

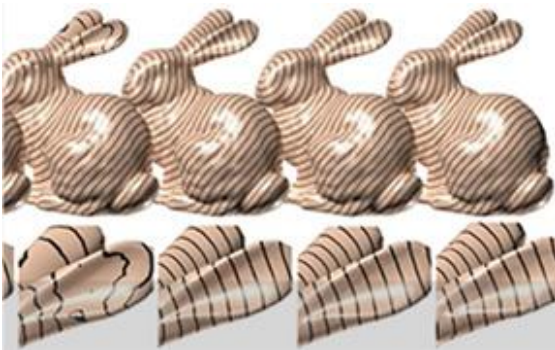
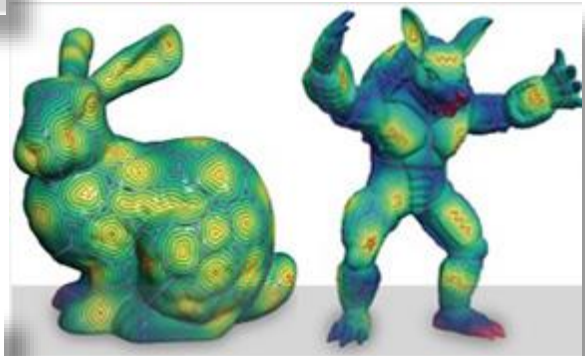


ASIAGRAPHICS

Asian Association for Computer Graphics
and Interactive Technology

Newsletter

Issue 2, November 2021



www.asiagraphics.org

AG Webinar Session 4

Date: Tuesday, November 30, 2021

Time: 11:00am UTC/GMT | 07:00pm (Beijing, Singapore) | 08:00pm (Seoul, Tokyo)

Chair: Jue Wang, Tencent AI Lab, China

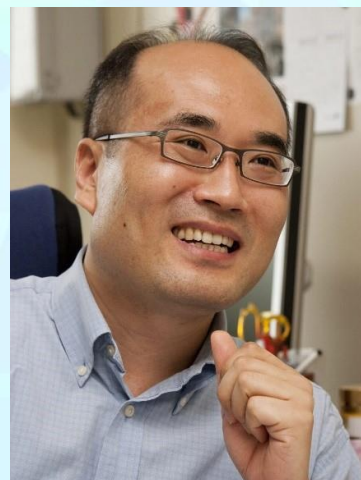
Talk 1

Title: Single Image Defocus Deblurring

Speaker: Prof. Seungyong Lee,
POSTECH, Korea

Abstract:

Defocus blur of an image occurs when the light ray from a point in the scene forms a circle of confusion (COC) on the camera sensor. Defocus deblurring aims to restore an all-in-focus image from a defocused image. In this talk, I will introduce my two recent works on single image defocus deblurring. The first is a novel end-to-end learning-based approach equipped with a novel Iterative Filter Adaptive Network (IFAN) that is specifically designed to handle spatially-varying and large defocus blur. It also contains a training scheme based on defocus disparity estimation and reblurring. The second is a novel deep learning approach for single image defocus deblurring based on inverse kernels. It proposes a kernel-sharing parallel atrous convolutional (KPAC) block specifically designed by incorporating the property of inverse kernels for defocus deblurring. Experimental results demonstrate that these approaches achieve state-of-the-art performance on real-world images.



AG Webinar Session 4

Talk 2

Title: Knowledge-Driven Deep Image/Video Restoration Networks

Speaker: Prof. Jinshan Pan, Nanjing University of Science and Technology, China

Abstract:

The recent years have witnessed significant advances in image/video restoration due to effective deep neural networks. However, most existing approaches mainly rely on large-capacity deep models, and their network designs do not well explore the properties of the image/video degradation process or the domain knowledge of the image/video restoration problems. In this talk, we will first revisit the statistical prior modeling-based image/video restoration methods. Then, we will discuss how to explore the physics models and prior knowledge to constrain deep neural networks for better image/video restoration. Instead of simply increasing the capacity of the deep models, the proposed neural networks constrained by the physics models and prior knowledge are more compact and perform favorably against state-of-the-art methods on several image/video restoration tasks.



