

## Parag Kumar Chaudhuri

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### ACADEMIC BACKGROUND

#### **Indian Institute of Technology Bombay, Mumbai, India.**

- Assistant Professor, 2009 – present.

#### **MIRALab, University of Geneva, Geneva, Switzerland.**

- Postdoctoral Research Assistant, 2006 – 2008.

#### **Indian Institute of Technology Delhi, New Delhi, India.**

- Ph.D. in Computer Science and Engineering, 2001 – 2006.

*Dissertation Title:* “A Framework for View-Dependent Character Animation”

*Advisers:* Prof. Prem Kalra and Prof. Subhashis Banerjee, IIT Delhi

CGPA: 9.05 / 10.0

#### **Delhi College of Engineering, Delhi, India.**

- B.E. in Civil Engineering, 1996 – 2000.

Aggregate Percentage - 87.61%

### PUBLICATIONS

#### **Books**

- *View-Dependent Character Animation*  
Parag Chaudhuri, Prem Kalra and Subhashis Banerjee  
Springer 2007, ISBN: 978-1-84628-591-2.

#### **Journals**

- *Fast EMG-data Driven Skin Deformation*  
Mustafa Kasap, Parag Chaudhuri and Nadia Magnenat-Thalmann  
Computer Animation and Social Agents (CASA) 2009, Amsterdam, the Netherlands.  
To be published in Computer Animation and Virtual Worlds, 2009.
- *Making Them Remember - Emotional Virtual Characters with Memory*  
Zerrin Kasap, Maher Ben Moussa, Parag Chaudhuri and Nadia Magenat-Thalmann  
IEEE Computer Graphics and Applications, Special Issue on Serious Games, 29(2):20-29, 2009.
- *Self Adaptive Animation based on User Perspective*  
Parag Chaudhuri, George Papagiannakis and Nadia Magnenat-Thalmann  
The Visual Computer, 24(7-9), 2008, (Special issue of selected papers from CGI 2008).
- *Reusing View-Dependent Animation*  
Parag Chaudhuri, Prem Kalra and Subhashis Banerjee  
The Visual Computer, 23(9–11), pp. 707-719, September, 2007, (Special issue of Selected papers from CGI 2007).
- *A System for View-Dependent Animation*  
Parag Chaudhuri, Prem Kalra and Subhashis Banerjee  
Computer Graphics Forum, 23(3), pp. 411-420,  
Proceedings of EUROGRAPHICS 2004, September 2004, Grenoble, France.

- *A Measure for Mesh Compression of Time-Variant Geometry*  
Prasun Mathur, Chhavi Upadhyay, Parag Chaudhuri and Prem Kalra  
Computer Animation and Social Agents (CASA) 2004, Geneva, Switzerland.  
Published in Computer Animation and Virtual Worlds, (Special Issue: The Very Best Papers from CASA 2004), 15(3-4), pp. 289-296, June 2004.

### Refereed Conferences

- *Camera-based Gaze Control for Virtual Characters*  
Parag Chaudhuri, George Papagiannakis and Nadia Magnenat-Thalmann  
Proceedings of the Fourth International Conference on Enactive Interfaces, (ENACTIVE) 2007, pp. 53-60, November 2007, Grenoble, France.
- *Stylistic Reuse of View-Dependent Animations*  
Parag Chaudhuri, Ashwani Jindal, Prem Kalra and Subhashis Banerjee  
Proceedings of the Indian Conference on Vision, Graphics and Image Processing (ICVGIP) 2004, pp. 95-100, December 2004, Kolkata, India.
- *An Efficient Central Path Algorithm for Virtual Navigation*  
Parag Chaudhuri, Rohit Khandekar, Deepak Sethi and Prem Kalra  
Proceedings of Computer Graphics International (CGI) 2004, pp. 188-195, June 2004, Crete, Greece.

### Book Articles and Tutorials

- *Applications of Interactive Virtual Humans in Mobile Augmented Reality*  
Nadia Magnenat-Thalmann, George Papagiannakis and Parag Chaudhuri  
Encyclopaedia of Multimedia, Borko Furht (ed.), Second Edition, Springer, ISBN: 978-0-387-74724-8, 2008.
- *Animation of Interactive Virtual Humans*  
Tutorial on Real-time Virtual Humans, with Nadia Magnenat-Thalmann and Daniel Thalmann, CGI 2008, Istanbul, Turkey.

