



## Experience

Sept 2011 - [Present]  
Gaithersburg, MD

**NIST - National Institute of Standards & Technology**  
**Digital Media Specialist Consultant**

Consulting on design, visualizations, animation, and interactive projects for scientific research.

Jan 2015 - July 2015  
New York, NY

**Critical Mass**  
**Associate Director of User Experience Architecture**

Led UX design initiatives, UX guided workshops, primary and secondary research, strategy for roadmaps, analysis, prototyping, usability testing for client Citi Bank's native mobile applications and global mobile platforms.

Dec 2010 - Jan 2015  
New York, NY

**The Wall Street Journal**  
**Sr. UX Architect - Specialist**

UX Design for research & development (R&D) arm of WSJ and Dow Jones creating schematics, wireframes, and UX flows of conceptual web platforms and mobile interfaces. Included domains: The Wall Street Journal, Market Watch, DJX, and Barron's. Collaborated with international teams of designers, dev teams, and editors on new UX concepts, designs and products.

Mar 2013 - Sept 2014  
New York, NY

**Columbia University**  
**Digital Media Specialist Consultant**

Consulted on design, visualizations, animation, and interactive projects for scientific research within the departments of Integrated Science, Engineering and Electron Transport in Molecular Nanostructures.

Jan 2007 - Jun 2010  
Boulder, CO

**JILA - University of Colorado**  
**Professional Research Assistant & Digital Media Specialist**

Worked closely with scientists and other JILA staff to create visual media projects that communicate scientific research. Published over **29** figures and visuals in **53** different journals, magazines, and press releases, as well as **7** covers for scientific research journals. Project leader for JILA website redesign and overhaul to a Content Management System (CMS).

## Education

Aug 2001 - May 2006  
Gainesville, FL

**B.S. in Digital Arts & Science**  
**University of Florida - Computer Science Department**

## Skills

UX Design for software and applications (mobile+desktop), Design Leadership, Cross-teams Collaboration, Project Planning, Rapid Prototyping, Wireframing/Schematics, Illustration, 3D Production, Animation, Video Production. Communicate well with technologists, stake holders, developers, researchers, scientists, and designers.

**Proficient with:** Adobe CC Software, Omnigraffle, Sketch, Keynote, Tumult Hype (prototyping), Invision App, JIRA, Basecamp, Autodesk Maya, Mac & Windows OS environments

