11:05 Kaffeepause

11:20 O. Kiwan (FB Ingenieurwissenschaften, HTW Berlin): **Charakterisierung des Abbildungsverhaltens von Tiefenbildsensoren**

WORKSHOP PROGRAM, 02 DEC 2021

3D Scan and Data processing

11:45 M. Bookhahn, A. Brechtel, T. Lorenz, F. Voit, F. Neumann (FB 2, HTW Berlin): **SparePartAssist – a mobile app to identify spare parts based on 3D sensor data. An interim balance**

12:10 J. Biltgen, S. Lauer, N. Heidemann, W. Flügge (Fraunhofer-IGP, Rostock): **Automatisierung der Unikatfertigung von Passrohren**

12:35 Mittagspause

13:15 F. Pieperit, St. Weidemann, N. Kolley, A. Bailleu, S. Tursch (FB I, HTW Berlin; condato GmbH, Berlin): **Personalisierte Sensorhalterungen unter Nutzung von 3D-Scan und 3D-Drucktechnologien zur optimalen und reproduzierbaren Platzierung körpernaher Sensoren**

3D Printing

13:40 P. Koch¹, F. Böhm², H. Korn³, St. Holtzhausen¹, V. Kleban² (1Professur für Virtuelle Produktentwicklung, TU Dresden; 2GFal e. V., Berlin; 3Fraunhofer-IWU, Dresden): **Konstruktion komplex gekrümmter dünner Wandstrukturen**

14:05 A. Seidler¹, St. Holtzhausen¹, P. Koch¹, H. Korn², K. Paetzold¹ (1Lehrstuhl für Virtuelle Produktentwicklung, TU Dresden; 2Fraunhofer-IWU, Dresden): **Fusion selbstähnlicher Gitterstrukturen zur inhomogenen Steifigkeitserhöhung**

14:30 T. Jacobi (3D-Medico GbR, Berlin): **Den FFF-3D-Druck von Orthesen medizinkonform in der eigenen Praxis umsetzen**

WORKSHOP PROGRAM, 03 DEC 2021

Measurement / Simulation

10:00 St. Sauer¹, M. Heizmann², D. Berndt¹ (1Fraunhofer-IFF, Magdeburg; 2KIT, Karlsruhe): **Messdatensimulation zur Unterstützung optischer Inspektionsaufgaben**

10:25 T. Lorenz, M. Beygmohammadi, D. Krueger, M. Dähne, R. Heidenreich (GFal e. V., Berlin): **EvAMess – Genauigkeitssimulation für markenbasierte 3D-Rekonstruktion**

10:50 Kaffeepause

Geometric Deep Learning (GDL)

11:05 A. Farahani, J. Vitay, F. H. Hamker (AI Lab, Chemnitz University of Technology): **Geometric Deep Learning and solutions for the industry**

11:30 P. Atoofi, J. Vitay, F. Hamker (Department of Artificial Intelligence, Chemnitz University of Technology): **Geometric Deep Learning – Graph Neural Networks, Challenges and Breakthroughs**

11:55 Mittagspause

Robotics and AR

12:35 A. Blondrath, R. Roj, R. Theiß, P. Dültgen (FGW e. V., Remscheid): **Additively manufactured robot gripper based on compliant mechanisms and shape memory alloys for clean room conditions**

13:00 R. Roj, J. Gerling, D. Grönebaum, N. Zehaie, L. Momberg, R. Theiß, P. Dültgen (FGW e. V., Remscheid): **Collaborative robotics: Improve occupational safety and intuitiveness through augmented reality**

13:25 A. Schroeder (S.K.M. Informatik GmbH, Schwerin): **XR-Entwicklungsstrategien für Content-Publishing, Datendienste und Cross-Plattform-Apps – Handlungsfelder XR-App-Entwicklung – Entwicklungsplattformen – Best-Praxis-Beispiele**

13:50 D. Krueger (GFal e. V., Berlin): **Closing Words**