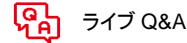
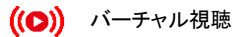
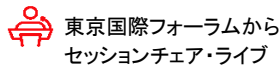



















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TECHNICAL PAPERS 日程



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

ホール B5 (1) (5F B BLOCK)

TECHNICAL PAPERS 日程



東京国際フォーラムから
セッションチェア・ライブ



バーチャル視聴



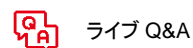
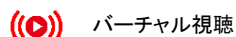
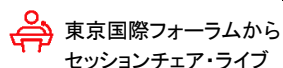
ライブ Q&A

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

ホール B5 (1) (5F B BLOCK)

TECHNICAL PAPERS 日程



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

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TECHNICAL PAPERS 日程













 東京国際フォーラムから
 セッションチェア・ライブ


パーチャル視聴



ライブ Q&A

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

