



Maneesh Agrawala

Forest Baskett Professor in the School of Engineering and Professor, by courtesy, of
Electrical Engineering
Computer Science

CONTACT INFORMATION

- **Administrative Contact**

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Bio

BIO

Maneesh Agrawala is the Forest Baskett Professor of Computer Science and Director of the Brown Institute for Media Innovation at Stanford University. He was previously a Professor of Electrical Engineering and Computer Science at the University of California, Berkeley (2005 - 2015). He works on computer graphics, human computer interaction and visualization. His focus is on investigating how cognitive design principles can be used to improve the effectiveness of audio/visual media. The goals of this work are to discover the design principles and then instantiate them in both interactive and automated design tools. He received an Okawa Foundation Research Grant in 2006, an Alfred P. Sloan Foundation Fellowship and an NSF CAREER Award in 2007, a SIGGRAPH Significant New Researcher Award in 2008, and a MacArthur Foundation Fellowship in 2009.

ACADEMIC APPOINTMENTS

- Professor, Computer Science
- Professor (By courtesy), Electrical Engineering

ADMINISTRATIVE APPOINTMENTS

- Director, David and Helen Gurley Brown Institute for Media Innovation, (2015- present)
- Professor, Computer Science, (2015- present)

HONORS AND AWARDS

- Research Grant, Okawa Foundation (2006)
- Research Fellow, Alfred P. Sloan Foundation (2007)
- CAREER Award, National Science Foundation (2007)
- Significant New Researcher Award, ACM SIGGRAPH (2008)
- Fellow, MacArthur Foundation (2009)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Associate Editor, ACM Transactions on Graphics (2013 - present)
- Advisor, Human Computation Journal (2013 - present)

- Science and Creativity Advisor, Studio 360 with Kurt Andersen (2012 - present)

PROGRAM AFFILIATIONS

- Symbolic Systems Program

PROFESSIONAL EDUCATION

- Ph.D., Stanford University , Computer Science (2002)
- B.S., Stanford University , Mathematics (1994)

LINKS

- Website at Stanford: <http://graphics.stanford.edu/~maneesh>
- Old UC Berkeley website: <http://vis.berkeley.edu/~maneesh>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Computer Graphics, Human Computer Interaction and Visualization.

Teaching

COURSES

2018-19

- Data Visualization: CS 448B (Aut)
- Exploring Computational Journalism: COMM 281, CS 206 (Aut)
- Topics in Computer Graphics: Computational Video Manipulation: CS 448V (Spr)

2017-18

- Data Visualization: CS 448B (Aut)
- Exploring Computational Journalism: COMM 281, CS 206 (Aut)
- Human-Computer Interaction Design Studio: CS 247 (Spr)

2016-17

- Data Visualization: CS 448B (Aut)
- Exploring Computational Journalism: COMM 281, CS 206 (Win)
- Human-Computer Interaction Design Studio: CS 247 (Spr)
- Social Impacts of Media Innovation: CS 82 (Spr)

2015-16

- Data Visualization: CS 448B (Spr)
- Human-Computer Interaction Design Studio: CS 247 (Aut)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Abe Davis, Ohad Fried, Jennifer Jacobs, Mira Shalah