Best Paper Award of Pacific Graphics 20+21

The winners of the Best Paper Award of Pacific Graphics 20+21 are the authors of the PG2020 full paper:

**“Adjustable Constrained Soft-Tissue Dynamics”,
Bohan Wang, Mianlun Zheng and Jernej Barbic
from University of Southern California.**

The best paper selection committee of PG20+21 gives the award to them to recognize the contribution of their work on precisely and independently adjusting the amplitude, frequency, sag and damping properties of secondary soft-tissue dynamics of virtual characters and other physically based systems.

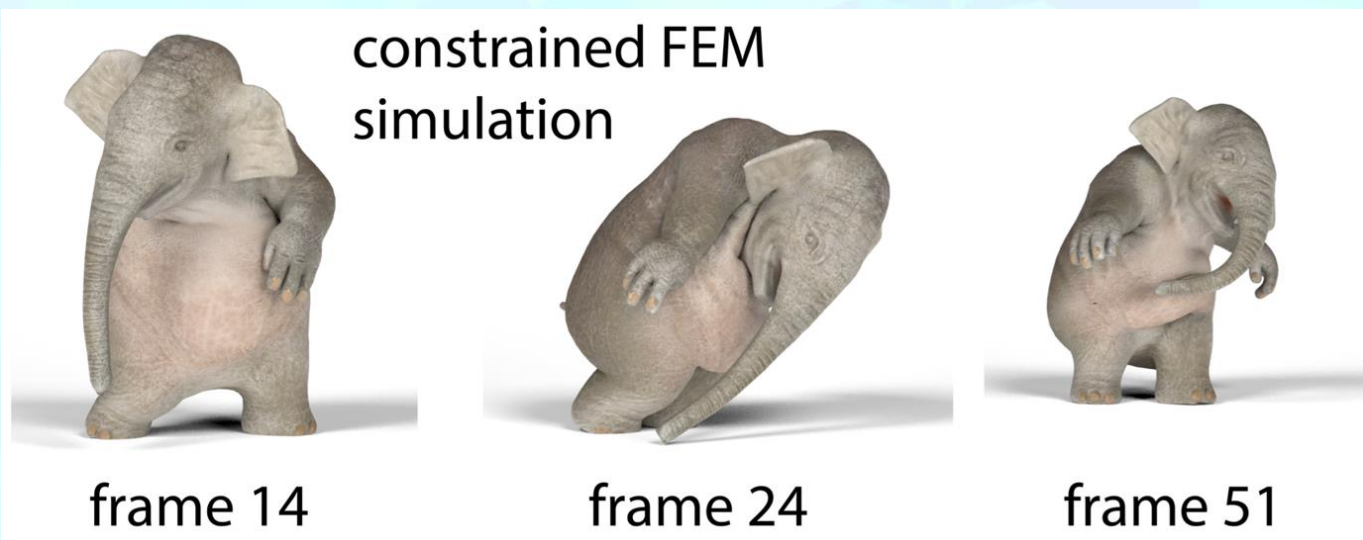


Figure 1: *Their adjusted physics makes it possible to scale down inertial deformable dynamics while not changing the frequency spectrum.*

Call for Papers: Geometric Modeling and Processing Conference (GMP 2022)

We welcome you to participate in the 16th International Conference on Geometric Modeling and Processing GMP 2022, which will be held from May 11 - May 13, 2022.

GMP is an annual international conference series on both mathematical and computational aspects of geometric modeling and simulation.

The GMP conference series provides researchers and practitioners with a forum for exchanging new ideas, discussing new applications, and presenting new solutions. The previous GMP conferences were held in Vancouver (2019), Aachen (2018), Xiamen (2017), and San Antonio (2016), etc., and virtually in 2021 and 2020, with great success.

The GMP conference is sponsored by AsiaGraphics.

