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Proceedings

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Preface

Welcome to the proceedings of the 36th Computer Graphics International Conference (CGI 2019)!

CGI is one of the oldest international conferences in computer graphics in the world. It is the official conference of the Computer Graphics Society (CGS), a long-standing international computer graphics organization. CGI and CGS were initiated by Professor Toshiyasu L. Kunii, from the University of Tokyo, in 1983. Since then, the CGI conference has been held annually in many different countries around the world and gained a reputation as one of the key conferences for researchers and practitioners to share their achievements and discover the latest advances in computer graphics and related fields. This year, CGI 2019 was organized by the CGS and the University of Calgary, Biometric Technologies Laboratory, Computer Science Department, with support from Alberta Ingenuity, Faculty of Sciences and VPR Office at the University of Calgary. The conference was held in Calgary, Alberta, Canada, during June 17–20, 2019. CGI 2019 was organized in cooperation with ACM/SIGGRAPH and EUROGRAPHICS.

This book of proceedings contains CGI full papers, CGI short papers, and ENGAGE workshop papers. CGI 2019 received 221 submissions from over 30 countries, in addition to ENGAGE workshop submissions. From the CGI 2019 submissions, 26 were selected as full LNCS papers (around 12%) and 23 as short LNCS papers (approximately 11%), in addition to 35 papers accepted directly for *The Visual Computer*. To ensure the highest quality of publications, each paper was reviewed by at least three experts in the field, while many papers were reviewed by five to six experts. The papers were reviewed by 225 international domain experts, including 132 IPC members and 93 invited sub-reviewers.

The selected papers cover both the theoretical as well as the most advanced research topics in computer graphics. The topics include 3D reconstruction and rendering, virtual reality and augmented reality, computer animation, geometric modelling, geometric computing, shape and surface modelling, visual analytics, image processing, pattern recognition, motion planning, gait and activity biometric recognition, machine learning for graphics, and applications in security, smart electronics, autonomous navigation systems, robotics, geographical information systems, medicine, and art.

In addition to CGI conference papers, this book of proceedings features papers from the ENGAGE 2019 Workshop (four full and five short papers), focused specifically on all aspects of geometric algebra and surface reconstruction. The workshop has been part of CGI conference since 2014.

We would like to express our deepest gratitude to all the IPC members and external reviewers, who provided high-quality reviews. We would also like to thank all the authors for contributing to the conference by submitting their work. Our special appreciation goes to the Organizing Committee, who contributed to the success of CGI 2019 and to the team at Springer. We also would like to acknowledge the contribution and support of the CGI 2019 sponsors, including the Biometric Technologies

laboratory, the Computer Science Department, Faculty of Sciences, VPR office at the University of Calgary, Alberta Ingenuity, and CGS.

June 2019

Marina L. Gavrilova
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Contents

CGI'19 Full Papers

Polarization-Based Illumination Detection for Coherent Augmented Reality Scene Rendering in Dynamic Environments	3
<i>A'aeshah Alhakamy and Mihran Tuceryan</i>	
BioClouds: A Multi-level Model to Simulate and Visualize Large Crowds . . .	15
<i>Andre Da Silva Antonitsch, Diogo Hartmann Muller Schaffer, Gabriel Wetzel Rockenbach, Paulo Knob, and Soraia Raupp Musse</i>	
Am I Better in VR with a Real Audience?	28
<i>Romain Terrier, Nicolas Martin, J��r��my Lacoche, Val��rie Gouranton, and Bruno Arnaldi</i>	
Video Sequence Boundary Labeling with Temporal Coherence	40
<i>Petr Bob��k, Ladislav ��molik, and Martin ��adik</i>	
Two-Layer Feature Selection Algorithm for Recognizing Human Emotions from 3D Motion Analysis	53
<i>Ferdous Ahmed and Marina L. Gavrilova</i>	
Improved Volume Scattering	68
<i>Haysn Hornbeck and Usman Alim</i>	
An Interactive Virtual Training System for Assembly and Disassembly Based on Precedence Constraints	81
<i>Zhuoran Li, Jing Wang, Zhaoyu Yan, Xinyao Wang, and Muhammad Shahid Anwar</i>	
Multi-character Motion Retargeting for Large-Scale Transformations	94
<i>Maryam Naghizadeh and Darren Cosker</i>	
Video Tamper Detection Based on Convolutional Neural Network and Perceptual Hashing Learning	107
<i>Huisi Wu, Yawen Zhou, and Zhenkun Wen</i>	
Phys-Sketch: Sketching 3D Dynamic Objects in Immersive Virtual Reality . . .	119
<i>Jose Abel Ticona, Steeven Villa, Rafael Torchelsen, Anderson Maciel, and Luciana Nedel</i>	
Field-Aware Parameterization for 3D Painting	131
<i>Songgang Xu, Hang Li, and John Keyser</i>	

