
Computer Graphics International 2026
CGI'26 London, UK
July 6-10, 2026
LONDON
CGI 2026
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Contents

About

Computer Graphics International (CGI)

CGI is one of the oldest annual international conferences on Computer Graphics in the world. Half a century of influence places the CGI as one of the top conferences on computer graphics and visualization. Researchers are invited to share their experiences and present novel achievements in Computer Graphics, Computer Vision, AI and Machine Learning, Media, as well as Virtual, Augmented and Extended Reality. Previous CGI conferences have been held around the globe including Bournemouth, UK (2012), Hannover, Germany(2013), Sydney, Australia (2014), Strasbourg, France (2015), Heraklion, Greece (2016), Yokohama, Japan (2017), Bintan, Indonesia (2018), Calgary, Canada (2019), Shanghai, China (2023), and Geneva, Switzerland (2024), and Hongkong, China (2025). CGI has been virtual between 2020 and 2022 due to the COVID pandemic.

CGI2026

This year, CGI 2026 is organized by the National Centre for Computer Animation at Bournemouth University, co-hosted by the Creative Computing Institute at University of the Arts London, and supported by the Computer Graphics Society (CGS). The Visual Computer Journal (Springer Nature), the official journal of the Computer Graphics Society, is closely associated with the conference.

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ENGAGE Workshop Committee

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Timetable

Programme at a Glance

Day	Hours	Main Programme	Format
Monday, 6 July	08:00 - 18:00	Registration and ENGAGE Workshop	Plenary
Tuesday, 7 July	09:30 - 17:15	Conference Opening, Keynote, Paper Session, Panel Discussion and UAL CCI Nerve Lab Demo	Plenary + Track A/B
Wednesday, 8 July	09:00 - 16:30	Keynote, Paper Session, UAL CCI Nerve Lab Demo	Plenary + Track A/B
Thursday, 9 July	09:00 - 17:15	Paper Session	Track A/B
Friday, 10 July	09:00 - 15:30	Paper Session, Conference Closing	Track A/B + Plenary

Conference Social

Day	Hours	Activity	Venue
Tuesday, 7 July	17:15 - 19:15	Reception & Network	9^{th} Floor
Wednesday, 8 July	18:30 - 21:30	Conference Dinner & Network	F1 Arcade, St Paul's London

List of Venues

Venue inside University of the Arts London (UAL)

Registration Desk: Reception, Ground Floor, 272 High Holborn (HH), London, WC1V 7EY
Plenary Room: HH_302, 3rd floor
Track A: HH_302, 3rd floor
Track B: HH_308, 3rd floor
UAL-CCI Nerve Lab: HH_G05
Tea Break: 3rd floor kitchen area
Lunch: Blueprint Cafe, ground floor
Reception: 9th floor, roof terrace with the views of London Skyline

Venue outside UAL building

Conference Dinner: F1 Arcade London, 1 New Change, London EC4M 9AF

WT: Welcom Talk; CP: Conference Paper; PD: Panel Discussion; KL: Keynote Lecture

Monday, 6 July 2026

Day 1 - Registration and ENGAGE Workshop

08:00–08:30	**Workshop registration and badge collection**		
08:30–08:40	WT	**Dmitry Shirokov & Eckhard Hitzer**	ENGAGE Workshop Welcome Address
08:40–09:30	KL	**Dr. Nektarios Valous** German Cancer Research Center (DKFZ) and the National Center for Tumor Diseases (NCT) Heidelberg, Germany	Novel workflows for natural and biomedical image processing based on hypercomplex algebras
09:30–09:40	**Short Break**		
Session 1	**GA applied in Medical VR, Robotics and Climate, Chair: Eckhard Hitzer**		
09:40–10:00	CP	**Mike Kentros** University of Crete, Greece	From Synthetic Worlds to Situated Action: Multi-Agent Grounding and CGA-Based Spatial Reasoning for VR Training (228)
10:00–10:20	CP	**Manos Kamarianakis** University of Crete, Greece	Conformal Geometric Algebra as a Symbolic Interface for LLM-Driven 3D Scene Editing (230)
10:20–10:40	CP	**Oliver Rettig** DHBW-Karlsruhe - Baden-Württemberg Cooperative State University Karlsruhe, Germany	Identification of Singularities of Serial Robot Manipulators Based on Geometric Algebra (115)
10:40–11:00	CP	**Zhenxia Liu** Nanjing Normal University, China	A Clifford Wavelet-Based Coupled Scalar-Vector Spatiotemporal Variability Index for Climatic and Oceanographic Data (125)
11:00–11:30	**Tea Break**		
Session 2	**GA and Deep Learning, Chair: Oliver Rettig**		
11:30–11:50	CP	**Sven Buchholz** TH Brandenburg, Brandenburg, Germany	Learning Knot Placement for B-Spline Curve Approximation with Clifford Algebra Neural Networks (130)
11:50–12:10	CP	**Ekaterina Filimoshina** HSE University, Russia	Parameter-light Equivariant Neural Networks Based on Geometric Algebras (278)
12:10–12:30	CP	**Nicholas Dwork** University of Colorado, US	A Clifford DeepSets Network for Highly Undersampled Multicoil MRI Reconstruction (116)
12:30–12:50	CP	**Cooper Doe** University of Colorado, US	Cython-Optimized Multivector Functions for Deep Learning (127)
12:50–14:00	**Lunch**		