The modeling and processing of geometric data is fundamental to many computer applications, including computer graphics, computer vision, CAD/CAM, medical imaging, engineering analysis, robotics, additive manufacturing, and scientific computing. The organizers of GMP 2022 invite submissions of full-length papers on topics including, but not limited, to:

- Mathematical foundations of computer-aided geometric design
- Computational geometry algorithms and analyses
- Multi-resolution and heterogeneous modeling
- 3D printing and computational manufacturing
- Geometric feature modeling and recognition
- Representation of curves and surfaces
- Discrete differential geometry
- Isogeometric analysis
- Shape optimization
- Material modeling

Call for Papers: Geometric Modeling and Processing Conference (GMP 2022)

(cont'd...)

Important Dates:

Dec 10, 2021 (23:59:59 UTC):	Abstract Submission
Dec 17, 2021 (23:59:59 UTC):	Full Paper submission
Feb 04, 2022:	First review cycle notification
Feb 18, 2022 (23:59:59 UTC):	Revised paper submission
Mar 4, 2022:	Second review cycle notification
Mar 11, 2022 (23:59:59 UTC):	Final paper submission
May 11-13, 2022:	Conference date

Paper Submission: The official language of the conference is English and manuscripts must be written in English. The submitted papers should present previously unpublished, original results that are not simultaneously submitted elsewhere. All papers will be rigorously peer-reviewed by members of the international program committee of GMP. The review process will be double-blind.

Publications: Accepted full-length papers will be published in a special issue of Computer-Aided Geometric Design (CAGD, Elsevier).

Conference Co-chairs

- Eliot Fried (Okinawa Institute of Science and Technology, Japan)
- Bernard Mourrain (Inria Sophia Antipolis Méditerranée, France)
- Jorg Peters (University of Florida, USA)

Program Co-chairs

- Xin Li (Louisiana State University, USA)
- Thomas Takacs (Johannes Kepler University Linz, Austria)
- Weiwei Xu (Zhejiang University, China)

Call for Papers: Pacific Graphics Conference (PG 2022)

The 30th annual international conference on computer graphics and applications, Pacific Graphics 2022, will take place at Kyoto International Conference Center, Kyoto, Japan on October 5th-8th, 2022. Pacific Graphics is a flagship conference of the AsiaGraphics Association. <http://pg2022.org>.

Publications: All accepted journal track papers will be published in a special issue of Computer Graphics Forum (CGF), the journal of the Eurographics Association, in print and online in 2022.

Important Dates (Exact date will be announced later.)

Journal Track Paper Submission: June, 2022

Short Paper and Poster Submission: August, 2022

Conference Chairs

- Shigeo Morishima, Waseda University
- Demetri Terzopoulos, UCLA
- Hubert Shum, Durham University

Program Chairs

- Nobuyuki Umetani, University of Tokyo
- Chris Wojtan, IST Austria
- Etienne Vouga, UT Austin

Contact us: info@pg2022.org



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PACIFIC GRAPHICS
OCT.5TH-8TH, 2022
KYOTO, JAPAN



PACIFIC GRAPHICS 2022
<http://pg2022.org>
(OPEN FROM DEC.1ST, 2021)

CONTACT US: info@pg2022.org

THE 30TH ANNUAL INTERNATIONAL CONFERENCE ON COMPUTER GRAPHICS AND APPLICATIONS, PACIFIC GRAPHICS 2022, WILL TAKE PLACE AT KYOTO INTERNATIONAL CONFERENCE CENTER, KYOTO, JAPAN ON OCTOBER 5TH-8TH, 2022.

PACIFIC GRAPHICS IS A FLAGSHIP CONFERENCE OF THE ASIAGRAPHICS ASSOCIATION.

ALL ACCEPTED JOURNAL TRACK PAPERS WILL BE PUBLISHED IN A SPECIAL ISSUE OF COMPUTER GRAPHICS FORUM (CGF), THE JOURNAL OF THE EUROGRAPHICS ASSOCIATION, IN PRINT AND ONLINE IN 2022.

IMPORTANT DATES (EXACT DATE WILL BE ANNOUNCED LATER.)

