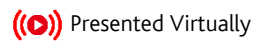
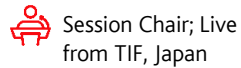

















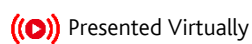
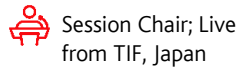


**HALL B5 (1) (5F B BLOCK)**  
**TECHNICAL PAPERS SCHEDULE**


All sessions available on-demand viewing on our virtual platform after the live session unless otherwise stated

Japan Time	TUESDAY, 14 DECEMBER 2021
09:00 - 09:55   	<b>01. Character Simulation</b> <ul style="list-style-type: none"> <li>• PBNS: Physically Based Neural Simulation for Unsupervised Garment Pose Space Deformation</li> <li>• Motion Recommendation for Online Character Control</li> <li>• SuperTrack: Motion Tracking for Physically Simulated Characters using Supervised Learning</li> <li>• Modeling Clothing as a Separate Layer for an Animatable Human Avatar</li> <li>• Transflower: probabilistic autoregressive dance generation with multimodal attention</li> </ul>
10:00 - 10:55   	<b>02. Turbulence and Fluids</b> <ul style="list-style-type: none"> <li>• Predicting High-Resolution Turbulence Details In Space and Time</li> <li>• Fast and Versatile Fluid-Solid Coupling for Turbulent Flow Simulation</li> <li>• Ships, Splashes, and Waves on a Vast Ocean</li> <li>• Spiral-Spectral Fluid Simulation</li> <li>• FrictionalMonolith: A Monolithic Optimization-based Approach for Granular Flow with Contact-Aware Rigid-Body Coupling</li> </ul>
11:00 - 11:55   	<b>03. Physically-based Simulation and Motion Control</b> <ul style="list-style-type: none"> <li>• Human Dynamics from Monocular Video with Dynamic Camera Movements</li> <li>• Foids: Bio-Inspired Fish Simulation for Generating Synthetic Datasets</li> <li>• Weatherscapes: Nowcasting Heat Transfer and Water Continuity</li> <li>• Camera Keyframing with Style and Control</li> <li>• A Material Point Method for Nonlinearly Magnetized Materials</li> </ul>
12:00 - 12:55   	<b>04. Computational Photography</b> <ul style="list-style-type: none"> <li>• Time-Travel Rephotography</li> <li>• Polarimetric Spatio-Temporal Light Transport Probing</li> <li>• Kaleidoscopic Structured Light</li> <li>• Layered Neural Atlases for Consistent Video Editing</li> <li>• Aesthetic-guided Outward Image Cropping</li> </ul>
13:00 - 13:55   	<b>05: Synthesizing Human Images</b> <ul style="list-style-type: none"> <li>• SketchHairSalon: Deep Sketch-based Hair Image Synthesis</li> <li>• Neural Actor: Neural Free-view Synthesis of Human Actors with Pose Control</li> <li>• Barbershop: GAN-based Image Compositing using Segmentation Masks</li> <li>• EyelashNet: A Dataset and A Baseline Method for Eyelash Matting</li> <li>• Pose with Style: Detail-Preserving Pose-Guided Image Synthesis with Conditional StyleGAN</li> </ul>
14:30 - 17:30  	<b>Digging into the Technical Papers (in Japanese)</b> [Birds of a Feather Session]

**HALL B5 (1) (5F B BLOCK)**  
**TECHNICAL PAPERS SCHEDULE**


All sessions available on-demand viewing on our virtual platform after the live session unless otherwise stated