Session 3	GA for Physics and Computer Science, Chair: Andrew J. S. Hamilton		
14:00–14:20	CP	**Ed Saribatir** University of Technology Sydney, Australia	Using Integers and SIMD instructions for Intermediate Calculations of Optimised Code Generated by GAALOP for Geometric Algebra Algorithms (121)
14:20–14:40	CP	**Patrick R Girard** Creatis laboratory INSA Lyon, France	Dirac Equation Revisited by Hyperquaternions (77)
14:40–15:00	CP	**Andrew J. S. Hamilton** University of Colorado Boulder, US	Geometric Algebra in String Theory (223)
15:00–15:20	CP	**Danail Brezov** University of Architecture, Civil Engineering and Geodesy, Bulgaria	Bundle Adjustment with Projective Motors (209)
15:20–15:40	CP	**Hamish Todd** Independent, UK	Transform-based CGA (259)
15:40–16:10	**Tea Break**		
Session 4	**GA for Geometry and Algebra, Chair: Manos Kamarianakis**		
16:10–16:30	CP	**Eckhard Hitzer** International Christian University, Tokyo, Japan	Introduction to Para-Complex Numbers and Para-Quaternions (151)
16:30–16:50	CP	**Enzo Harquin** LIGM, Université Gustave Eiffel, France	Conic Conformal Geometric Algebra: Foundation for Two-Dimensional Conic Geometry (126)
16:50–17:10	CP	**Ian Bell** Independent, UK	Cyclidial Spatial Partitioning via Conformally Embedded Lie Sphere Space (184)
17:10–17:30	CP	**Dmitry Shirokov** HSE University, Moscow, Russia	On Hyperbolic SVD in Geometric Algebras (123)
17:30–17:40	**Short Break**		
17:40–17:50	**Awards: Best Presentation (Manos Kamarianakis)**		
17:50–17:55	**GA Application and Computing Award (Oliver Rettig)**		
17:55–18:00	**Workshop Closing Remarks**		

Tuesday, 7 July 2026

Day 2 - Conference Opening, Keynote, Paper Session and Panel

9:30–10:00	**Conference Registration**		
10:00–10:30	WT	**Prof. Nadia Magnenat-Thalmann** MIRALab, University of Geneva, Switzerland	From Pioneering Virtual Humans in the 1980s to Social Robotics

10:30–11:30	KL	**Dr. Patrick Bourdot** Université Paris-Saclay, France	Working Together in XR: Challenges and Opportunities for Immersive Collaboration
11:30–12:00	**Tea Break**		
12:00–13:00	CP	**Technical Session** Track A	Image Enhancement & Apperance Modeling - Part 1
12:00–13:00	CP	**Technical Session** Track B	Neural Rendering & GS Systems - Part 1
13:00–14:00	**Lunch**		
14:00–15:00	PD	**Prof. Nadia Magnenat-Thalmann, Prof. Daniel Thalmann, Prof. Jianjun Zhang, Prof. Mick Grierson, Dr. Patrick Bourdot**	Has generative AI changed the core research agenda of computer graphics?
15:00–15:30	**Tea Break**		
15:30–16:30	CP	**Technical Session** Track A	Image Enhancement & Apperance Modeling - Part 2
15:30–16:30	CP	**Technical Session** Track B	Neural Rendering & GS Systems - Part 2
16:30–17:15	**UAL-CCI Nerve Lab Demo**		
17:15–19:15	**Reception**		

Day 2 - Track A, Chair: Andrew Hamilton

12:00–13:00	**Image Enhancement & Apperance Modeling - Part 1**		
12:00–12:15	CP	**Jiajun Chen** University of Southampton, UK	SC-TAS: Stability-Constrained Task-Adaptive Saliency for Artifact-Aware Attention Transfer in JPEG-Compressed Images (35)
12:15–12:30	CP	**Yu Jiang** Wuhan University, China	GUIDE: Dual-Gated Semantic Conditioning with Correctable Priors for Single-Image Human Material Estimation (68)
12:30–12:45	CP	**Yu Jiang** Wuhan University, China	DuoLit: Dual-Level Priors and Gated Lighting Injection for Human Material Estimation (69)
12:45–13:00	CP	**Yuanzhen Li** Yunnan University, China	CrossMamba: Transformer-Mamba Fusion for Document Shadow Removal (88)
15:30–16:30	**Image Enhancement & Apperance Modeling - Part 2**		
15:30–15:45	CP	**Yu-Kun Lai** Cardiff University, UK	Rectangling Stitched Images via Unsupervised Warping (105)
15:45–16:00	CP	**Chen Yan** Changsha University of Science and Technology, China	LM-UMamba: An Lightweight Multi-Scale UMamba for Large-Hole Inpainting (138)

16:00–16:15	CP	**Mengying Sun** The Hong Kong Polytechnic University, China	Semantic-Aware Exemplar-based Low-Light Image Colorization (277)
16:15–16:30	CP	**Hezi Shi** Nanyang Technological University, Singapore	SPMMSegNet: Self-Parameterization Multi-Scale Mesh Segmentation Network for Tooth Identification (45)

Day 2 - Track B, Chair: Marco Agus

12:00–13:00	**Neural Rendering & GS Systems - Part 1**		
12:00–12:15	CP	**Hezi Shi** Nanyang Technological University, Singapore	SplatSurf: Bridging Gaussian Splatting and Surface Geometry via Triangle-Soup (36)
12:15–12:30	CP	**Kemal Mutluergil** Sabanci University, Turkey	RT-Suitedness: Predicting Hardware Ray Tracing Energy Gains from Static Scene Geometry (46)
12:30–12:45	CP	**Ioannis Fudos** University of Ioannina, Greece	STAR-NT: Spatiotemporal Acceleration of Real-Time Neural Transparency Rendering (48)
12:45–13:00	CP	**Deborah Pintani** University of Verona, Italy	EnvMap-GS: Two-Stage Outdoor Gaussian Reconstruction with Background-to-Environment Map Baking (89)
15:30–16:30	**Neural Rendering & GS Systems - Part 2**		
15:30–15:45	CP	**Jingfeng Li** University of Science and Technology Beijing, China	PGSR-DR: High-Fidelity Reflective Surface Reconstruction with Planar-based Gaussians and Deferred Rendering (99)
15:45–16:00	CP	**Koki Tomita** Tokyo City University Japan	Trajectory-Based Object-Level Filtering for 3DGS-SLAM in Dynamic Streetscapes (155)
16:00–16:15	CP	**Tianhua Li** Taiyuan University of Technology, China	NII-GS: Low-Light Novel View Synthesis via Nonlinear Illumination Interpolation (200)
16:15–16:30	CP	**Valentin Kraft** Fraunhofer MEVIS, Germany	Volumetric Gaussian Splatting: Direct Optimization in Voxel Space for Efficient Medical Data Visualization (235)