Publications

PUBLICATIONS

- **Visual Rhythm and Beat** *ACM TRANSACTIONS ON GRAPHICS*
Davis, A., Agrawala, M.
2018; 37 (4)
- **Saliency in VR: How do people explore virtual environments?**
Sitzmann, V., Serrano, A., Pavel, A., Agrawala, M., Gutierrez, D., Masia, B., Wetzstein, G.
IEEE COMPUTER SOC.2018: 1633–42
- **Converting Basic D3 Charts into Reusable Style Templates** *IEEE TRANSACTIONS ON VISUALIZATION AND COMPUTER GRAPHICS*
Harper, J., Agrawala, M.
2018; 24 (3): 1274–86
- **Mosaic: Designing Online Creative Communities for Sharing Works-in-Progress** *DESIGN THINKING RESEARCH: MAKING DISTINCTIONS: COLLABORATION VERSUS COOPERATION*
Kim, J., Agrawala, M., Bernstein, M. S., Plattner, H., Meinel, C., Leifer, L.
2018: 105–29
- **Interactive Design and Stability Analysis of Decorative Joinery for Furniture** *ACM TRANSACTIONS ON GRAPHICS*
Yao, J., Kaufman, D. M., Gingold, Y., Agrawala, M.
2017; 36 (2)
- **Interactive Furniture Layout Using Interior Design Guidelines** *ACM TRANSACTIONS ON GRAPHICS*
Merrell, P., Schkufza, E., Li, Z., Agrawala, M., Koltun, V.
2011; 30 (4)
- **Perceptual Guidelines for Creating Rectangular Treemaps** *IEEE TRANSACTIONS ON VISUALIZATION AND COMPUTER GRAPHICS*
Kong, N., Heer, J., Agrawala, M.
2010; 16 (6): 990-998
- **Sizing the Horizon: The Effects of Chart Size and Layering on the Graphical Perception of Time Series Visualizations** *27th Annual CHI Conference on Human Factors in Computing Systems*
Heer, J., Kong, N., Agrawala, M.
ASSOC COMPUTING MACHINERY.2009: 1303–1312
- **Visualizing dynamic architectural environments** *COMMUNICATIONS OF THE ACM*
Houston, M., Niederauer, C., Agrawala, M., Humphreys, G.
2004; 47 (8): 54-59
- **Non-invasive interactive visualization of dynamic architectural environments** *Annual Symposium of the ACM SIGGRAPH*
Niederauer, C., Houston, M., Agrawala, M., Humphreys, G.
ASSOC COMPUTING MACHINERY.2003: 700–700
- **Designing effective step-by-step assembly instructions** *Annual Symposium of the ACM SIGGRAPH*
Agrawala, M., Phan, D., Heiser, J., Haynaker, J., Klingner, J., Hanrahan, P., Tversky, B.
ASSOC COMPUTING MACHINERY.2003: 828–37
- **Cognitive design principles for visualizations: Revealing and instantiating** *25th Annual Conference of the Cognitive-Science-Society*
Heiser, J., Tversky, B., Agrawala, M., Hanrahan, P.
LAWRENCE ERLBAUM ASSOC PUBL.2003: 545–550
- **Sketches for design and design of sketches** *Conference on Human Behaviour in Design*
Tversky, B., Suwa, M., Agrawala, M., Heiser, J., Stolte, C., Hanrahan, P., Phan, D., Klingner, J., Daniel, M. P., Lee, P., Haymaker, J.
SPRINGER-VERLAG BERLIN.2003: 79–86
- **Conveying shape and features with image-based relighting** *IEEE Visualization 2003 Conference*
Akers, D., Losasso, F., Klingner, J., Agrawala, M., Rick, J., Hanrahan, P.

IEEE.2003: 349–354

- **Rendering effective route maps: Improving usability through generalization** *SIGGRAPH 2001*
Agrawala, M., Stolte, C.
ASSOC COMPUTING MACHINERY.2001: 241–250
- **Efficient image-based methods for rendering soft shadows** *Computer Graphics Annual Conference*
Agrawala, M., Ramamoorthi, R., Heirich, A., Moll, L.
ASSOC COMPUTING MACHINERY.2000: 375–384
- **Artistic multiprojection rendering** *11th Eurographics Workshop on Rendering*
Agrawala, M., Zorin, D., Munzner, T.
SPRINGER-VERLAG WIEN.2000: 125-?
- **Model-based compression for synthetic animations** *International Conference on Image Processing (ICIP-96)*
Chaddha, N., Agrawala, M., Beers, A.
IEEE.1996: 417–420