Japan Time	WEDNESDAY, 15 DECEMBER 2021
09:00 - 09:55 ((O)) Q&A Session Chair	<b>06: Facial Animation and Rendering</b> <ul style="list-style-type: none"> <li>• Live Speech Portraits: Real-Time Photorealistic Talking-Head Animation</li> <li>• Rendering with Style: Combining Traditional and Neural Approaches for High-Quality Face Rendering</li> <li>• Semi-supervised video-driven facial animation transfer for production</li> <li>• FreeStyleGAN: Free-view Editable Portrait Rendering with the Camera Manifold</li> </ul>
10:00 - 10:55 ((O)) Q&A Session Chair	<b>07: Scene Synthesis and Navigation</b> <ul style="list-style-type: none"> <li>• Synthesizing Scene-Aware Virtual Reality Teleport Graphs</li> <li>• Continuous Aerial Path Planning for 3D Urban Scene Reconstruction</li> <li>• Aerial Path Planning for Online Real-Time Exploration and Offline High-Quality Reconstruction of Large-Scale Urban Scenes</li> <li>• Joint Computational Design of Workspaces and Workplans</li> <li>• AutoMate: A Dataset and Learning Approach for Automatic Mating of CAD Assemblies</li> </ul>
11:00 - 11:55 ((O)) Q&A Session Chair	<b>08: Natural Phenomena</b> <ul style="list-style-type: none"> <li>• TreePartNet: Neural Decomposition of Point Clouds for 3D Tree Reconstruction</li> <li>• ICTree: Automatic Perceptual Metrics for Tree Models</li> <li>• Learning to Reconstruct Botanical Trees from Single Images</li> <li>• Modeling Flower Pigmentation Patterns</li> <li>• Practical Pigment Mixing for Digital Painting</li> </ul>
12:00 - 12:55 ((O)) Q&A Session Chair	<b>09: Neural Rendering</b> <ul style="list-style-type: none"> <li>• HyperNeRF: A Higher-Dimensional Representation for Topologically Varying Neural Radiance Fields</li> <li>• NeRFactor: Neural Factorization of Shape and Reflectance Under an Unknown Illumination</li> <li>• Dynamic Neural Garments</li> <li>• Neural Frame Interpolation for Rendered Content</li> <li>• Neural Radiosity</li> </ul>
13:00 - 13:55 ((O)) Q&A Session Chair	<b>10: Audio and Visual Displays</b> <ul style="list-style-type: none"> <li>• VR Social Copresence with Light Field Displays</li> <li>• Project Starline: A high-fidelity telepresence system</li> <li>• Reproducing Reality with a High-Dynamic-Range Multi-Focal Stereo Display</li> <li>• Neural 3D Holography: Learning Accurate Wave Propagation Models for 3D Holographic Virtual and Augmented Reality Displays</li> <li>• Binaural Audio Generation via Multi-task Learning</li> </ul>
14:30 - 17:30 Q&A Session Chair	<b>Digging into the Technical Papers (in Japanese)</b> [Birds of a Feather Session]

**HALL B5 (1) (5F B BLOCK)**  
**TECHNICAL PAPERS SCHEDULE**


















 Session Chair; Live  
from TIF, Japan


Presented Virtually



Live Q&amp;A

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Japan Time	THURSDAY, 16 DECEMBER 2021
09:00 - 09:55   	<b>11. NPR and Digital Art</b> <ul style="list-style-type: none"> <li>AdaptiBrush: Adaptive General and Predictable VR Ribbon Brush</li> <li>Multi-Class Inverted Stippling</li> <li>Shading Rig: Dynamic Art-Directable Stylised Shading for 3D Characters</li> <li>Physically-based Feature Line Rendering</li> <li>SketchGNN: Semantic Sketch Segmentation with Graph Neural</li> </ul>
10:00 - 10:55   	<b>12: Geometry Processing and Simulation</b> <ul style="list-style-type: none"> <li>Interactive Cutting and Tearing in Projective Dynamics with Progressive Cholesky Updates</li> <li>Integer Coordinates for Intrinsic Geometry Processing</li> <li>Generalized Fluid Carving With Fast Lattice-Guided Seam Computation</li> <li>"Locking-Proof Tetrahedra"</li> <li>Sum-of-Squares Geometry Processing</li> </ul>
11:00 - 11:55   	<b>13. Meshing</b> <ul style="list-style-type: none"> <li>Generalized Adaptive Refinement for Grid-based Hexahedral Meshing</li> <li>Q-zip: Singularity Editing Primitive for Quad Meshes</li> <li>Convex polyhedral meshing for robust solid modeling</li> <li>Interactive All-Hex Meshing via Cuboid Decomposition</li> </ul>
12:00 - 12:55   	<b>14. Surface Parameterization and Texturing</b> <ul style="list-style-type: none"> <li>TM-NET: Deep Generative Networks for Textured Meshes</li> <li>I ❤️ LA: Compilable Markdown for Linear Algebra</li> <li>Computing Sparse Cones with Bounded Distortion for Conformal Parameterizations</li> <li>Optimizing Global Injectivity for Constrained Parameterization</li> <li>Efficient and Robust Discrete Conformal Equivalence with Boundary</li> </ul>
13:00 - 13:55   	<b>15. Curves and Surfaces</b> <ul style="list-style-type: none"> <li>DeepVecFont: Synthesizing High-quality Vector Fonts via Dual-modality Learning</li> <li>Repulsive Surfaces</li> <li>Keypoint-Driven Line Drawing Vectorization via PolyVector Flow</li> <li>Differentiable Surface Triangulation</li> <li>Repulsive Curves</li> </ul>
14:30 - 17:30  	<b>Digging into the Technical Papers (in Japanese)</b> [Birds of a Feather Session]