Wednesday, 8 July 2026

Day 3 - Keynote, Paper Session and CCI(UAL) Nerve Lab Demo

8:30–09:00	**Conference Registration**

09:00–10:00	KL	**Josh Bainbridge** Head of Applied Machine Learning, Framestore, UK	The Evolution of Framestore's Academy Award-Winning Rendering Tech
10:00–10:30	**Tea Break**		
10:30–11:30	CP	**Technical Session** Track A	3D Reconstruction & Scene Understanding - Part 1
10:30–11:30	CP	**Technical Session** Track B	Generative Models & Diffusion - Part 1
11:30–11:45	**Short Break**		
11:45–12:30	CP	**Technical Session** Track A	3D Reconstruction & Scene Understanding - Part 2
11:45–12:30	CP	**Technical Session** Track B	Generative Models & Diffusion - Part 2
12:30–13:30	**Lunch**		
13:30–14:15	**UAL-CCI Nerve Lab Demo**		
14:15–14:30	**Short Break**		
14:30–15:15	CP	**Technical Session** Track A	Human Modeling & Animation - Part 1
14:30–15:15	CP	**Technical Session** Track B	Pose & Motion Analysis - Part 1
15:15–15:45	**Tea Break**		
15:45–16:30	CP	**Technical Session** Track A	Human Modeling & Animation - Part 2
15:45–16:30	CP	**Technical Session** Track B	Pose & Motion Analysis - Part 2
18:30–21:30	**Conference Dinner**		

Day 3 - Track A Session 1, Chair: Yukun Lai

10:30–11:30	**3D Reconstruction & Scene Understanding - Part 1**		
10:30–10:45	CP	**Marco Agus** Hamad Bin Khalifa University, Qatar	InLayDiffusion: Indoor Layout Estimation from a Single Panorama via Structural Point Cloud Lifting and Guided Diffusion (25)
10:45–11:00	CP	**Ayellet Tal** Technion - Israel Institute of Technology, Isreal	Walk and Learn: Self-Supervised Learning on Triangular Meshes (81)
11:00–11:15	CP	**Peichi Zhou** Shanghai Normal University, China	Terrain Gap Filling from Single-View Satellite Imagery based on Prior Geographical Knowledge Constraints (163)
11:15–11:30	CP	**Haozhi Huang** Jinan University, China	SepFlow BEV: Efficient 3D Scene Flow via Directionally Decoupled Matching in Bird's-Eye View (134)
11:45–12:30	**3D Reconstruction & Scene Understanding - Part 2**		

11:45–12:00	CP	**Yue Liu** Beijing Institute of Technology, China	A Reconstruction-Oriented Framework for Text-Guided 3D Scene Reconstruction (164)
12:00–12:15	CP	**Dennis Ruppel** Fraunhofer IGD, Germany	Beyond Reprojection Error: Camera Calibration with 3D Targets (226)
12:15–12:30	CP	**Rajendra Nagar** Indian Institute of Technology Jodhpur, India	Localized Basis Functions for Decoupled Spatio-Temporal Neural Distance Fields (265)

Day 3 - Track A Session 2, Chair: Daniel Thalmann

14:30–15:15	**Human Modeling & Animation - Part 1**		
14:30–14:45	CP	**Xin Zhao** Beihang University, China	EmoDiffuser: Emotional Diffuser for Speech-driven 3D Facial Animation (10)
14:45–15:00	CP	**Wonseop Shin** Chung-ang University, South Korea	L-DANCE: LLM-guided Motion Intensity Aware Natural Dance Generation (51)
15:00–15:15	CP	**Wei Chen** Capital Normal University, China	GrambaTalk: Generating 3D Talking Head with Spatial Graph and Temporal Mamba (57)
15:45–16:30	**Human Modeling & Animation - Part 2**		
15:45–16:00	CP	**Jian Liu** Hokkaido University, Japan	Skeleton Geodesic Distance-Based Skinning for 3D Avatar Motion Demonstration (203)
16:00–16:15	CP	**Qian Zhou** Wuhan Textile University, China	Stage-wise Material-Aware Supervision for Topology-Preserving Garment Mesh Deformation (206)
16:15–16:30	CP	**Luca Cazzola** University of Trento, Italy	Neural Motion Blending Across Arbitrary Character Topologies (236)

Day 3 - Track B Session 1, Chair: TBC

10:30–11:30	**Generative Models & Diffusion - Part 1**		
10:30–10:45	CP	**Selim Balcisoy** Sabanci University, Turkey	Prompt-to-Population: Controllable pipeline for coherent and diverse text to 3D assets (61)
10:45–11:00	CP	**Yifan Huang** Zhejiang Sci-Tech University, China	NDC: Neural Diffusion Curves for Image Vectorization (106)
11:00–11:15	CP	**Fei Fang** Wuhan Textile University, China	Boundary-Driven High-Resolution Embroidery Synthesis via Wavefront Flow Matching (161)
11:15–11:30	CP	**Shao-Yun Lo** National Chengchi University	BrickMosaic: Multi-Layer LEGO Stylization via Tiling Optimization and Palette-Constrained Rendering (190)

11:45–12:30	Generative Models & Diffusion - Part 2		
11:45–12:00	CP	**Yuyang Dai** Wuhan Textile University, China	PromptFit:Text-Driven Fashion Image Editing with Large Multimodal Model (219)
12:00–12:15	CP	**Li Hong** South-Central Minzu University, China	TS-Diff: Topology-Guided and Uncertainty-Aware Diffusion for Pedestrian Trajectory Prediction in Complex Scenes (224)
12:15–12:30	CP	**Wei Chen** Capital Normal University, China	HoloDiff: Holistic Talking Human Animation via Latent Diffusion (260)

Day 3 - Track B Session 2, Chair: Xiaosong Yang

14:30–15:15	Pose & Motion Analysis - Part 1		
14:30–14:45	CP	**Arjun Raj** Indian Institute of Technology Madras, India	Bird's Eye View (BEV) Features for Vulnerable Road User Intention Recognition (29)
14:45–15:00	CP	**Yuanxiang Zhao** North China University of Technology, China	PoseRT-Lab: Budget-Aware Online Multi-Person Pose Estimation for High-Dynamic Videos (175)
15:00–15:15	CP	**Chuansheng Liu** North China University of Technology, China	Instance Paste: Person-Shaped Occlusion Augmentation for Top-Down Pose Estimation under Heavy Human Occlusion (189)
15:45–16:30	Pose & Motion Analysis - Part 2		
15:45–16:00	CP	**Kaijie Qu** North China University of Technology, China	JC-STNet: A Physics-Inspired Joint-Centric Spatio-Temporal Network for Real-Time 2D Pose Estimation (211)
16:00–16:15	CP	**Yanling Zhong** Guangdong University of Technology, China	Robust Self-Supervised Monocular 3D Hand Reconstruction under Noise and Occlusion (216)
16:15–16:30	CP	**Yunfan Gao** Northwest A&F University, China	LFEPose: Occlusion-Robust Sheep Pose Estimation via Limb Feature Enhancement (220)