# Designs in Publications

- 2012 **Advanced Materials [Cover Image]** "Template Patterning: Flexible Control of Block Copoly...", 12 Jun 2012, Vol. 24, Iss. 23, Pg 3082, Online [URL](#).  
**Signs of the Time; Sott.net**, "SRC and Stanford Enable Chip Pattern Etching for 14nm", 29 May 2012, Online [URL](#).  
**Tom's Hardware**, "SRC and Stanford Enable Chip Pattern Etching for 14nm", 29 May 2012, Online [URL](#).  
**Solid State Technology**, "Directed Self-Assembly Lithography Research Yields Contact Holes On Semiconductor Wafer", 28 May 2012, Online [URL](#).  
**EE Times**, "SRC Clears Path to 14-nm with Directed Self Assembly", 24 May 2012, Online [URL](#).  
**R. Colin Johnson Blog: Next Gen Log**, "SRC Clears Path to 14nm With Directed Self-Assembly", 24 May 2012, Online [URL](#).  
**Nano Letters [Cover Image]**, "Nanoelectronic programmable synapses for Brain-inspired computing", 09 May 2012, Vol. 12, Iss. 5, Online [URL](#).
- 2011 **NIST Tech Beat Release [animation]** "NIST Sensor Improvement Brings Analysis Method into Mainstream", 20 Dec. 2011, Online [URL](#).  
**Science [article Fig 1(C)]**, "Suppression of Collisional Shifts in a Strongly Interacting Lattice Clock", 25 Feb. 2011, Vol 331, 6020, Online [URL](#).  
**NIST Press Release**, "Quantum Quirk: JILA Scientists Pack Atoms Together to Prevent Collisions in Atomic Clock...", 3 Feb. 2011, Online [URL](#).
- 2010 **World News Network [video and animation]**, "Strontium Atomic Clock", 27 August 2010, Online [URL](#).  
**Nanowerk [article Fig 1]**, "An optical 'tripod' enhances the use of atomic-force microscopy", 24 August 2010, Online [URL](#).  
**SPIE Newsroom [article Fig 1]**, "An optical 'tripod' enhances the use of atomic-force microscopy", 23 August 2010, Online [URL](#).  
**ScienceNet.cn [article photo]**, "Gone to the Dark Side, It Has", August 2010, Online [URL](#).  
**NIST Physics Laboratory Annual Report (2008-2009) [Fig(s) 1-8 pg 45-50]**, 13 July 2010, Online [URL](#).  
**Annual Review of Analytical Chemistry [Fig 13 Image]**, "Cavity-Enhanced Direct Frequency Comb Spec...", 15 June 2010, Vol 3, Online [URL](#).  
**Life From An RNA World: The Ancestor Within** by Michael Yarus [Book: Fig 10.1. and Fig 15.1.], Harvard Uni. Press, 15 April 2010, ISBN 9780674050754, Online [URL](#) [URL\(2\)](#).  
**The Journal of Physical Chemistry A [Cover and Fig 1 Image]**, "Vibrational Autodetachment-Intramolecular Vibrational Relaxation Translated into Electronic Motion", 1 April 2010, Vol 114, Iss 12, pp4017-4470, [URL](#).  
**APS (Physics) [Image Gallery]**, "Direct Frequency Comb Spectroscopy", March 2010, Online [URL](#).  
**Nature Photonics [Box 1 Fig]**, "High-harmonic generation: Ultrafast lasers yield...", March 2010, Vol 4, No 3, pp149-151, Online [URL](#).  
**Physics Today [Cover Image]**, "Universal insights from few-body land", March 2010, Vol 63, Iss 3, pp8-80, Online [URL](#).
- 2009 **Nature Nanotechnology [article Fig 1]**, "Measurement: Facing Heisenberg at the nanoscale", Dec 2009, Vol 4, No 12, pp781-883, Online [URL](#).  
**Angewandte Chemie Intl Edn [Cover Image]**, "The Lowest Singlet and Triplet States of...", 26 Oct 2009, Vol 48, issue 45, 8381, Online [URL](#).  
**PNAS [article Fig 1]**, "Phase matched upconversion of coherent ultrafast laser light ...", 30 June 2009, Vol 106, No. 26, pp10516-10521 Online [URL](#).  
**The Astrophysical Journal [article Fig(s) 11-12]**, "Subsurface Circulations Within Active ...", 20 Jun. 2009, Vol 698:1749-1760, Online [URL](#).  
**Laser Focus World [animation]**, "PHOTONIC FRONTIERS: OPTICAL CLOCKS: Optical clocks set...", May 2009, Vol 45, issue 5, Online, [URL](#).  
**Nanotechnology Now**, "Squeezing Noise Below Quantum Limits", 29 Mar. 2009, Online [URL](#).  
**Science [Editors' Choice]**, "APPLIED PHYSICS: Fidget-Free Microscopy", 27 Mar. 2009, Vol 323, 5922, Online [URL](#).  
**Shanghi Institute of Ceramics Chinese Academy of Science (SICCAS)**, "Making a Point: Picoscale Stability ...", 27 Mar. 2009, Online [URL](#).  
**Thomas Net**, "Making a Point: Picoscale Stability in a Room-Temperature AFM", 27 Mar. 2009, Online [URL](#).  
**Reserach.gov**, "Squeezing Noise Below Quantum Limits", 26 Mar. 2009, Online [URL](#).  
**NSF [Discovery]**, "Squeezing Noise Below Quantum Limits", 26 Mar. 2009, Online [URL](#) [URL\(2\)](#).  
