

SIDDHARTHA CHAUDHURI

CURRICULUM VITAE

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RESEARCH INTERESTS

Computational design tools, high-level shape understanding, shape recognition & reconstruction, largescale rendering.

EDUCATION

2011	Ph.D.	Computer Science	Stanford University
		<i>Dissertation: 3D Modeling with Data-Driven Suggestions; Supervisor: Vladlen Koltun</i>	
2009	M.S.	Computer Science	Stanford University
2005	B.Tech.	Computer Science & Engineering	IIT Kanpur (GPA 9.9/10)

EMPLOYMENT AND RESEARCH POSITIONS

2014-present	Lecturer	Cornell University
2012-2014	Postdoctoral Research Associate	Princeton University (<i>supervisor: Thomas Funkhouser</i>)
2011-2012	Postdoctoral Research Fellow	Stanford University (<i>supervisors: Thomas Funkhouser, Vladlen Koltun</i>)
2012	Architect & Chief Developer	FUSE Character Modeler, Mixamo Inc. (acquired by Adobe) http://www.mixamo.com/fuse
2009-2011	Research Assistant	Stanford University (<i>supervisor: Vladlen Koltun</i>)
2005-2008	Stanford Graduate Fellow	Stanford University (<i>supervisor: Vladlen Koltun</i>)
2004	Research Intern	École Polytechnique Fédérale de Lausanne (<i>supervisor: Edoardo Charbon</i>)
2001-2005	Undergraduate Researcher	IIT Kanpur (<i>supervisors: Shashank K. Mehta, R. K. Ghosh, Amitabha Mukerjee</i>)

TEACHING EXPERIENCE

Spring 2015	CS2800: Discrete Structures	Instructor	Cornell
Spring 2015	CS2110: Object-Oriented Prog. & Data Structures	Instructor	Cornell
Fall 2014	CS2800: Discrete Structures	Instructor	Cornell
Spring 2014	COS426: Computer Graphics	Preceptor	Princeton
Spring 2013	COS436: Human-Computer Interface Technology	Guest Lecturer	Princeton
Spring 2013	COS126: General Computer Science	Preceptor	Princeton
Winter 2012	CS248: Interactive Computer Graphics	Guest Lecturer	Stanford
Winter 2011	CS248: Interactive Computer Graphics	Guest Lecturer	Stanford
Spring 2011	CS208: Canon of Computer Science	Course Assistant	Stanford
Summer 2010	CS148: Introduction to Computer Graphics	Instructor	Stanford
Spring 2010	CS208: Canon of Computer Science	Course Assistant	Stanford
Winter 2007	CS103X: Discrete Structures (accelerated)	Course Assistant	Stanford

Quality of teaching consistently rated as excellent in anonymous student evaluations.

HONOURS AND AWARDS (SELECTED LIST)

- 2015 Selected as one of five Outstanding Faculty Members (across all departments) by the Cornell Class Council of 2018
- 2005-2008 PACCAR Inc. Stanford Graduate Fellowship
- 2005 Director's Gold Medal for Best All-Round Achievement and Leadership, IIT Kanpur
- 2005 Dr. V. Rajaraman Scholarship for Best Final Year Student in Computer Science (based on academic performance in 2001-04), IIT Kanpur
- 2002-2004 Academic Excellence Award, IIT Kanpur
- 2002 Lucent Global Science Scholar
- 2000 The Telegraph Award for Best All-Round Student in the state of West Bengal, India
- 1999-2005 National Talent Search Scholarship, Govt. of India

