

COMPUTER GRAPHICS I
(COMP.5460)

JOURNAL FINDER

ASSIGNMENT

PRANITHA KEERTHI

01719717

 SOURCE: *ACM Transactions on Graphics (TOG)*

1. MOVIE EDITING AND COGNITIVE EVENT SEGMENTATION IN VIRTUAL REALITY VIDEO

BibTeX

```
@article{Serrano:2017:MEC:3072959.3073668,  
  author = {Serrano, Ana and Sitzmann, Vincent and Ruiz-Borau, Jaime and Wetzstein, Gordon and Gutierrez, Diego and Masia, Belen},  
  title = {Movie Editing and Cognitive Event Segmentation in Virtual Reality Video},  
  journal = {ACM Trans. Graph.},  
  issue_date = {July 2017},  
  volume = {36},  
  number = {4},  
  month = jul,  
  year = {2017},  
  issn = {0730-0301},  
  pages = {47:1--47:12},  
  articleno = {47},  
  numpages = {12},  
  url = {http://doi.acm.org/10.1145/3072959.3073668},  
  doi = {10.1145/3072959.3073668},  
  acmid = {3073668},  
  publisher = {ACM},  
  address = {New York, NY, USA},  
  keywords = {cinematography, immersive environments},  
}
```

ACM Ref

Ana Serrano, Vincent Sitzmann, Jaime Ruiz-Borau, Gordon Wetzstein, Diego Gutierrez, and Belen Masia. 2017. Movie editing and cognitive event segmentation in virtual reality video. *ACM Trans. Graph.* 36, 4, Article 47 (July 2017), 12 pages. DOI: <https://doi.org/10.1145/3072959.3073668>

2. INTERACTIVE DIGITAL PHOTOMONTAGE

BibTeX

```
@article{Agarwala:2004:IDP:1015706.1015718,  
  author = {Agarwala, Aseem and Dontcheva, Mira and Agrawala, Maneesh and Drucker, Steven and Colburn, Alex and Curless, Brian and Salesin, David and Cohen, Michael},  
  title = {Interactive Digital Photomontage},  
  journal = {ACM Trans. Graph.},  
  issue_date = {August 2004},  
  volume = {23},  
  number = {3},  
  month = aug,  
  year = {2004},  
  issn = {0730-0301},  
  pages = {294--302},
```

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numpages = {9},
url = {http://doi.acm.org.umasslowell.idm.oclc.org/10.1145/1015706.1015718},
doi = {10.1145/1015706.1015718},
acmid = {1015718},
publisher = {ACM},
address = {New York, NY, USA},
keywords = {Interactive image editing, image compositing, user-guided optimization},
}

```

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@inproceedings{Agarwala:2004:IDP:1186562.1015718,
author = {Agarwala, Aseem and Dontcheva, Mira and Agrawala, Maneesh and Drucker, Steven and Colburn, Alex and Curless, Brian and Salesin, David and Cohen, Michael},
title = {Interactive Digital Photomontage},
booktitle = {ACM SIGGRAPH 2004 Papers},
series = {SIGGRAPH '04},
year = {2004},
location = {Los Angeles, California},
pages = {294--302},
numpages = {9},
url = {http://doi.acm.org.umasslowell.idm.oclc.org/10.1145/1186562.1015718},
doi = {10.1145/1186562.1015718},
acmid = {1015718},
publisher = {ACM},
address = {New York, NY, USA},
keywords = {Interactive image editing, image compositing, user-guided optimization},
}

```

ACM Ref

Aseem Agarwala, Mira Dontcheva, Maneesh Agrawala, Steven Drucker, Alex Colburn, Brian Curless, David Salesin, and Michael Cohen. 2004. Interactive digital photomontage. ACM Trans. Graph. 23, 3 (August 2004), 294-302. DOI: <https://doi-org.umasslowell.idm.oclc.org/10.1145/1015706.1015718>