JOURNAL TRACK PAPER SUBMISSION: JUNE, 2022

SHORT PAPER AND POSTER SUBMISSION: AUGUST, 2022

> **CONFERENCE LEADERSHIP**

>> **CONFERENCE CHAIRS**

SHIGEO MORISHIMA, WASEDA UNIVERSITY
DEMETRI TERZOPOULOS, UCLA
HUBERT SHUM, DURHAM UNIVERSITY

>> **PROGRAM CHAIRS**

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Call for Papers: The Symposium on Solid and Physical Modeling (SPM 2022)

The Symposium on Solid and Physical Modeling (SPM) is an international conference series organised annually with the support of the [Solid Modeling Association](https://solidmodeling.org/) (SMA). The conference aims at all aspects of geometric and physical modeling, and their application in design, analysis and manufacturing, as well as in biomedical, geophysical, digital entertainment, and other areas. The conference serves also as a ceremony for awarding the 2022 Pierre Bézier Prize for contributions to solid, shape, and physical modeling. Due to global pandemic, SPM 2022 will be held as an online event. <https://spm2022.sciencesconf.org/>

Topics of interest include, but are not limited to:

- 3D fabrication/printing/manufacturing technologies
- Anisotropic/heterogeneous/composite materials
- Applied algebraic and differential geometry
- Applied computational geometry and topology
- Conceptual, collaborative, and distributed design
- Computational fabrication
- Curve, surface, and manifold modeling
- Dimensioning and tolerancing
- Feature modeling, recognition, and understanding
- Geometric algorithms
- Geometric and topological representations
- Geometric constraint solving and parametric modeling
- Geometric interpolation and smoothing
- Geometry generation and processing
- Geometry compression and transmission
- Isogeometric analysis
- Meshing and mesh optimization

Call for Papers: The Symposium on Solid and Physical Modeling (SPM 2022)

(cont'd...)

- Multi-resolution modeling
- Numerical analysis of geometric algorithms
- Physically-based modeling and simulation
- Product data exchange, standards, and interoperability
- Reverse engineering/reconstruction of surfaces/solids
- Robustness and validity of geometric computations
- Shape modeling, synthesis and analysis

Paper Submissions: Accepted full-length papers will be published in the journal of [Computer-Aided Design](#) (Elsevier) after a rigorous two-stage double-blind review process. Papers should be formatted according to the style guidelines for Computer-Aided Design and should not exceed 12 pages, including figures and references. We strongly recommend using the [LaTeX template](#) to format your paper, but we also accept papers formatted by MS Word according to the style guidelines for Computer-Aided Design (Elsevier). The file must be submitted in PDF format using the EasyChair website <https://easychair.org/conferences/?conf=spm20220>.

Important Dates:

Abstract for full papers: February 4, 2022

Full paper submission: February 10, 2022

First review notification: March 25, 2022

Revised papers due: April 15, 2022

Final notification: April 29, 2022

Camera ready papers: May 16, 2022

Conference: June 27-29, 2022

Call for Papers: TECHNICAL PAPERS of SIGGRAPH 2022

The SIGGRAPH 2022 Technical Papers program is the premier international venue for disseminating and discussing new scholarly work in computer graphics technology and interactive techniques. The scientific excellence of the ideas is the predominant acceptance criterion. We are looking for high-quality research papers.

Paper Submissions: At SIGGRAPH 2022, there are **two** ways to submit your paper to the Technical Papers program.

✓ JOURNAL PAPERS:

- Continuation of the same Technical Papers program from previous years
- Ideas are extensively tried and tested
- No maximum (or minimum) page length
- Published in ACM Transactions on Graphics (TOG)

✓ CONFERENCE PAPERS:

- New program starting in 2022
- Exciting new ideas in a shorter format – papers that might be less polished but still have an impact
- Strict, 7-page limit, plus additional pages for references
- Published in SIGGRAPH Conference Proceedings

The review process, deadline and committee are the same for both Journal and Conference Papers. Also, starting in 2022, for the first time we will be giving out Best Technical Papers Awards.

SUBMISSIONS DEADLINE:

- **Submissions Form & Conflicts:** Wed, 26 January 2022, 22:00 +00:00 GMT
- **Paper Deadline:** Thu, 27 January 2022, 22:00 +00:00 GMT
- **Upload Deadline:** Fri, 28 January 2022, 22:00 +00:00 GMT



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