PROFESSIONAL ACTIVITIES

- Program Committee Member: Eurographics 2014 (Short Papers), 2015 (State-of-the-Art Reports, Short Papers), SIGGRAPH Asia 2014 Workshop on Creative Shape Modeling and Design.
- Reviewer: SIGGRAPH, SIGGRAPH Asia, UIST, Eurographics, Computer-Aided Design, TVCG, Computer Graphics Forum, Shape Modeling International, Graphical Models, ACM Transactions on Information Systems.
- Instructor: *Data-Driven Visual Computing*, SIGGRAPH Asia 2014 (with L. J. Guibas, A. Efros, S.-M. Hu, A. Shamir, K. Xu and J.-Y. Zhu).
- Organizer: Tristate Workshop on Imaging and Graphics/SIGGRAPH Papers Committee Workshop, 2014, <http://shape.cs.princeton.edu/twig14>.
- Technical Advisor: Mixamo Inc.
- Author: *The Raytracing Repository*, a reference website on raytracing. Cited in university course materials, technical papers and popular science articles. Frequently recommended as a primary resource for beginners.
- Author and maintainer: The THEA graphics and geometry processing library, used in Mixamo Inc.'s FUSE character modeling tool and various research projects.
- Organizer: Stanford Graphics Lunch Talks, Princeton Shape Reconstruction Reading Group.

AFFILIATIONS

- 2009-present Association for Computing Machinery (ACM)
- 2007-2012 Stanford Virtual Worlds Group

PUBLICATIONS

1. M. E. Yumer, **S. Chaudhuri**, J. K. Hodgins, and L. B. Kara (2015). Semantic Shape Editing Using Deformation Handles. *ACM Transactions on Graphics (Proc. SIGGRAPH)* 34(4).

2. T. Liu, **S. Chaudhuri**, V. G. Kim, Q.-X. Huang, N. J. Mitra, and T. Funkhouser (2014). Creating Consistent Scene Graphs Using a Probabilistic Grammar. *ACM Transactions on Graphics (Proc. SIGGRAPH Asia)* **33**(6).
3. V. G. Kim, **S. Chaudhuri**, L. Guibas, and T. Funkhouser (2014). Shape2Pose: Human-Centric Shape Analysis. *ACM Transactions on Graphics (Proc. SIGGRAPH)* **33**(4).
4. **S. Chaudhuri**, E. Kalogerakis, S. Giguere, and T. Funkhouser (2013). AttribIt: Content Creation with Semantic Attributes. In: *Proc. UIST*.
5. V. G. Kim, W. Li, N. J. Mitra, **S. Chaudhuri**, S. DiVerdi, and T. Funkhouser (2013). Learning Part-Based Templates from Large Collections of 3D Shapes. *ACM Transactions on Graphics (Proc. SIGGRAPH)* **32**(4).
6. E. Kalogerakis, **S. Chaudhuri**, D. Koller, and V. Koltun (2012). A Probabilistic Model for Component-Based Shape Synthesis. *ACM Transactions on Graphics (Proc. SIGGRAPH)* **31**(4).
7. **S. Chaudhuri**, E. Kalogerakis, L. Guibas, and V. Koltun (2011). Probabilistic Reasoning for Assembly-Based 3D Modeling. *ACM Transactions on Graphics (Proc. SIGGRAPH)* **30**(4).
8. **S. Chaudhuri** and V. Koltun (2010). Data-Driven Suggestions for Creativity Support in 3D Modeling. *ACM Transactions on Graphics (Proc. SIGGRAPH Asia)* **29**(6).
9. **S. Chaudhuri** and V. Koltun (2009). Smoothed Analysis of Probabilistic Roadmaps. *Computational Geometry: Theory and Applications* **42**(8), 731–747.
10. **S. Chaudhuri**, D. Horn, P. Hanrahan, and V. Koltun (2009). *Image-Based Exploration of Massive Online Environments*. Tech. rep. CSTR 2009-02. Stanford University.
11. **S. Chaudhuri**, R. K. Singh, and E. Charbon (2005). Feature-Based Techniques for Real-Time Morphable Model Facial Image Analysis. In: *Image and Video Communications and Processing Conference, IS&T/SPIE's 17th Annual Symposium on Electronic Imaging Science and Technology*. San Jose.
12. **S. Chaudhuri**, R. K. Ghosh, and S. K. Das (2005). Towards Optimal Sensor Placement with Hypercube Cutting Planes. In: *IEEE Wireless Communications and Networking Conference (invited paper)*. New Orleans.
13. M. Chhabra, A. Nahar, N. Agrawal, T. Jain, A. Mukerjee, A. Mathad, and **S. Chaudhuri** (2004). Novel Approaches to Vision and Motion Control for Robot Soccer. In: *National Conference on Advanced Manufacturing and Robotics*. CMERI, Durgapur.