Thursday, 9 July 2026

Day 4 - Paper Session

09:00–09:30	Conference Registration		
09:30–10:30	CP	**Technical Session** Track A	Gaussian Splatting & Neural Rendering - Part 1

09:30–10:30	CP	**Technical Session** Track B	Applications & HCI Systems - Part 1
10:30–11:00	**Tea Break**		
11:00–11:45	CP	**Technical Session** Track A	Gaussian Splatting & Neural Rendering - Part 2
11:00–11:45	CP	**Technical Session** Track B	Applications & HCI Systems - Part 2
11:45–12:00	**Short Break**		
12:00–13:00	CP	**Technical Session** Track A	Detection & Segmentation - part 1
12:00–12:45	CP	**Technical Session** Track B	Representation & Clustering - part 1
13:00–14:00	**Lunch**		
14:00–14:45	CP	**Technical Session** Track A	Detection & Segmentation - Part 2
14:00–14:45	CP	**Technical Session** Track B	Representation & Clustering - Part 2
14:45–15:15	**Tea Break**		
15:15–16:00	CP	**Technical Session** Track A	3D Vision & Point Clouds - Part 1
15:15–16:00	CP	**Technical Session** Track B	Physics-Based Simulation & Rendering - Part 1
16:00–16:15	**Short Break**		
16:15–17:00	CP	**Technical Session** Track A	3D Vision & Point Clouds - Part 2
16:15–17:15	CP	**Technical Session** Track B	Physics-Based Simulation & Rendering - Part 2

Day 4 - Track A Session 1, Chair: Selim Balcisoy

09:30–10:30	**Gaussian Splatting & Neural Rendering - Part 1**		
09:30–09:45	CP	**Zimeng Li** Shenzhen Polytechnic University, China	VEDAL: Variational Error-Driven Asynchronous Learning for 3D Gaussian Splatting Pruning (31)
09:45–10:00	CP	**Chao Cai** Jiangxi University of Finance and Economics, China	FreDeGS: Frequency-Guided 3D Gaussian Splatting for Scene Deblurring (37)
10:00–10:15	CP	**Huan Zhou** Wuhan University, China	SARG-GS: Semantic-Augmented and Residual-Guided 3D Gaussian Splatting for Sparse View Synthesis (66)
10:15–10:30	CP	**Shuaining Li** Shanghai Institute of Technology, China	Physically-Guided 3D Gaussian Splatting for Specular Reflection Modeling (141)
11:00–11:45	**Gaussian Splatting & Neural Rendering - Part 2**		

11:00–11:15	CP	**Yongle Zhang** University of Chinese Academy of Sciences, China	ReliableGS: Geometric Reliability-Regularized Gaussian Splatting for Transparent Surface Reconstruction (149)
11:15–11:30	CP	**Jinliang Yan** Shanghai Institute of Technology, China	Frequency-Separated Vector Quantization for 3D Gaussian Splatting Compression in Dynamic Scenes (171)
11:30–11:45	CP	**Huan Zhou** Wuhan University, China	ME-GS: Robust Large-Scale Reconstruction via Manifold-Epipolar Constrained 3D Gaussian Splatting (174)

Day 4 - Track A Session 2, Chair: Wei Song

12:00–13:00	**Detection & Segmentation - Part 1**		
12:00–12:15	CP	**Yu Pang** Shenyang University of Technology, China	Progressive Thermal-embedding Single-stream Network for Enhanced RGB-T Salient Object Detection (4)
12:15–12:30	CP	**Yuansheng Luo** Changsha University of Science and Technology, China	Frequency-Band Decoupled Feature Learning and State-Space Global Modeling for Robust Pavement Crack Segmentation (150)
12:30–12:45	CP	**Yongqing Sun** Nihon University, Japan	Reliability and Channel-Aware Distillation for RT-DETR-Based UAV Small Object Detection (167)
12:45–13:00	CP	**Yongqing Sun** Nihon University, Japan	LSA-Net: Explicit Scale-Dimension Modeling for Dense Small-Object Detection in UAV Imagery (178)
14:00–14:45	**Detection & Segmentation - Part 2**		
14:00–14:15	CP	**Khaoula Ayad** Hangzhou dianzi university of science and technology, China	EfficientShadow: Multi-Scale Attention Network for Robust Shadow Detections (195)
14:15–14:30	CP	**Yuxuan Xiong** Changsha University Of Science & Technology, China	IRSFNet: An Infrared-RGB Small-Target Fusion Network for Vehicle Detection in UAV Remote Sensing Imagery (215)
14:30–14:45	CP	**Shun Tatsukawa** Hosei University, Japan	A Two-stage Albedo Estimation Model for Relighting Single Terrain Image (253)

Day 4 - Track A Session 3, Chair: Yukun Lai

15:15–16:00	**3D Vision & Point Clouds - Part 1**		
15:15–15:30	CP	**Hui Wang** North China University of Technology, China	Mask-Aware Tri-Modal Learning for Indoor 3D Object Detection (11)

15:30–15:45	CP	**Bo Jin** Northwest A&F University, China	GoatPoinTr: Single-View Point Cloud Completion and Keypoint Detection Network for Goat Body Measurement (43)
15:45–16:00	CP	**Guofeng Zhang** Zhejiang University, China	Reliability-aware Conflict Calibration for Generalized Few-shot Point Cloud Segmentation (187)
16:15–17:00	**3D Vision & Point Clouds - Part 2**		
16:15–16:30	CP	**Mengjie Wang** Shenzhen University, China	SAPDR: Saliency-Aware Poisson Disk Resampling for 3D Point Clouds (202)
16:30–16:45	CP	**Yonggang Xu** Beijing Technology and Business University, China	Uncertainty-Aware Multi-View Post-Aggregation for Point Cloud Quality Assessment (207)
16:45–17:00	CP	**Chiyue Zhang** Inner Mongolia University of Technology, China	FGA-Fusion: Fixed-Weight Gated Adaptive Fusion for Multimodal 3D Object Detection in a Unified BEV Space (252)

