

**WSCG 2023**  
**31. International Conference on**  
**Computer Graphics, Visualization**  
**and**  
**Computer Vision 2023**

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**WSCG 2023**  
**conference program**

**Schedule**

(video-conferencing information will be sent to corresponding authors)

- Monday 15, 2023 – Registration at Primavera Hotel - 18:00 – 20:00  
or on Tuesday, Wednesday during breaks
- Tuesday 16, 2023 – Physical presentations (including posters)  
*NO online presentations*
- Wednesday 17, 2023 – Physical presentations (including posters)  
*NO online presentations*  
Conference dinner
- Thursday 18, 2023 – Virtual on-line and pre-recorded presentations  
*NO physical presentations*  
**Conference office is NOT open**

- **Conference office** is open on Monday evening and during breaks, but **closed on Thursday**
- **Conference dinner ticket** - to be ordered at the registration desk on Monday or Tuesday very early morning, offer is limited.
- **Lunches** – special offer (at a discount) available at the hotel's reception a day before.

**Please, RELOAD the file to get updated schedule**

**Tuesday, May 16, 2023**

**8:30-10:10 Session A – Chair: Adrian Dziembowski**

- Debski,R., Schmitt,O., Trenz,P., Reimann,M., Döllner,J., Trapp,M., Semmo,A., Pasewaldt,S.: A Framework for Art-directed Augmentation of Human Motion in Videos on Mobile Devices  
Paper: [\[E97\]](#)
- Stankowski, J., Dziembowski, A.: Massively Parallel CPU-based Virtual View Synthesis with Atomic Z-test  
Paper: [\[G17\]](#)
- Scheibert,O., Möller,J., Grogorick,S., Eisemann,M.: Error-Robust Indoor Augmented Reality Navigation: Evaluation Criteria and a New Approach  
Paper: [\[F03\]](#)
- Seabra,M., Fernandes,F., Lopes,D., Pereira,J.: Position Based Rigid Body Simulation: A comparison of physics simulators for games  
Paper: [\[G05\]](#)
- Kremer,R., Herfet,T.: SAIL: Semantic Analysis of Information in Light Fields: Results from Synthetic and Real-World Data  
Paper: [\[E47\]](#)

**10:40-12:10 Session B – Chair: Bálint, C.**

- Klóska, D., Dziembowski, A., Samelak, J.: Versatile Input View Selection for Efficient Immersive Video Transmission  
Paper: [\[G13\]](#)
- Puchalski M., Woźna-Szczeniak B.: AutogrASPing Pose of Virtual Hand Model Using the Signed Distance Field Real-time Sampling with Fine-tuning  
Paper: [\[F97\]](#)
- Bálint, Cs., Valasek, G., Gergó, L.: Low-Rank Rational Approximation of Natural Trochoid Parameterizations  
Paper: [\[G41\]](#)
- Kacerik,M., Bittner,J.: On Importance of Scene Structure for Hardware-Accelerated Ray Tracing  
Paper: [\[G29\]](#)

**13:30-14:50 Session C – Chair: Sturm, F.**

- Ghiotto,M., Desbenoit,B., Raffin,R.: Operational theater generation by a descriptive language  
Paper: [\[F11\]](#)
- Sturm, F., Sathiyababu, R., Hergenroether, E., Siegel, M.: Semi-Supervised Learning Approach for Fine Grained Human Hand Action Recognition in Industrial Assembly  
Paper: [\[F89\]](#)
- Dulau,I., Beurton-Aimar,M., Hwu,Y., Recur,B.: Investigation on Encoder-Decoder Networks for Segmentation of Very Degraded X-Ray CT Tomograms  
Paper: [\[D73\]](#)
- Hable,A., Matore,M., Scherr,A., Krivec,T., Gruber,D.: Detection of Printed Circuit Board Defects with Photometric Stereo and Convolutional Neural Networks  
Paper: [\[E73\]](#)

**15:00-15:40 Session D –KEYNOTE – Chair: Skala, V.**

- Benger,W.: Illustrating Geometric Algebra and Differential Geometry in 5D Color Space  
Paper: [[G43](#)]