Aseem Agarwala, Mira Dontcheva, Maneesh Agrawala, Steven Drucker, Alex Colburn, Brian Curless, David Salesin, and Michael Cohen. 2004. Interactive digital photomontage. In ACM SIGGRAPH 2004 Papers (SIGGRAPH '04), Joe Marks (Ed.). ACM, New York, NY, USA, 294-302. DOI: <https://doi-org.umasslowell.idm.oclc.org/10.1145/1186562.1015718>

 **SOURCE: IEEE *Transactions on Visualization and Computer Graphics* (TVCG)**

1. GENERATING MULTI-DESTINATION MAPS

BibTeX

```

@article{7530932,
author = {Junsong Zhang, Jiepeng Fan, Zhenshan Lao},
title = {Generating Multi-Destination Maps},
journal = {IEEE Transactions on Visualization and Computer Graphics},
volume = {23},

```

```

number = {8},
month = aug,
year = {2017},
issn = {1077-2626},
pages = {1964-1976},
numpages = {12},
doi = {10.1109/TVCG.2016.2597827},
publisher = {IEEE Compur},
keywords = {cartography; data visualisation; graph theory; mobile computing; optimisation; global
layout phase; graph drawing; layout optimization; mobile devices; multidestination maps; online map
service; visualization; Layout; Navigation; Optimiztion methods; Roads; Trajectory},
}

```

Citation

J. Zhang, J. Fan and Z. Luo, "Generating Multi-Destination Maps," in *IEEE Transactions on Visualization and Computer Graphics*, vol. 23, no. 8, pp. 1964-1976, Aug. 1 2017.
 URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7530932&isnumber=7961285>

2. INFERENCE-BASED SURFACE RECONSTRUCTION OF CLUTTERED ENVIRONMENTS

BibTeX

```

@ARTICLE{6035704,
author={K. Biggers and J. Keyser},
journal={IEEE Transactions on Visualization and Computer Graphics},
title={Inference-Based Surface Reconstruction of Cluttered Environments},
year={2012},
volume={18},
number={8},
pages={1255-1267},
keywords={hidden feature removal; solid modelling; surface reconstruction; cluttered environments;
construction process; Inference based surface reconstruction; iterative identification; occluded
surfaces; predictive modeling; solid model representations; surface reconstruction; user provided
models; Computational modeling; Object recognition; Shape; Solid modeling; Solids; Surface
reconstruction; Surface treatment; Three-dimensional/stereo scene analysis; object recognition;
segmentation; surface fitting.},
doi={10.1109/TVCG.2011.263},
ISSN={1077-2626},
month={Aug},}

```

Citation

K. Biggers and J. Keyser, "Inference-Based Surface Reconstruction of Cluttered Environments," in *IEEE Transactions on Visualization and Computer Graphics*, vol. 18, no. 8, pp. 1255-1267, Aug. 2012.
 URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6035704&isnumber=6214949>

 SOURCE: IEEE *Computer Graphics and Applications* (CG&A)

1. PERFORMANCE-BASED ANIMATION USING CONSTRAINTS FOR VIRTUAL OBJECT MANIPULATION

BibTeX

```
@ARTICLE{8013431,
author={J. Hwang and K. Kim and I. H. Suh and T. Kwon},
journal={IEEE Computer Graphics and Applications},
title={Performance-Based Animation Using Constraints for Virtual Object Manipulation},
year={2017},
volume={37},
number={4},
pages={95-102},
keywords={avatars; character recognition; computer animation; gesture recognition; motion control; object detection; real-time systems; body gestures; captured reference motions; character animation; detailed finger movements; human avatars; human demonstrations; motion controller; natural motions; optical motion capture systems; performance based animation; virtual object manipulation; Animation; Avatars; Data gloves; Fingers; Motion control; Real-time systems; Tracking; computer graphics; computer graphics applications; motion controller; object manipulation; performance-based animation; virtual reality},
doi={10.1109/MCG.2017.3271455},
ISSN={0272-1716},}
```

Citation

J. Hwang, K. Kim, I. H. Suh and T. Kwon, "Performance-Based Animation Using Constraints for Virtual Object Manipulation," in *IEEE Computer Graphics and Applications*, vol. 37, no. 4, pp. 95-102, 2017.

URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8013431&isnumber=8013430>

2. IMAGE-BASED RENDERING OF RANGE DATA WITH ESTIMATED DEPTH UNCERTAINTY

BibTeX

```
@ARTICLE{1310209,
author={C. Hofsetz and K. Ng and G. Chen and P. McGuinness and N. Max and Y. Liu},
journal={IEEE Computer Graphics and Applications},
title={Image-based rendering of range data with estimated depth uncertainty},
year={2004},
volume={24},
number={4},
pages={34-41},
keywords={computational geometry; computer vision; data visualisation; feature extraction; image reconstruction; rendering (computer graphics); uncertainty handling; computer vision; data
```

acquisition; data registration; depth extraction; ellipsoidal Gaussian splats; estimated depth uncertainty; geometry reconstruction technique; image-based rendering; range data; uncertainty estimation; Cameras; Filling; Image reconstruction; Information geometry; Kernel; Laboratories; Layout; Pixel; Rendering (computer graphics); Uncertainty; Algorithms; Artificial Intelligence; Cluster Analysis; Computer Graphics; Computer Simulation; Image Enhancement; Image Interpretation, Computer-Assisted; Imaging, Three-Dimensional; Information Storage and Retrieval; Numerical Analysis, Computer-Assisted; Pattern Recognition, Automated; Photogrammetry; Reproducibility of Results; Sensitivity and Specificity; Signal Processing, Computer-Assisted; Subtraction Technique; User-Computer Interface},
doi={10.1109/MCG.2004.8},
ISSN={0272-1716},
month={July},}

Citation

C. Hofsetz, K. Ng, G. Chen, P. McGuinness, N. Max and Y. Liu, "Image-based rendering of range data with estimated depth uncertainty," in *IEEE Computer Graphics and Applications*, vol. 24, no. 4, pp. 34-41, July-Aug. 2004.

URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1310209&isnumber=29083>

 **SOURCE: ACM SIGGRAPH *Computer Graphics***

1. INTERACTIVE HIGH-QUALITY GREEN-SCREEN KEYING VIA COLOR UNMIXING

BibTeX

```
@article{Aksoy:2016:IHG:2965650.2907940,
  author = {Aksoy, Ya\u{g}iz and Aydin, Tun\u{c}{c} Ozan and Pollefeys, Marc and Smoli\u{c}},
  title = {Interactive High-Quality Green-Screen Keying via Color Unmixing},
  journal = {ACM Trans. Graph.},
  issue_date = {September 2016},
  volume = {35},
  number = {5},
  month = aug,
  year = {2016},
  issn = {0730-0301},
  pages = {152:1--152:12},
  articleno = {152},
  numpages = {12},
  url = {http://doi.acm.org.umasslowell.idm.oclc.org/10.1145/2907940},
  doi = {10.1145/2907940},
  acmid = {2907940},
  publisher = {ACM},
  address = {New York, NY, USA},
  keywords = {Green-screen keying, image matting, interactive segmentation, soft segmentation},
}
```

ACM Ref

Yağiz Aksoy, Tunç Ozan Aydin, Marc Pollefeys, and Aljoša Smolić. 2016. Interactive High-Quality Green-Screen Keying via Color Unmixing. *ACM Trans. Graph.* 35, 5, Article 152 (August 2016), 12 pages. DOI: <https://doi-org.umasslowell.idm.oclc.org/10.1145/2907940>

2. OBSCURING LENGTH CHANGES DURING ANIMATED MOTION**BibTeX**

```
@inproceedings{Harrison:2004:OLC:1186562.1015761,
  author = {Harrison, Jason and Rensink, Ronald A. and van de Panne, Michiel},
  title = {Obscuring Length Changes During Animated Motion},
  booktitle = {ACM SIGGRAPH 2004 Papers},
  series = {SIGGRAPH '04},
  year = {2004},
  location = {Los Angeles, California},
  pages = {569--573},
  numpages = {5},
  url = {http://doi.acm.org.umasslowell.idm.oclc.org/10.1145/1186562.1015761},
  doi = {10.1145/1186562.1015761},
  acmid = {1015761},
  publisher = {ACM},
  address = {New York, NY, USA},
  keywords = {Weber fraction, change detection, computer animation, length perception, visual attention},
}
```