**HALL B5 (1) (5F B BLOCK)**  
**TECHNICAL PAPERS SCHEDULE**



















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Live Q&amp;A

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Japan Time	FRIDAY, 16 DECEMBER 2021
09:00 - 09:55   	<b>16. Fabrication</b> <ul style="list-style-type: none"> <li>Spatial-Temporal Motion Control via Composite Cam-follower Mechanisms</li> <li>Generalized Deployable Elastic Geodesic Grids</li> <li>Optimizing Contact-based Assemblies</li> <li>Volume decomposition for two-piece rigid casting</li> <li>Computational Design of Planar Multistable Compliant Structures</li> </ul>
10:00 - 10:55   	<b>17. Reconstruction</b> <ul style="list-style-type: none"> <li>Deep3DLayout: 3D Reconstruction of an Indoor Layout from a Spherical Panoramic Image</li> <li>Intuitive and Efficient Roof Modeling for Reconstruction and Synthesis</li> <li>Large Steps in Inverse Rendering of Geometry</li> <li>Neural Marching Cubes</li> <li>Supervoxel Convolution for Online 3D Semantic Segmentation</li> </ul>
11:00 - 11:55   	<b>18. Sampling and Denoising</b> <ul style="list-style-type: none"> <li>Cascaded Sobol' Sampling</li> <li>Ensemble Denoising for Monte Carlo Renderings</li> <li>Path Graphs: Iterative Path Space Filtering</li> <li>Learning to Cluster for Rendering with Many Lights</li> <li>Monte Carlo Denoising via Auxiliary Feature Guided Self-Attention</li> </ul>
12:00 - 12:55   	<b>19. Real-time Rendering</b> <ul style="list-style-type: none"> <li>Fast Volume Rendering with Spatiotemporal Reservoir Resampling</li> <li>Perceptual Model for Adaptive Local Shading and Refresh Rate</li> <li>ExtraNet: Real-time Extrapolated Rendering for Low-latency Temporal Supersampling</li> <li>Tessellation-Free Displacement Mapping for Ray Tracing</li> <li>Fast and Accurate Spherical Harmonics Products</li> </ul>
13:00 - 13:55   	<b>20. Light Interactions and Differentiable Rendering</b> <ul style="list-style-type: none"> <li>Differentiable Time-Gated Rendering</li> <li>Differentiable Transient Rendering</li> <li>Generative Modelling of BRDF Textures from Flash Images</li> <li>Physical Light-Matter Interaction in Hermite-Gauss Space</li> <li>Beyond Mie Theory: Systematic Computation of Bulk Scattering Parameters based on Microphysical Wave Optics</li> </ul>
14:00 - 14:30 	Introduction to SIGGRAPH Asia Technical Papers 2022
14:30 - 17:30  	<b>Digging into the Technical Papers (in Japanese)</b> [Birds of a Feather Session]