**16:00-18:00 Session E – Chair: Sandu, R.**

- Hardy,C.,Queau,Y.,Tschumperle,D.: MS-PS: A Multi-Scale Network for Photometric Stereo With a New Comprehensive Training Dataset  
Paper: [[F43](#)]
- Suessle,V., Arandjelovic,M., Kalan,A., Agbor,A., Boesch,C., Brazzola,G., Deschner,T., Dieguez,P., Granjon,A., Kuehl,H., Landsmann,A., Lapuente,J., Maldonado,N., Meier,A., Rockaiova,Z., Wessling,E., Wittig,R., Downs,C., Weinmann,A., Hergenroether,E.: Automatic Individual Identification of Patterned Solitary Species Based on Unlabeled Video Data  
Paper: [[D47](#)]
- Lesar,Ž., Bohak,C., Marolt,M.: Blocky Volume Package: a Web-friendly Volume Storage and Compression Solution  
Paper: [[F67](#)]
- Bustacara-Medina, Cesar, Ruiz-Garcia, Enrique: Accuracy of Legendre Moments for Image Representation  
Paper: [[G03](#)]
- Tomokazu,K., Ryosuke,S., Soma,S.: Training Image Synthesis for Shelf Item Detection reflecting Alignments of Items in Real Image Dataset  
Paper: [[E43](#)]
- Sandu,R., Shcherbakov,A.: A Resource Allocation Algorithm for a History-Aware Frame Graph  
Paper: [[E71](#)]
- Hassoubah,M., Sistu,G.: LS-3DLane regression network using Parallelism loss function  
Paper: [[D59](#)] - withdrawn

**Wednesday, May 17, 2023**

**8:30-10:10 Session G – Chair: Lengauer, S.**

- Lengauer,S.,Shao,L.,Mayerhofer,M.,Preiner,R.,Karl,S.,Trinkl,E.,Sipiran,I.,Bustos,B.,Schreck,T.: Visual Exploration of Repetitive Patterns on Ancient Peruvian Pottery  
Paper: [[D67](#)]
- Shekhar,S., Reimann,M., Wattasseril,J., Semmo,A., Döllner,J., Trapp,M.: ALIVE: Adaptive-Chromaticity for Interactive Low-light Image and Video Enhancement  
Paper: [[D53](#)]
- Benger, W. , Voicu, A., Baran, R., Gonciulea, L., Barna, C., Steinbacher, F.: The Method of Mixed States for Interactive Editing of Big Point Clouds  
Paper: [[F23](#)]
- Hauenstein,J., Newman,T.: First Considerations in Computing and Using Hypersurface Curvature for Energy Efficiency  
Paper: [[F29](#)]

**10:30-11:50 Session H – Chair: Hast, A.**

- Padinjarathala,A.,Sadleir,R.: Using the Adaptive HistoPyramid to Enhance Performance of Surface Extraction in 3D Medical Image Visualisation  
Paper: [[F79](#)]
- Saga, R., Beak, J.: Evolutionary-Edge Bundling with Concatenation Process of Control Points  
Paper: [[G37](#)]
- Sommer, A., Schwanecke, U., Schoemer, E.: Real-time Light Estimation and Neural Soft Shadows for AR Indoor Scenarios  
Paper: [[E89](#)]

**12:00 Common photo**

**13:30-15:10 Session K – Chair: Del-Tejo-Catala, O.**

- Anders hast: Sex Classification of Face Images using Embedded Prototype Subspace Classifiers  
Paper: [[E07](#)]
- Ciapas,B., Treigys,P.: Self-Checkout Product Class Verification using Center Loss approach  
Paper: [[D79](#)]
- Tucholke,M-A., Christoph,M., Anders,L., Ochlich,R., Grogorick,S., Eisemann,M.: Real-Time Reflection Reduction from Glasses in Videoconferences  
Paper: [[F17](#)]
- Del-Tejo-Catala O., Perez J., Guardiola J.L., Perez A.J., Perez-Cortes J.C.: Probabilistic Pose Estimation with Synthetic-Real Domain Adaptation  
Paper: [[E83](#)]
- Malawski,F.,Krupa,M.: Temporal Segmentation of Actions in Fencing Footwork Training  
Paper: [[G02](#)]

**15:30-16:15 Session L – KEYNOTE – Chair: Skala, V.**

- Semwal,S,K.: Raytracing Renaissance: An elegant framework for modeling light at Multiple Scales  
Paper: [[G47](#)]