ACM Ref

Jason Harrison, Ronald A. Rensink, and Michiel van de Panne. 2004. Obscuring length changes during animated motion. In *ACM SIGGRAPH 2004 Papers (SIGGRAPH '04)*, Joe Marks (Ed.). ACM, New York, NY, USA, 569-573. DOI: <https://doi-org.umasslowell.idm.oclc.org/10.1145/1186562.1015761>

 **SOURCE: *Computers and Graphics (C&G)***

**1. PATTERNS FROM PHOTOGRAPH: REVERSE-ENGINEERING
DEVELOPABLE PRODUCTS**

BibTeX

```
@article{FONDEVILLA20174,
  title = "Patterns from photograph: Reverse-engineering developable products",
  journal = "Computers & Graphics",
  volume = "66",
```

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pages = "4 - 13",  
year = "2017",  
month = "August"  
note = "Shape Modeling International 2017",  
issn = "0097-8493",  
doi = "https://doi.org/10.1016/j.cag.2017.05.017",  
url = "http://www.sciencedirect.com/science/article/pii/S0097849317300663",  
author = "Amélie Fondevilla and Adrien Bousseau and Damien Rohmer and Stefanie Hahmann and Marie-Paule Cani",  
keywords = "Single-view 3D reconstruction, Image-based modeling, Sketch-based modeling, Developable surfaces"  
}
```

Citation

Amélie Fondevilla, Adrien Bousseau, Damien Rohmer, Stefanie Hahmann, Marie-Paule Cani, Patterns from photograph: Reverse-engineering developable products, Computers & Graphics, <https://doi.org/10.1016/j.cag.2017.05.017>.

(<http://www.sciencedirect.com/science/article/pii/S0097849317300663>)

2. NATURAL PHENOMENA STIMULATION

BibTeX