A Novel Method of Multi-user Redirected Walking for Large-Scale Virtual Environments.	143
<i>Tianyang Dong, Yifan Song, Yuqi Shen, and Jing Fan</i>	
Broker-Insights: An Interactive and Visual Recommendation System for Insurance Brokerage.	155
<i>Paul Dany Atauchi, Luciana Nedel, and Renata Galante</i>	
Auto-labelling of Markers in Optical Motion Capture by Permutation Learning	167
<i>Saeed Ghorbani, Ali Etemad, and Nikolaus F. Troje</i>	
A Simple Algorithm for Hard Exudate Detection in Diabetic Retinopathy Using Spectral-Domain Optical Coherence Tomography	179
<i>Maciej Szymkowski, Emil Saeed, Khalid Saeed, and Zofia Mariak</i>	
Multi-level Motion-Informed Approach for Video Generation with Key Frames.	190
<i>Zackary P. T. Sin, Peter H. F. Ng, Simon C. K. Shiu, Fu-lai Chung, and Hong Va Leong</i>	
Evaluating the Performance of Virtual Reality Navigation Techniques for Large Environments	203
<i>Kurtis Danyluk and Wesley Willett</i>	
HMD-TMO: A Tone Mapping Operator for 360° HDR Images Visualization for Head Mounted Displays	216
<i>Ific Goudé, Rémi Cozot, and Francesco Banterle</i>	
Integrating Peridynamics with Material Point Method for Elastoplastic Material Modeling.	228
<i>Yao Lyu, Jinglu Zhang, Jian Chang, Shihui Guo, and Jian Jun Zhang</i>	
“Am I Talking to a Human or a Robot?”: A Preliminary Study of Human’s Perception in Human-Humanoid Interaction and Its Effects in Cognitive and Emotional States.	240
<i>Evangelia Baka, Ajay Vishwanath, Nidhi Mishra, Georgios Vleioras, and Nadia Magnenat Thalmann</i>	
Transferring Object Layouts from Virtual to Physical Rooms: Towards Adapting a Virtual Scene to a Physical Scene for VR	253
<i>Zackary P. T. Sin, Peter H. F. Ng, Simon C. K. Shiu, Fu-lai Chung, and Hong Va Leong</i>	
Fast Simulation of Crowd Collision Avoidance.	266
<i>John Charlton, Luis Rene Montana Gonzalez, Steve Maddock, and Paul Richmond</i>	

Improved Automatic Speed Control for 3D Navigation	278
<i>Domi Papoi and Wolfgang Stuerzlinger</i>	
Efficient Rendering of Rounded Corners and Edges for Convex Objects	291
<i>Simon Courtin, Sébastien Horna, Mickaël Ribadière, Pierre Poulin, and Daniel Meneveaux</i>	
Convenient Tree Species Modeling for Virtual Cities	304
<i>Like Gobeawan, Daniel Joseph Wise, Alex Thiam Koon Yee, Sum Thai Wong, Chi Wan Lim, Ervine Shengwei Lin, and Yi Su</i>	
On Visualization of Movements for Monitoring Older Adults	316
<i>Shahram Payandeh and Eddie Chiu</i>	
CGI'19 Short Papers	
Create by Doing – Action Sequencing in VR	329
<i>Flavien Lécuyer, Valérie Gouranton, Adrien Reuzeau, Ronan Gaugne, and Bruno Arnaldi</i>	
Deep Intrinsic Image Decomposition Using Joint Parallel Learning	336
<i>Yuan Yuan, Bin Sheng, Ping Li, Lei Bi, Jinman Kim, and Enhua Wu</i>	
Procedurally Generating Biologically Driven Feathers	342
<i>Jessica Baron and Eric Patterson</i>	
A Unified Algorithm for BRDF Matching	349
<i>Ron Vanderfeesten and Jacco Bikker</i>	
Multi-layer Perceptron Architecture for Kinect-Based Gait Recognition	356
<i>A. S. M. Hossain Bari and Marina L. Gavrilova</i>	
New Three-Chemical Polynomial Reaction-Diffusion Equations	364
<i>Do-yeon Han, Byungmoon Kim, and Oh-young Song</i>	
Capturing Piecewise SVBRDFs with Content Aware Lighting	371
<i>Xiao Li, Peiran Ren, Yue Dong, Gang Hua, Xin Tong, and Baining Guo</i>	
VRSpineSim: Applying Educational Aids Within A Virtual Reality Spine Surgery Simulator	380
<i>Ahmed E. Mostafa, Won Hyung Ryu, Sonny Chan, Kazuki Takashima, Gail Kopp, Mario Costa Sousa, and Ehud Sharlin</i>	
Visual Analysis of Bird Moving Patterns	388
<i>Krešimir Matković, Denis Gračanin, Michael Beham, Rainer Splechtma, Miriah Meyer, and Elena Ginina</i>	