**19:00 - Conference dinner - order a ticket**

**Thursday, May 18, 2023**

**If a presenter is not on line and no-prerecorded presentation obtained, the following presentation will be started.**

**Sessions Q and R can be slightly delayed**

**8:30-10:30 Session P – Chair: Skala, V.**

- Alex, M., Wünsche, B., Lottridge, D.: Perceptions of Colour Pickers in Virtual Reality Art-Making  
Paper: [[E17](#)] fixed
- Thissen, M., Hergenroether, E.: Why Existing Multimodal Crowd Counting Datasets Can Lead to Unfulfilled Expectations in Real-World Applications  
Paper: [[D97](#)]
- Colom, J., Saito, H.: Reconstruction from Multi-view Sketches: an Inverse Rendering Approach  
Paper: [[E41](#)]
- Dietze, A., Grimm, P., Jung, Y.: Visualization of deviations between different geometries using a multi-level voxel-based representation  
Paper: [[F05](#)]
- Feng, H., Wuensche, B., Shaw, A.: Generating Realistic River Patterns with Space Colonization  
Paper: [[F71](#)] fixed
- Erzar, B., Lesar, Z., Marolt, M.: Fast Incremental Image Reconstruction with CNN-enhanced Poisson Interpolation  
Paper: [[F47](#)]
- Khoa D. Vo, Len T. Bui: StarSRGAN: Improving Real-World Blind Super-Resolution  
Paper: [[E23](#)] fixed

**11:30-13:30 Session Q - Chair: Skala, V.**

- Gonzales, M.E.M., Uy, L.C., Ilaio, J.P.: Designing a Lightweight Edge-Guided Convolutional Neural Network for Segmenting Mirrors and Reflective Surfaces  
Paper: [[E59](#)] fixed
- Manika Bindal, Venkatesh Kamat: Detail preserving non-rigid shape correspondences  
Paper: [[F59](#)] fixed
- Shaw, A., Wünsche, B., Mariono, K., Ranveer, A., Xiao, M., Hajika, R., Liu, Y.: JengASL: A Gamified Approach to Sign Language Learning in VR  
Paper: [[E19](#)] fixed
- Van Linh, L., Olivier, S.: Coordinate-Unet 3D for segmentation of lung parenchyma  
Paper: [[E05](#)]
- Ortiz Pablo, D., Badri, S., Noren, E., Nötzli, C.: Bias mitigation techniques in Image Classification: Fair Machine Learning in Human Heritage Collections  
Paper: [[E67](#)]
- Kaczmarek, A.L.: The Usage of the BP-Layers Stereo Matching Algorithm with the EBCA Camera Set  
Paper: [[F41](#)]
- Oronowicz-Jaskowiak, W., Wasilewski, P., Kowaluk, M.: Justice expectations related to the use of CNNs to identify CSAM. Technological interview.  
Paper: [[E03](#)]
- Abduh, L., Omar, L., Ivrisimtzis, I.: Anomaly Detection with Transformer in Face Anti-spoofing  
Paper: [[F31](#)]

### **13:30-15:10 Session R – Chair: – Chair: Skala, V.**

- Soto-Villalobos,R., Benavides-Bravo,F.G., Hueyotl-Zahuantitla,F., Aguirre-López,M.A.: A new deterministic gasket fractal based on ball sets  
Paper: [[F19](#)]
- Seah, HS., Tandianus B., Sui, Yiliang., Wu, Zhongke., Zhang, Zhuyan.: Modeling and Rendering with eXpressive B-Spline Curves  
Paper: [[E31](#)]
- Boumrah,M., Garbaya,S., Radgui,A.: Real-Time Visual Analytics for Remote Monitoring of Patient’s Health  
Paper: [[G53](#)]
- Huan,Q., Rousselle,F., Renaud,C.: Optimised Light Rendering through Old Glass  
Paper: [[G11](#)]
- Havlicek, M. Haindl, M.: Texture Spectral Similarity Criteria Comparison  
Paper: [[E53](#)]
- Krishna Chaitanya Gurijala, Lei Wang, Arie Kaufman: Monte Carlo Based Real-Time Shape Analysis in Volumes  
Paper: [[E79](#)]

### **POSTERS - during breaks**

- Sluzek, A.: On Unguided Automatic Colorization of Monochrome Images  
Paper: [[D37](#)]
- Justyna Niewiadomska-Kaplar: Polychromatism of all light waves: new approach to the analysis of the physical and perceptive color aspects  
Paper: [[G59](#)]
- Pardo,R., Remolar,I.: Autonomous Photogrammetry Workflow for Real Time Rendering using Free Software  
Paper: [[F13](#)]
- Bobulski,J., Kubanek,M.: The use of artificial intelligence for automatic waste segregation in the garbage recycling process  
Paper: [[E11](#)]
- Kubanek, M., Karbowski, L., Bobulski, J.: Detection of Dangerous Situations Near Pedestrian Crossings using In-Car Camera  
Paper: [[F02](#)]
- Reddy,S., Reddy,G., Gupta,S., Hazra.D., Gupta,U.: Compressed Deep Learning Model for Detecting COVID-19 Disease: A Genetic Algorithm based approach  
Paper: [[F83](#)] - withdrawn