Day 4 - Track B Session 1, Chair: Corey Ford

09:30–10:30	**Applications & HCI Systems - Part 1**		
09:30–09:45	CP	**Nan Xiang** Xi'an Jiaotong-Liverpool University, China	VAI-Med: Synergistic Voice and Gesture Multimodal Interaction for Medical Education (28)
09:45–10:00	CP	**Libo Sun** Southeast University, China	KPGBeltNet: In-Vehicle Seatbelt Detection Algorithm Based on Human Keypoint-Guided Sampling and Local-Global Attention (56)
10:00–10:15	CP	**Jing Dong** Dalian University, China	Image-to-Symbolic Music Generation Based on Musical Expression Terms (136)
10:15–10:30	CP	**Meng Yang** Beijing Forestry University, China	SandMaster: A Data-Driven Colored Sand Animation Framework with Multi-Modal Interaction (199)
11:00–11:45	**Applications & HCI Systems - Part 2**		
11:00–11:15	CP	**Mengmeng Fu** Sounth-Central Minzu University, China	STARS: A Spatio-Temporal Attention and Retrieval-Augmented Framework for Sign Language Translation (225)
11:15–11:30	CP	**Fan Yu** Zhengzhou University of Light Industry, China	Scene-Conditioned VR–EEG User Experience Modeling for Immersive Indoor Environments Using a Hybrid Transformer–CNN Network (255)
11:30–11:45	CP	**Pushp Pushp** IIIT Sri City, India	A Hybrid Kinematic GCN and Elastic Transformer for Efficient Indian Sign Language Recognition (272)

Day 4 - Track B Session 2, Chair: TBC

12:00–12:45	**Representation & Clustering - Part 1**		
12:00–12:15	CP	**Tolga Capin** TED University, Turkey	TDSal: A Task-Based Top-Down Saliency Prediction Model (5)
12:15–12:30	CP	**Jinghan Bai** Northeast Normal University, China	Visual Aliasing Entropy: Quantifying Perceptual Loss in Temporal Aggregation for Dynamic Community Evolution Analysis (65)
12:30–12:45	CP	**Yu Jiang** Wuhan University, China	HAFMat: Hybrid Priors Guided Adaptive Fusion for Single-Image Human Material Estimation (102)
14:00–14:45	**Representation & Clustering - Part 2**		
14:00–14:15	CP	**Junda Kong** Beijing University of Posts and Telecommunications, China	AFG-ASP: Adapting Foundation ViTs for Fine-Grained Recognition via Attention Set Pooling (166)
14:15–14:30	CP	**Junfeng Ou** Guangdong University of Technology, China	Projective Incomplete Multi-view Clustering via Adaptive Intrinsic Graph Learning (179)
14:30–14:45	CP	**Yonghao Wu** Guangdong University of Technology, China	Reliable Refinement Graph Learning for Incomplete Multi-View Clustering (237)

Day 4 - Track B Session 3, Chair: TBC

15:15–16:00	**Physics-Based Simulation & Rendering - Part 1**		
15:15–15:30	CP	**Yang Zhou** Shenzhen University, China	PoseAlign: Sculpting Pose-Consistent Meshes via Text-Guided Deformation (27)
15:30–15:45	CP	**Qimu Su** Xinjiang University, China	Physics-Driven Snowy Scene Rendering and Robust Vehicle Tracking under Adverse Weather (194)
15:45–16:00	CP	**Yiguo Lou** Huazhong University of Science and Technology, China	FEAO: A Feature-Enhanced Network for Real-Time Ambient Occlusion (196)
16:15–17:00	**Physics-Based Simulation & Rendering - Part 2**		
16:15–16:30	CP	**Xu Wang** Hokkaido University, Japan	Residual-Driven Chebyshev Acceleration for Jacobi Neo-Hookean XPBD Solver (40)

16:30–16:45	CP	**Mingzhao Zhou** Brunel University of London, UK	VR-Deform: Real-Time Visual and Haptic Interaction with Deformable Bodies using XPBD in Virtual Reality (47)
16:45–17:00	CP	**Seth Holladay** Brigham Young University, US	Particle-based artistic control in an Eulerian smoke simulation framework (133)
17:00–17:15	CP	**Gustaf Waldemarson** Lund University/Arm, Sweden	Color and Attribute Micromaps (266)

Friday, 10 July 2026

Day 5 - Paper Session and Conference Closing

09:00–09:30	**Conference Registration**		
09:30–10:30	CP	**Technical Session** Track A	Medical Imaging & Healthcare AI - Part 1
09:30–10:15	CP	**Technical Session** Track B	Trust, Security & Authenticity in Visual Computing - Part 1
10:30–11:00	**Tea Break**		
11:00–11:45	CP	**Technical Session** Track A	Medical Imaging & Healthcare AI - Part 2
11:00–11:45	CP	**Technical Session** Track B	Trust, Security & Authenticity in Visual Computing - Part 2
11:45–12:00	**Short Break**		
12:00–13:00	CP	**Technical Session** Track A	Multimodal Learning & LLMs - part 1
12:00–13:00	CP	**Technical Session** Track B	Geometry, CAD & Algebra
13:00–14:00	**Lunch**		
14:00–14:30	CP	**Technical Session** Track A	Multimodal Learning & LLMs - Part 2
14:30–15:00	**Conference Awards & Closing Remarks**		
15:00–15:30	**Tea Break & Social**		

Day 5 - Track A Session 1, Chair: Nicholas Dwork

09:30–10:30	**Medical Imaging & Healthcare AI - Part 1**		
09:30–09:45	CP	**In Kyu Park** Inha University, South Korea	Learning Skull Shape Variations Through CT Scan Data (16)
09:45–10:00	CP	**Kun Yang** NingboTech University, China	3D Brain Image Anomaly Detection Using Anomaly-guided Large Vision-Language Models (39)

10:00–10:15	CP	**Yang Wen** Shenzhen University, China	ProMedSAM: Prompt-Free Medical Video Segmentation with Bidirectional Propagation and Semantic-Frequency Refinement (159)
10:15–10:30	CP	**Zhangjin Huang** University of Science and Technology of China, China	Dual Perspectives on Improving SAM-Med2D for Polyp Segmentation (242)
11:00–11:45	**Medical Imaging & Healthcare AI - Part 2**		
11:00–11:15	CP	**Nguyen Anh Thu Tran** University of Sydney, Australia	CurAug: Curriculum-based Data Augmentation for Rare Disease-aware Radiology Report Generation (243)
11:15–11:30	CP	**Yuzhou Wu** ChangSha University of Science and technology, China	CLIP-SM: Contrastive Language-Image Pretraining with Medical Synonym Mechanism for Multimodal Diagnostics (267)
11:30–11:45	CP	**Le Ma** University of Geneva, Switzerland	RTSurgNet: Stable Real-Time Recognition of Surgical Hand Gestures (213)

