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| CGL | Meeting Agenda |

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| Date | November 18, 2020 |
| Location | Online |
| Time | 1 pm |
| Chair | Andrew Tinits  Andrew Tinits |

1. Acceptance of the Agenda - additions or deletions
2. Coffee Hour - cancelled

1. Forthcoming

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| --- | --- | --- | --- | --- |
| Date | Nov 25, 2020 | Dec 2, 2020 | Dec 9, 2020 | Dec 16, 2020 |
| Location | Online | Online | Online | Online |
| Chair | Christopher Batty | Jumyung  JC Chang | Ege Ciklabakkal | Xiang Fang |
| Tech. Presentation | Andrew Tinits  Andrew Tinits | Christopher Batty | Jumyung  JC Chang | Ege Ciklabakkal |

1. Technical Presentation



Reza Adhitya Saputra

Title: **Deformation-Driven Element Packing**

Abstract:

A packing is an arrangement of geometric elements within a container region in the plane. Elements are united to communicate the overall container shape, but each is large enough to be appreciated individually. Creating a packing is challenging since an artist should arrange compatible elements so that their boundaries interlock with each other.

This thesis presents three packing methods that create element compatibilities using shape deformation. The first method, FLOWPAK, deforms elements to flow along a vector field interpolated from user-supplied strokes, giving a sense of visual flow to the final composition. The second method, RepulsionPak, utilizes repulsion forces to pack elements, each represented as a mass-spring system, allowing them to deform to achieve a better fit with their neighbours and the container. The last method, AnimationPak, creates animated packings by arranging animated two-dimensional elements inside a static container. We represent animated elements in a three-dimensional spacetime domain, and view the animated packing problem as a three-dimensional packing in that domain. Finally, we propose statistical methods for measuring the evenness of 2D element distributions, which provide quantitative means of evaluating and comparing packing algorithms.

1. Discussion Items
2. Conferences and Special Journal Issues

Eurographics 2021

Vienna, May 3rd–7th, 2021

<https://conferences.eg.org/eg2021/>

GRAPP 2021

Online, Feb 8th–10th, 2021

Paper deadline is Nov 26th, 2020

<http://www.grapp.visigrapp.org/>

Graphics Interface 2021

Online, May 27th–28th, 2021

Paper 1st deadline Dec 18th, 2020 (2nd deadline in April)

<https://graphicsinterface.org/conference/2021/>

SIGGRAPH 2021

Online, summer 2021

Paper deadline is Jan 27th, 2021

<https://s2021.siggraph.org/>

1. Seminar and Events

Friday, 20 November 2020, 1:30PM - Systems and Networking, Online PhD seminar

Eric Dong: -- Astrape: Anonymous Payment Channels with Boring Cryptography

Friday, 20 November 2020, 2:00PM - Computer Graphics, Online PhD defence

Reza Adhitya Saputra: -- Deformation-Driven Element Packing

Friday, 27 November 2020, 1:00PM - Human-Computer Interaction, Online PhD seminar

Jeremy Hartmann: -- View-Dependent Effects for 360° Virtual Reality Video

1. Lab Cleanup - cancelled

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