**Bio Optics World**, "100x stability-boost technique transferable to commercial AFMs", 25 Mar. 2009, Online [URL](#).  
**R & D Magazine**, "Room-temperature AFM gets picoscale stability", 25 Mar. 2009, Online [URL](#).  
**Materials Research Society (MRS)**, "Picoscale stability in a room-temperature AFM", 25 Mar. 2009, Online [URL](#).  
**News Wise**, "Making a Point: Picoscale Stability in a Room-Temperature AFM", 25 Mar. 2009, Online [URL](#).  
**PhysOrg**, "Making a Point: Picoscale Stability in a Room-Temperature AFM", 25 Mar. 2009, Online [URL](#).  
**Nanotechnology Now**, "Making a Point: Picoscale Stability in a Room-Temperature AFM", 25 Mar. 2009, Online [URL](#).  
**Nanowerk**, "Making a Point: Picoscale Stability in a Room-Temperature AFM", 24 Mar. 2009, Online [URL](#).  
**In Sciences**, "Making a Point: Picoscale Stability in a Room-Temperature AFM", 24 Mar. 2009, Online [URL](#).  
**NIST Tech Beat Release**, "Making a Point: Picoscale Stability in a Room-Temperature AFM", 24 Mar. 2009, Online [URL](#).  
**Laser & Photonics Reviews [article Fig 3]**, "Optical traps for single molecule biophysics: a primer", Feb. 2009, Vol 3, Iss. 1-2, Pg 207, [URL](#).  
**Chemical Physics Letters [Cover image]**, "Tomography of a superionically cooled molecular ...", 13 Jan. 2009, Vol 468, Iss 1-3, Pgs 1-106, [URL](#).  
**Scientific Weekly**, "Ultracold bipolar Molecules - Another step towards quantum computing", 02 Jan. 2009, Online [URL](#).
- 2008 **Science News [Cover image]**, "Into the Cold; Slowing down molecules to unlock their secrets", 20 Dec. 2008, Vol 174, No. 13, Online [URL](#).  
**Science & Technology Review [Cover image]**, "Time-Resolved Dynamics in N<sub>2</sub>O<sub>4</sub> Probed ...", 28 Nov. 2008, Vol 22, issue 268, Online [URL](#).  
**Steacie Institute for Molecular Sciences (SIMS)**, "Twanging Molecular Slinky with Ultrafast Laser Gives ...", 23 Nov. 2008, Online [URL](#).  
**Science [Cover image and article Fig 1(A-B)]**, "Time-Resolved Dynamics in N<sub>2</sub>O<sub>4</sub> Probed Using ...", 21 Nov. 2008, Vol 322, 5905, Online [URL](#).  
**Science [article Fig 1(A-C)]**, "Observing the Creation of Electronic Feshbach Resonances in ...", 14 Nov. 2008, Vol 322, 5904, Online [URL](#) [URL\(2\)](#).  
**Popular Mechanics**, "Ultrafast lasers give researchers a snapshot of electrons in action", 06 Nov. 2008, Online [URL](#).  
**Information Center for Basic Science**, "Ultrafast lasers give researchers a snapshot of electrons in action", 02 Nov. 2008, Online [URL](#).  
**PhysOrg**, "Ultrafast lasers give researchers a snapshot of electrons in action", 30 Oct. 2008, Online [URL](#).  
**NSF [Discovery]**, "First Ultracold Polar Molecule Gas Ready for ...", Published by National Science Foundation, 29 Oct. 2008, Online [URL](#) [URL\(2\)](#).  
**Research.gov**, "First Ultracold Polar Molecule Gas Ready for Research", 29 Oct. 2008, Online [URL](#).  
**Air Force Office of Scientific Research**, "Missile defense, engine crack detection could benefit from laser ...", 22 Oct. 2008, Online [URL](#) [URL\(2\)](#).  
**Air Force Print News Today**, "University of Colorado professors ...", Air Force Office of Scientific Research, 20 Oct. 2008, Online [URL](#) [URL\(2\)](#).  
**Aerotech News and Review**, "University of Colorado professors conduct new laser research", 24 Oct. 2008, Online [URL](#) [URL\(2\)](#).  
**Science Daily**, "First Dense Gas Of Ultracold 'Polar' Molecules Created", 19 Sept. 2008, Online [URL](#).  
**First Science News**, "JILA scientists create first dense gas of ultracold 'polar' molecules", 18 Sept. 2008, Online [URL](#).  
**PhysOrg**, "Scientists create first dense gas of ultracold 'polar' molecules", 18 Sept. 2008, Published online, [URL](#) [URL\(2\)](#).  
**EurekaAlert News**, "JILA scientists create first dense gas of ultracold 'polar' molecules", 18 Sept. 2008, Online [URL](#) [URL\(2\)](#).  
**e! Science News**, "JILA scientists create first dense gas of ultracold 'polar' molecules", 18 Sept. 2008, Online [URL](#).  
**Joint Quantum Institute**, "Scientists Create First Dense Gas of Ultracold 'Polar' Molecules", 18 Sept. 2008, Online [URL](#).  
**CU News Release**, "CU and NIST Scientists Create First Dense Gas of Ultracold 'Polar' Molecules", 18 Sept. 2008, Online [URL](#).  
**NIST News Release**, "JILA scientists create first dense gas of ultracold 'polar' molecules", 18 Sept. 2008, Online [URL](#).