Day 5 - Track A Session 2, Chair: Olufemi Isiaq

12:00–12:45	**Multimodal Learning & LLMs - Part 1**		
12:00–12:15	CP	**Yi Chen** Beijing Technology and Business University, China	From Pixels to Multimodal Insights: A Visual Analysis Method for Automated Extractor of Temporal Knowledge (41)
12:15–12:30	CP	**Donglei Chen** South China University of Technology, China	Large Model-Assisted Video Summarization via Global Entity Unification and Robust Importance Scoring (44)
12:30–12:45	CP	**Junyi Yang** Zhejiang University, China	DiaVTG: Multi-Turn Reasoning Framework for Video Temporal Grounding (82)
12:45–13:00	CP	**Tingwei Wu** Polytechnic Institute of Zhejiang University, China	Intent-LTA: Intent-Aware Structured Large Language Model for Long-Term Action Anticipation (91)
14:00–14:30	**Multimodal Learning & LLMs - Part 2**		
14:00–14:15	CP	**Kelaiti Xiao** Dalian University of Technology, China	Visualize the Idioms: An Iterative LLM-T2IM-MLLM Framework (221)
14:15–14:30	CP	**Hao Zhang** Yunnan University, China	Dual-Gated Visual-Semantic Decomposition for Multimodal Sentiment Analysis (261)

Day 5 - Track B Session 1, Chair: TBC

09:30–10:15	**Trust, Security & Authenticity in Visual Computing - Part 1**		
09:30–09:45	CP	**Wang Hanhan** Beijing Electronic Science and Technology Institute, China	CMFDFormer: Transformer-based Copy-Move Forgery Detection with Knowledge Distillation (30)
09:45–10:00	CP	**Yonghan Chen** Guangdong University of Technology, China	CreaseAttack: A Structure-Aware Backdoor Attack for Palmprint Recognition (170)
10:00–10:15	CP	**Xuan Tan** University of Yamanashi, Japan	Semantic Region-Guided Face Anonymization for Controllable Facial Attribute Preservation (182)
11:00–11:45	**Trust, Security & Authenticity in Visual Computing - Part 2**		
11:00–11:15	CP	**Wei Song** Shanghai Ocean University, China	Spatially Adaptive Mixture-of-Experts Enhancement for Underwater Small Object Detection (257)
11:15–11:30	CP	**Yan Liu** Tongji University, China	AniPrO: Interpretable Anime Image Provenance Detection via Multi-Dimensional Semantic Reasoning (276)
11:30–11:45	CP	**Yunlong Liao** Independent, Macao	A Novel Multi-Image Encryption Scheme Based on a Hilbert-Chained Kronecker-Fibonacci (122)

Day 5 - Track B Session 2, Chair: Zhangjin Huang

12:00–13:00	**Geometry, CAD & Algebra**		
12:00–12:15	CP	**Pengfei Xu** Shenzhen University, China	A Schedule-Driven Grammar-Aware Relayout Framework for Power-Grid Topology Diagrams (95)
12:15–12:30	CP	**Zongying Wang** Shanghai University, China	Statistical Implicit Watermarking for Neural Radiance Fields via High-Order Moments (100)
12:30–12:45	CP	**Jianru Shen** University of Montana, US	Frequency-Scale Saliency for Spectral Descriptor Analysis in 3D Shape Retrieval (192)
12:45–13:00	CP	**Yina Ding** Zhejiang Sci-Tech University, China	BRepGCL:Text-Driven Fine-Grained CAD Model Retrieval via B-Rep Graph Contrastive Learning (240)

List of Abstracts – Talks

Monday 6th

Novel workflows for natural and biomedical image processing based on hypercomplex algebras

Dr. Nektarios Valous KL

German Cancer Research Center, Germany

This talk leverages quaternions and the two-dimensional orthogonal planes split framework for natural and biomedical image analysis. The talk presents methodological overviews and results on the following computational workflows and outcomes: natural and biomedical image re-colorization, natural image de-colorization, natural and biomedical image contrast enhancement, computational re-staining and stain separation in histological images, and performance gains in machine and deep learning pipelines for histological images. The proposed workflows can regulate color appearance and image contrast, be part of automated processing pipelines, and assist in digital pathology applications. Employing basic arithmetic and matrix operations, the talk presents a computationally accessible methodology that showcases versatility and consistency across processing tasks and a range of computer vision and biomedical applications.

Biography: Nektarios Valous is a researcher at the German Cancer Research Center and the National Center for Tumor Diseases (NCT) Heidelberg, and the founding and executive editor of the open-access journal ImmunoInformatics at Elsevier. He is working at the intersections of computational biomedicine – applied mathematics and biosystems engineering – interdisciplinary physics with publications in 29 peer-reviewed journals. He drives cross-disciplinary initiatives, curates special issues, and organizes/chairs conference sessions that link computational methods to biomedical impact.

Tuesday 7th

Working Together in XR: Challenges and Opportunities for Immersive Collaboration

Dr. Patrick Bourdot

KL

University Paris-Saclay, France

This talk provides an overview of a body of work conducted with my team on immersive collaboration using Extended Reality (XR) technologies. It highlights both the opportunities and the challenges of working together in co-located and remote setups. These range from multi-stereoscopic CAVE-like systems to Virtual Reality (VR) and Augmented/Mixed Reality (AR/MR) headsets. Our research addresses key questions, including user co-habitation, dual presence, spatial consistency, workspace partitioning, engagement, and attention. These topics are explored through several use cases, such as immersive training for assembly tasks, immersive analytics of complex data, and remote immersive learning. For each project, we discuss major outcomes, limitations, and insights. We also highlight promising directions for advancing XR-based immersive collaboration in the future.