GAN with Pixel and Perceptual Regularizations for Photo-Realistic Joint Deblurring and Super-Resolution.	395
<i>Yong Li, Zhenguo Yang, Xudong Mao, Yong Wang, Qing Li, Wenyin Liu, and Ying Wang</i>	
Realistic Pedestrian Simulation Based on the Environmental Attention Model	402
<i>Di Jiao, Tianyu Huang, Gangyi Ding, and Yiran Du</i>	
Fast Superpixel Segmentation with Deep Features.	410
<i>Mubinun Awaisu, Liang Li, Junjie Peng, and Jiawan Zhang</i>	
BricklAyeR: A Platform for Building Rules for AmI Environments in AR. . .	417
<i>Evropi Stefanidi, Dimitrios Arampatzis, Asterios Leonidis, and George Papagiannakis</i>	
Fine-Grained Color Sketch-Based Image Retrieval.	424
<i>Yu Xia, Shuangbu Wang, Yanran Li, Lihua You, Xiaosong Yang, and Jian Jun Zhang</i>	
Development and Usability Analysis of a Mixed Reality GPS Navigation Application for the Microsoft HoloLens.	431
<i>Renan Luigi Martins Guaresse and Anderson Maciel</i>	
A Synthesis-by-Analysis Network with Applications in Image Super-Resolution.	438
<i>Lechao Cheng and Zhangye Wang</i>	
Towards Moving Virtual Arms Using Brain-Computer Interface	445
<i>Jaime Riascos, Steeven Villa, Anderson Maciel, Luciana Nedel, and Dante Barone</i>	
ODE-Driven Sketch-Based Organic Modelling	453
<i>Ouwen Li, Zhigang Deng, Shaojun Bian, Algirdas Noreika, Xiaogang Jin, Ismail Khalid Kazmi, Lihua You, and Jian Jun Zhang</i>	
Physical Space Performance Mapping for Lenticular Lenses in Multi-user VR Displays	461
<i>Juan Sebastian Munoz-Arango, Dirk Reiners, and Carolina Cruz-Neira</i>	
Parallax Occlusion Mapping Using Distance Fields	468
<i>Saad Khattak and Andrew Hogue</i>	
Object Grasping of Humanoid Robot Based on YOLO	476
<i>Li Tian, Nadia Magnenat Thalmann, Daniel Thalmann, Zhiwen Fang, and Jianmin Zheng</i>	

Bivariate BRDF Estimation Based on Compressed Sensing	483
<i>Haru Otani, Takashi Komuro, Shoji Yamamoto, and Norimichi Tsumura</i>	
Nadine Humanoid Social Robotics Platform	490
<i>Manoj Ramanathan, Nidhi Mishra, and Nadia Magnenat Thalmann</i>	
ENGAGE'19 Workshop Full Papers	
Gajit: Symbolic Optimisation and JIT Compilation of Geometric Algebra in Python with GAALOP and Numba	499
<i>Hugo Hadfield, Dietmar Hildenbrand, and Alex Arsenovic</i>	
Geometric Algebra Levenberg-Marquardt	511
<i>Steven De Keninck and Leo Dorst</i>	
Transverse Approach to Geometric Algebra Models for Manipulating Quadratic Surfaces	523
<i>Stéphane Breuils, Vincent Nozick, Laurent Fuchs, and Akihiro Sugimoto</i>	
Cubic Curves and Cubic Surfaces from Contact Points in Conformal Geometric Algebra	535
<i>Eckhard Hitzler and Dietmar Hildenbrand</i>	
ENGAGE'19 Workshop Short Papers	
Non-parametric Realtime Rendering of Subspace Objects in Arbitrary Geometric Algebras	549
<i>Steven De Keninck</i>	
Automatic Normal Orientation in Point Clouds of Building Interiors	556
<i>Sebastian Ochmann and Reinhard Klein</i>	
Colour Image Segmentation by Region Growing Based on Conformal Geometric Algebra	564
<i>Jaroslav Hrdina, Radek Matoušek, and Radek Tichý</i>	
GAC Application to Corner Detection Based on Eccentricity	571
<i>Jaroslav Hrdina, Aleš Návrát, and Petr Vašík</i>	
Ray-Tracing Objects and Novel Surface Representations in CGA	578
<i>Sushant Achawal, Joan Lasenby, Hugo Hadfield, and Anthony Lasenby</i>	
Author Index	585