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- 2008 Science [Fig 1A]**, "Quantum State Engineering and Precision Metrology Using State-Insensitive Light ...", 27 June 2008 Vol. 320, 1734, Online [URL](#)
- The Futurist**, "New Clocks: It's About Time", May-June 2008 Vol. 42, No. 3, Published online by World Future Society, [URL](#) [URL\(2\)](#).
- Optics Express [article Fig 1]**, "Quasi-phase matching and characterization of high-order ...", 24 Apr. 2008, Vol 16, No.9, 6551, Online [URL](#) [URL\(2\)](#).
- Photonics**, "More Exact Than an Ion Clock", 11 Mar. 2008, Online [URL](#).
- Signs of the Time; Sott.net**, "'Quantum Logic Clock' Rivals Mercury Ion As World's Most Accurate Clock", 10 Mar. 2008, Online [URL](#).
- Science Daily**, "'Quantum Logic Clock' Rivals Mercury Ion As World's Most Accurate Clock", 10 Mar. 2008, Published online, Online [URL](#).
- NIST News Release**, "NIST 'Quantum Logic Clock' Rivals Mercury Ion as World's Most Accurate Clock Comparison ...", 6 Mar. 2008, Online [URL](#).
- Science Codex**, "Collaboration helps make JILA strontium atomic clock 'best in class'", 20 Feb. 2008, Online [URL](#).
- Information Center for Basic Science**, "Collaboration helps make JILA strontium atomic clock 'best in class'", 20 Feb. 2008, Online [URL](#).
- CU News Release**, "New Experimental Atomic Clock Surpasses Accuracy Of Current U.S. Standard Time Clock", 14 Feb. 2008, Online [URL](#).
- Science Centric**, "Collaboration helps make JILA strontium atomic clock 'best in class'", 14 Feb. 2008, Online [URL](#).
- Science Express**, "Sr Lattice Clock at  $1 \times 10^{-16}$  Fractional ..." 14 Feb. 2008, 10.1126/science.1153341 (Science Express Reports), Online [URL](#).
- Photonics**, "A More Precise Atomic Clock", 14 Feb. 2008, Online [URL](#).
- NIST News Release**, "Collaboration Helps Make JILA Strontium Atomic Clock 'Best in Class' 'Crystal of Light' Clock ...", 14 Feb. 2008, Online [URL](#).
- Signs of the Time; Sott.net**, "Most Accurate Clock Ever: 'Crystal Of Light' Clock Surpasses Accuracy Of NIST-F1 ...", 18 Feb. 2008, Online [URL](#).
- Science Daily**, "Most Accurate Clock Ever: 'Crystal Of Light' Clock Surpasses Accuracy Of NIST-F1 Fountain Clock" 14 Feb. 2008, Online [URL](#).
- News Wise**, "Collaboration Helps Make JILA Strontium Atomic Clock 'Best in Class'", 14 Feb. 2008, Online [URL](#).
- EurekAlert!**, "Collaboration helps make JILA strontium atomic clock 'best in class'", 14 Feb. 2008, Online [URL](#).
- PhysOrg**, "Collaboration helps make JILA strontium atomic clock 'best in class'", 14 Feb. 2008, Online [URL](#).
- United States of America Department of Commerce**, "NIST Announces New Atomic Clock Promising Improved ...", 14 Feb. 2008, Online [URL](#).
- 2007 OPN; Optics & Photonics News**, "All-Optical Quasi-Phase Matching in Extreme Nonlinear Optics" Dec 2007, Vol 18, No 12, p32, Online [URL](#).
- Symmetry**, "RESULTS! The particles of our readers' imaginations" 7 Sept. 2007, Vol 04, Issue 07, 9, Online [URL](#).
- Science**, "Initial Events in X-ray Excitation", 7 Sept. 2007, Vol 317, 1289, Online [URL](#).
- Science**, "Harnessing Attosecond Science in the Quest for Coherent X-rays", 10 Aug. 2007, Vol 317, 777, Fig 2, Online [URL](#).
- 2005 UF Department of Computer and Information Science and Engineering News**, 25 Jun. 2005, Online [URL](#).