```
@article{BARANOSKI2006483,  
title = "Natural Phenomena Simulation",  
journal = "Computers & Graphics",  
volume = "30",  
number = "4",  
pages = "483 - 484",  
year = "2006",  
month = "August"  
issn = "0097-8493",  
doi = "https://doi.org/10.1016/j.cag.2006.03.005",  
url = "http://www.sciencedirect.com/science/article/pii/S0097849306000811",  
author = "Gladimir V.G. Baranoski and Marcio Lobo Netto"  
}
```

Citation

Gladimir V.G. Baranoski, Marcio Lobo Netto, Natural Phenomena Simulation, Computers & Graphics, <https://doi.org/10.1016/j.cag.2006.03.005>.

(<http://www.sciencedirect.com/science/article/pii/S0097849306000811>)

 SOURCE: Computer Graphics Forum (CGF)

1. THE SHAPE VARIATIONAL AUTOENCODER: A DEEP GENERATIVE MODEL OF PART-SEGMENTED 3D OBJECTS

BibTeX

@article{12462389020170801,

Abstract = {We introduce a generative model of part-segmented 3D objects: the shape variational auto-encoder (ShapeVAE). The ShapeVAE describes a joint distribution over the existence of object parts, the locations of a dense set of surface points, and over surface normals associated with these points. Our model makes use of a deep encoder-decoder architecture that leverages the part-decomposability of 3D objects to embed high-dimensional shape representations and sample novel instances. Given an input collection of part-segmented objects with dense point correspondences the ShapeVAE is capable of synthesizing novel, realistic shapes, and by performing conditional inference enables imputation of missing parts or surface normals. In addition, by generating both points and surface normals, our model allows for the use of powerful surface-reconstruction methods for mesh synthesis. We provide a quantitative evaluation of the ShapeVAE on shape-completion and test-set log-likelihood tasks and demonstra},

Author = {Nash, C. and Williams, C. K. I.},

ISSN = {01677055},

Journal = {Computer Graphics Forum},

Keywords = {SHAPE analysis (Computational geometry), THREE-dimensional imaging, DECODERS & decoding, MATHEMATICAL models, NUMERICAL grid generation (Numerical analysis), Categories and Subject Descriptors (according to ACM CCS), I.3.5 [Computer Graphics]: Computational Geometry and Object Modelling-},

Number = {5},

Pages = {1 - 12},

Title = {The shape variational autoencoder: A deep generative model of part-segmented 3D objects.},

Volume = {36},

URL =

{<https://umasslowell.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=124623890&site=ehost-live>},

Year = {2017},

}

2. FUNCTIONAL WEBS FOR FREEFORM ARCHITECTURE

BibTeX

@article{6364443220110801,

Abstract = {Rationalization and construction-aware design dominate the issue of realizability of freeform architecture. The former means the decomposition of an intended shape into parts which are sufficiently simple and efficient to manufacture; the latter refers to a design procedure which already incorporates rationalization. Recent contributions to this topic have been concerned mostly with small-scale parts, for instance with planar faces of meshes. The present paper deals with another important aspect, namely long-range parts and supporting structures. It turns out that from the pure geometry viewpoint this means studying families of curves which cover surfaces in certain well-defined ways. Depending on the application one has in mind, different combinatorial arrangements of curves are required. We here restrict ourselves to so-called hexagonal webs which correspond to a triangular or tri-hex decomposition of a surface. The individual curve may have certain special properties, like being pl},

Author = {Deng, B. and Pottmann, H. and Wallner, J.},
 ISSN = {01677055},
 Journal = {Computer Graphics Forum},
 Keywords = {ARCHITECTURE, COMPUTER graphics, ENGINEERING graphics,
 ARCHITECTURAL design, GEOMETRY},
 Number = {5},
 Pages = {1369 - 1378},
 Title = {Functional webs for freeform architecture.},
 Volume = {30},
 URL =
 {<https://umasslowell.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=63644432&site=ehost-live>},
 Year = {2011},
 }

 SOURCE: *Visual Computer*

1. SCALABLE TEXTURE COMPRESSION USING THE WAVELET TRANSFORM

BibTeX

@Article{Andries2017,
 author="Andries, Bob
 and Lemeire, Jan
 and Munteanu, Adrian",
 title="Scalable texture compression using the wavelet transform",
 journal="The Visual Computer",
 year="2017",
 month="Sep",
 day="01",
 volume="33",
 number="9",
 pages="1121--1139",
 abstract="2D texture data represent one of the main data sources in 3D graphics, requiring large amounts of memory and bandwidth. Texture compression is of critical importance in this context to cope with these bottlenecks. To improve upon the available supported texture compression systems, several transform-based solutions have been proposed. These solutions, however, are not suitable for real-time texture sampling or provide insufficient image quality at medium to low rates. We propose a new scalable texture codec based on the 2D wavelet transform suitable for real-time rendering and filtering, using a new subband coding technique. The codec offers superior compression performance compared to the state-of-the-art, resolution scalability coupled with a wide variety of quality versus rate trade-offs as well as complexity scalability supported by the use of different wavelet filters.",
 issn="1432-2315",
 doi="10.1007/s00371-016-1269-1",
 url="https://doi.org/10.1007/s00371-016-1269-1"
 }

2. INTERACTIVE WIRELESS VIRTUAL COLONOSCOPY

BibTeX

```
@Article{Jeong2007,  
author="Jeong, Seok-Jae  
and Kaufman, Arie E.",  
title="Interactive wireless virtual colonoscopy",  
journal="The Visual Computer",  
year="2007",  
month="Aug",  
day="01",  
volume="23",  
number="8",  
pages="545--557",  
abstract="We present an interactive virtual colon navigation system on a PDA that is a client-server  
system over a wireless network. For improving the quality of the rendering results on the PDA, the  
overall rendering speed, and the user interactivity, we propose three novel methods and adapt a GPU-  
based direct volume rendering technique. Using these proposed methods, our system can support  
approximately a two times faster navigation speed and 17 percent better PSNR than previous remote  
visualization methods with a 512{\texttimes}512{\texttimes}361 volumetric colon CT data using a  
PDA device over 802.11b wireless network. ",  
issn="1432-2315",  
doi="10.1007/s00371-007-0117-8",  
url="https://doi.org/10.1007/s00371-007-0117-8"  
}
```