Special Issue on Physically Based Animation

Final submissions due: 1 July 2016 ■ Publication date: March/April 2017

Computer animation has been an active research field in computer graphics for many years. The techniques developed in this field are an important part of many modern computer tools in a range of application areas, such as VR, computer games, special effects in movies and commercials, and virtual prototyping and training simulators, just to name a few. More recently, physically based simulation has become a popular topic in computer animation. Many different simulation methods are being investigated to generate realistic animations of rigid bodies, elastic rods, cloth, deformable bodies, fluids, and so forth.

This special issue of IEEE Computer Graphics and Applications will provide an opportunity for researchers and practitioners in the field of physically based animation to publish their latest work. For this special issue, we solicit papers describing innovative computer animation techniques. Topics of interest include, but are not limited to, the following:

- Animation systems
- Applications (robotics, medicine, entertainment)
- Character animation
- Collision detection and contact handling
- Crowd simulation
- Facial animation
- Interfaces for creating and editing animations
- Mathematical foundations of animation
- Natural phenomena
- Particle systems
- Perception in animation
- Real-time and interactive methods
- Virtual and augmented reality

Guest Editors

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Submission Guidelines

Peer-reviewed special-issue and feature articles submitted to IEEE CG&A should not exceed 8,000 words, including the main text, abstract, keywords, bibliography, biographies, and table text, where a page is approximately 800 words. Articles should include no more than 10 figures or images, where each 1/4 page figure, image, and table counts for approximately 200 words. Note that all tables, images, and illustrations must be appropriately scaled and legible; larger elements should be accounted for accordingly with respect to word count. Please limit the number of references to the most relevant and ensure to delineate your work from relevant past articles in CG&A. Furthermore, avoid an excessive number of references to published work that might only be marginally relevant. Consider instead providing such pertinent background material in sidebars for nonexpert readers. Visit the CG&A style and length guidelines at www.computer.org/web/peer-review/magazines. We also strongly encourage you to submit multimedia (videos, podcasts, and so on) to enhance your article. Visit the CG&A supplemental guidelines at www.computer.org/web/peer-review/magazines.

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