Biography: Dr. Bourdot is Research Director at CNRS and the founding leader of the VENISE team (www.limsi.fr/venise), a Virtual & Augmented Reality research group established in 2001 at the University of Paris-Saclay. His research focuses on eXtended Reality (XR), including virtual navigation, 3D reconstruction, multimodal and collaborative interactions, and related perception and cognition challenges. Applications span Design and Engineering, Bioinformatics, Computational Fluid Dynamics, Science Education, and Autism Spectrum Disorder. He has led numerous projects funded by the French government and national research institutes, coordinated CNRS participation in the INTUITION VR/AR network (6th IST Framework), and is the founding secretary of AFRV and a founding member of EuroVR/EuroXR, where he served as Vice-President (2016–2021) and President (2021–present). Dr. Bourdot has published extensively in leading journals (e.g., Presence, JVRB, Frontiers in Robotics and AI) and conferences (e.g., CHI, INTERACT, IEEE VR), and serves as editor of several Springer LNCS volumes and associate editor for Frontiers journals on XR.

Wednesday 8th

The Evolution of Framestore's Academy Award-Winning Rendering Tech

Josh Bainbridge KL

Head of Applied Machine Learning at Framestore, UK

Over the past fifteen years, Framestore has developed and refined a layered shading system that has become central to the studio's pursuit of photorealistic surfaces. It has been used on more than 100 film and television productions, and recognised in 2026 with an Academy Award for Technical Achievement.

This talk traces the evolution of that system across three generations, following its path from early architecture through to the engineering decisions that shaped a production-scale renderer. Josh will explore how published research has been adapted to the realities of large-scale visual effects, where physical correctness, artistic controllability and fast iteration must hold together. Drawing on productions including Guardians of the Galaxy, Prehistoric Planet and F1, Josh examines the relationship between research and the systems built to apply it in practice.

As machine learning and AI reshape how images are made, the relationship between artists and technology is shifting again. Josh will consider what this means for the meeting point of art and science that has defined this work so far, where the open problems now lie, and how the research community and creative practitioners might shape that future together.

Biography: Josh Bainbridge is Head of Applied Machine Learning at Framestore, where he leads the studio's machine learning team and its drive to innovate with the technology across creative production. He is helping shape Framestore's wider AI strategy, guiding how emerging tools are explored, adopted and brought into the pipeline. Over more than a decade at the studio, Josh has enabled teams and developers to build software for computer graphics and visual effects on feature film and episodic production. He has architected systems grounded in research that ranges from light transport and shading systems, to Quasi-Monte Carlo techniques, and denoising algorithms.

In 2026, Josh received an Academy Award for Technical Achievement for the design, architecture and engineering of Framestore's layered shading system, developed with Nathan Walster and used on more than 100 film and television productions. He serves as Chairman of the Technical Steering Committee for the Academy Software Foundation's OpenQMC project and as an Industry Advisory Board Member at WMG, University of Warwick.

Useful Information

Talks and paper presentations will be held at the **Lecture Rooms** of UAL-CCI. They are located on the third floor of the UAL central London campus.

Coffee breaks will be offered in the common area on the third floor just outside the Plenary room. **Lunches** will be offered in the Blueprint Cafe on the ground floor. **Reception** will be offered in the roof terrace on the 9th floor.

Wi-Fi will be available during the conference. The UAL provides access to an eduroam network.

The **conference dinner** will be held at the "F1 Arcade", 1 New Change, London, EC4M 9AF.

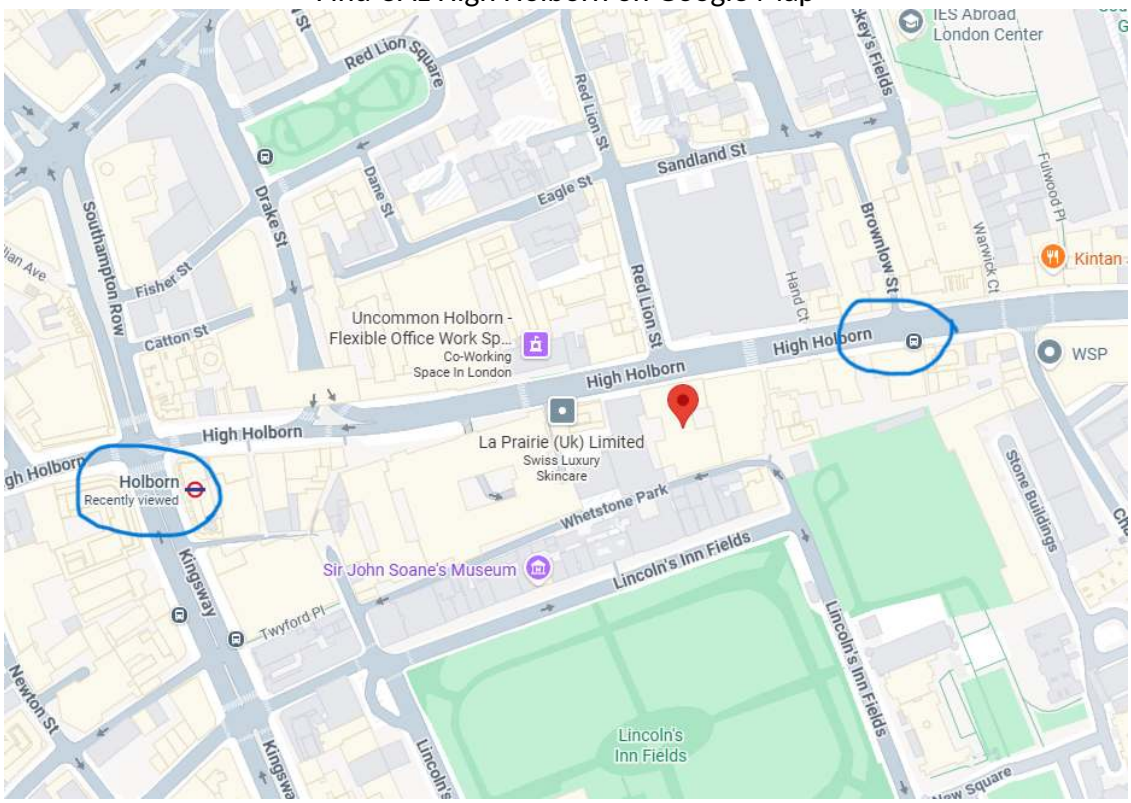
How to get to the UAL-CCI

High Holborn (HH) is Creative Computing Institute's (CCI) newest building, taking over from the London College of Fashion Business School. The address is 272 High Holborn, London, WC1v 7EY. UAL HH campus can be reached by:

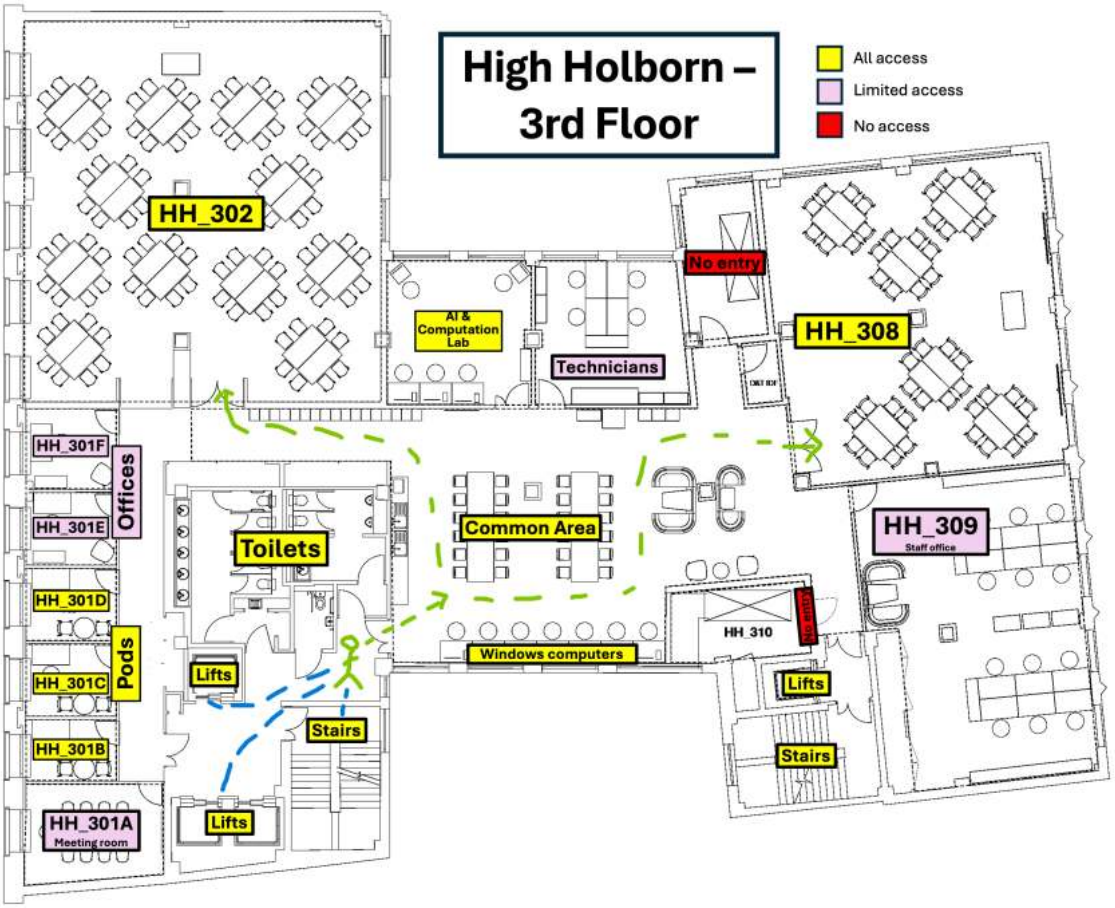
- **London Underground:** Central(Red) Line/Piccadilly(Blue) Line, Holborn Station
- **Bus:** lines 8, 59, 133, Brownlow Street Station
- **Euro Star:** Get off at St. Pancras International Station, take underground Piccadilly line at King's Cross Station (cross the street) to Holborn station
- **Airport:** Piccadilly line to Holborn Station from Heathrow Airport Terminals. From Gatwick Airport, take Thameslink (national railway) to St. Pancras International station then change to Piccadilly line.

Some useful signs you will need to remember to be a Londoner:

Find UAL High Holborn on Google Map



Floor map of 3rd floor HH building



Partner Institutions

National Centre for Computer Animation (NCCA)

The National Centre for Computer Animation has been at the forefront of computer graphics and animation education and research in the UK since 1989.The aim of the NCCA is to promote science in the service of the arts and to embed a theoretical underpinning within a contemporary professional setting, allowing graduates to leave BU with highly sought-after skills in the computer animation, visual effects and computer games industries. They have forged links with many of the UK's, and the world's, most prominent animation organisations and award-winning professionals. BU is also one of a small number of institutions from around the world who have been granted Houdini Certified School status by Side Effects Software, and a number of our computer animation degrees boast the ScreenSkills Tick, indicating the quality of those courses.

Creative Computing Institute

The UAL Creative Computing Institute (CCI) is the only research-intensive institute in the UK focussing on the intersection of computing and creative arts. CCI leads the conversation and innovation on emerging computer technologies including machine learning, AI, XR/VR/AR, robotics, data science and computer science. CCI's approach is guided by 3 key social principles: Digital inclusion, creating opportunities for marginalised people through creative technology; Diversity in Technology, being mindful of how our technological innovations impact society; and Digital Entrepreneurship, creating pathways to entrepreneurship for marginalised people. These principles permeate our research and knowledge exchange activities at our four sites across South and Central London including landmark projects such as the Peckham Digital Accelerator Zone (£1.4m; Institute of Coding and Nominet) and the Animating Minds project (£1.16m, UKRI), building new AI tools for diverse creators of children's animation.

Computer Graphics Society

The Computer Graphics Society (CGS) is an international, professional society whose purpose is to promote advances in computer graphics by exchanging ideas to find innovative solutions. It is an international non-profit association, run by volunteers, that is at the service of its members. CGS invites researchers across the whole world to share their passion, experiences and novel achievements in various fields – like computer graphics and human-computer interaction. CGS was formally founded in Geneva in 1992 by: Prof. Tosiyasu L.Kunii, Prof. Rae Earnshaw, Prof. Nadia Magnenat-Thalmann (actual President of CGS) and Prof. Daniel Thalmann. CGS has founded 4 conferences: Computer Graphics International (CGI), Computer Animation and Social Agents (CASA), Pacific Graphics (PG) and MultiMedia Modeling (MMM). Currently, CGI and CASA are organized each year by the Computer Graphics Society.