### HONOURS AND AWARDS

- Outstanding PhD Award 2006, IBM India Research Lab
- Best Presentation Award, Annual Inter Research Institute Student Seminar in Computer Science (IRISS) 2005, Indian Institute of Technology Kanpur, India.
- Gold Medal, Department Topper, Department of Civil Engineering, University of Delhi.
- Gold Medal, B.E. (1996 – 2000), Delhi College of Engineering.
- Gold Medal, Department Topper, Department of Civil Engineering, Delhi College of Engineering.
- All India Rank - 98, Percentile Score - 98.18, Graduate Aptitude Test in Engineering (GATE) 2000.
- All India Rank - 42, Percentile Score - 94.80, Combined Entrance Examination for Design (CEED) 2000.
- Scholarship in Painting, Cultural Talent Search Scholarship Scheme, Centre for Cultural Resources and Training, Government of India.

### PROFESSIONAL EXPERIENCE

**MIRALab, University of Geneva**  
Geneva, Switzerland

*Postdoctoral Research Assistant*  
*November 2006 - December 2008*

Research on real time character animation for Virtual and Augmented Reality. Deputy manager for European projects on behalf of Prof. Magnenat-Thalmann. Co-author of several new European and Swiss project proposals, contributing to scientific ideas and financial planning.

**Dept. of Computer Science & Engg., IIT Delhi**

New Delhi, India

Project Associate for a project on developing an image based modelling and rendering system.

*Project Associate*

*January 2006 - October 2006*

**Dept. of Computer Science & Engg., IIT Delhi**

New Delhi, India

Teaching assistant for the following courses - Introduction to Computers and Programming, Operating Systems, Digital Image Analysis and Processing, Computer Graphics, Advanced Computer Graphics. Designed and evaluated course assignments.

*Teaching Assistant*

*January 2001 - December 2005*

**Risk Management Software India Pvt. Ltd.**

Noida, U.P., India

Development and verification of a Hurricane Wind Model for the Florida coastal area, in the USA, including mathematical modelling of tropical cyclonic windstorms and structural risk assessment.

*Engineer*

*July 2000 - December 2000*

PROFESSIONAL ACTIVITIES

- *Editorial Assistant of The Visual Computer*  
In 2007-2008. Assisted in managing paper submissions, assigning reviewers, preliminary review of papers, decision-making about the papers.
- *Member of International Programme Committee and Reviewer*  
Programme Committee member for CGI 2008, Session Chair for CGI 2007.  
Primary reviewer: The Visual Computer, Journal of Computer Animation and Virtual Worlds, CGI 2008, Enactive 2007, ICVGIP 2006.  
Selected secondary and tertiary reviewer responsibilities: IEEE Computer Graphics and Applications, International Journal of Image and Graphics, IEEE Transactions on Haptics, IEEE Transactions on Information Technology in Biomedicine, SIGGRAPH 2008, Eurographics 2008, SMI 2008, IEEE VR 2008, SCA 2008 & 2007, CASA 2008, ICCV 2007, ACCV 2007, 3DPVT 2008, MMM 2009 & 2007.  
Independent reviewer: Vienna Science and Technology Fund
- *Contribution to International Research Projects and Proposals*  
ENACTIVE (Enactive Interfaces Network of Excellence): Deputy project manager for MIRALab, scientific contributor. Project Page: <http://www.enactivenetwork.org>.  
CATCH (Swiss Virtual Campus): Scientific Contributor for developing lecture notes and slides on body animation.  
EU FP7 and FNRS Project proposals : Helped with submission of multiple proposals to Call 1,2 and 3 of EU Seventh Framework programme for Research (FP7) and for the Swiss National Science Foundation.
- *Organization of ICVGIP 2006*  
Setup of conference website, responsible for conference submission system and paper database, assisted in complete paper review process.

OTHER SELECTED PROJECTS

- *RADical - A Radiosity Renderer*  
Implementation of a radiosity engine in OpenGL based on the progressive radiosity algorithm. Referred in the Wikipedia entry on Radiosity: <http://en.wikipedia.org/wiki/Radiosity>  
Project Page: <http://www.cse.iitd.ac.in/~parag/projects/radical/index.shtml>

- *PCTrace - A Distributed Ray Tracer*  
Implementation of a distributed raytracer with soft shadows, translucency, fuzzy reflections, alpha mapping, bump mapping, texture mapping, constructive solid geometry & stereo images.  
Project Page: <http://www.cse.iitd.ac.in/~parag/projects/pctrace/index.shtml>
- *Volume Visualization on the GPU*  
Implementation of a GLSL shader to visualize the Visual Human Dataset.  
Project Page: <http://www.cse.iitd.ac.in/~parag/projects/volvis/index.shtml>
- *Digital Image Watermarking*  
Implementation of Secure Spread Spectrum Watermarking of Images complete with robustness tests.  
Project Page: <http://www.cse.iitd.ac.in/~parag/projects/DIP/DIP.shtml>