# Audrey St. John

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## Research interests

My general area of interest is theoretical computer science, seeking rigorous foundational and algorithmic results. Currently, I work on problems in computational geometry, particularly in rigidity theory, with applications to problems in robotics, biology and Computer Aided Design.

## Education

Ph.D., Computer Science, May 2008
Dissertation: *Geometric Constraint Systems with Applications in CAD and Biology*
UMass Amherst, Amherst, MA

M.S., Computer Science, May 2004
UMass Amherst, Amherst, MA

B.A., Computer Science, Mathematics, Summa Cum Laude, May 2002
Honors in Computer Science
Wellesley College, Wellesley, MA

## Fellowships, Honors

NSF Graduate Research Fellowship, 2002-2004, 2006-2007
UMass University Fellowship, 2002-2003
Phi Beta Kappa (honors society), inducted May 2002
Sigma Xi (honors society), inducted May 2002

## Grants

MaGE (Megas and Gigas Educate): Growing Computer Science Capacity at Mount Holyoke College
*Source: Google, Inc., awarded to Heather Pon-Barry (PI), Audrey St. John (co-PI), Becky Packard (co-PI)*
*Amount: $449,055, Award period: May 2015 - May 2018*

iDesign Summer Program for Community College Women
*Source: Massachusetts Life Science Center, awarded to Mount Holyoke College*
*Amount: $30,000, Award period: Summer 2015*

CAREER: A Rigidity Theory for Multi-Robot Formations (IIS-1253146)
*Source: National Science Foundation, awarded to Audrey St. John (PI)*
*Amount: $411,531, Award period: October 2013 - September 2018*

SolidWorks Research Grant
*Source: Dessault Systemes, awarded to Audrey St. John (PI)*
*Amount: $10,000, Award period: 2010-2013*

## Appointments

*Associate Professor of Computer Science* — **Mount Holyoke College, South Hadley, MA, 2014 - current**

*Clare Boothe Luce Assistant Professor of Computer Science* — **Mount Holyoke College, South Hadley, MA, 2011 - 2014**

*Visiting Assistant Professor, Department of Computer Science* — **Mount Holyoke College, South Hadley, MA, 2008 - 2011**

*Teaching Instructor, Department of Computer Science* — **Smith College, Northampton, MA, Fall 2005, Fall 2007**

## Publications

*(* indicates undergraduate author)*

Alyxander Burns*, Bernd Schulze, Audrey St. John. *Persistent Multi-Robot Formations with Redundancy.* Accepted to: 13th International Symposium on Distributed Autonomous Robotic Systems (DARS '16), 2016. [acceptance rate: 39.2%, one of 60% of accepted papers chosen for oral presentation]

James Farre*, Helena Kleinschmidt*, Jessica Sidman, Audrey St. John, Stephanie Stark*, Louis Theran, Xilin Yu*. *Algorithms for detecting dependencies and rigid subsystems for CAD.* Computer Aided Geometric Design, 47: 130-149, 2016.

James Farre*, Helena Kleinschmidt*, Jessica Sidman, Audrey St. John, Stephanie Stark*, Louis Theran. *Detecting dependencies in geometric constraint systems.* Proc. of 10th International Workshop on Automated Deduction in Geometry (ADG 2014), Coimbra, Portugal, 2014.

Natasha Mohanty, Audrey Lee-St.John, R. Manmatha, Toni Rath. *Chapter 10 - Shape-Based Image Classification and Retrieval.* In: C.R. Rao and Venu Govindaraju, Editor(s), Handbook of Statistics, Elsevier, Volume 31, pages 249-267, 2013.

Christopher Clement*, Audrey Lee-St.John and Jessica Sidman. *Hyperbanana Graphs.* Proc. of 25th Canadian Conference on Computational Geometry, Waterloo, ON, August 2013.

Rittika Shamsuddin*, Milka Doktorova*, Sheila Jaswal, Audrey Lee-St.John and Kathryn McMenimen. *Computational Prediction of Hinge Axes in Proteins.* BMC Bioinformatics, 15(8), 2014. Abstract presented at IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS) 2013.

Audrey Lee-St.John and Jessica Sidman. *Combinatorics and the Rigidity of CAD Systems.* Computer-Aided Design 45(2):473-482, 2013. *(Best Paper Award, Symposium on Solid & Physical Modeling, Dijon, France, October 2012.)* http://arxiv.org/abs/1210.0451+.

Audrey Lee-St.John. *Kinematic Joint Recognition in CAD Constraint Systems.* In: Proc. of the 24th Canadian Conference on Computational Geometry, Charlottetown, PEI, 2012.

Kirk Haller, Audrey Lee-St.John, Meera Sitharam, Ileana Streinu and Neil White. *Body-and-cad geometric constraint systems.* Computational Geometry, 45(8):385-405, 2012.

Carlile Lavor, Jon Lee, Audrey Lee-St.John, Leo Liberti, Antonio Mucherino and Maxim Sviridenko. *Discretization orders for distance geometry problems.* Optimization Letters, 6:783-796, 2012.

John Altidor, Jack Wileden, Jeffrey McPherson*, Ian Grosse, Sundar Krishnamurty, Felicia Cordeiro*, and Audrey Lee-St. John. *A Programming Language Approach To Parametric CAD Data Exchange.* Proc. of ASME 2011 International Design Engineering Technical Conferences, 2011.

Audrey Lee-St.John and Ileana Streinu. *Angular rigidity in 3D: combinatorial characterizations and algorithms.* In: Proc. of the 21st Canadian Conference on Computational Geometry, Vancouver, BC, 2009.

Kirk Haller, Audrey Lee-St.John, Meera Sitharam, Ileana Streinu and Neil White. *Body-and-cad geometric constraint systems.* In: 24th Annual ACM Symposium on Applied Computing, Technical Track on Geometric Constraints and Reasoning GCR'09, Honolulu, HI, 2009.

Audrey Lee and Ileana Streinu. *Pebble Game Algorithms and Sparse Graphs.* Discrete Mathematics, 308(8):1425-1437, 2008. http://arxiv.org/abs/math.CO/0702129. Abstract presented at EuroComb '05.

Audrey Lee, Ileana Streinu and Louis Theran. *Graded Sparse Graphs and Matroids.* In Journal of Universal Computer Science: Special issue for Combinatorics and Related Areas (C. S. Calude, G. Stefanescu, and M. Zimand, eds.) 13(10):1671-1679, 2007. http://arxiv.org/abs/0711.2838.

Audrey Lee, Ileana Streinu and Louis Theran. *The Slider-Pinning Problem.* In Proc. 19th Canadian Conference on Computational Geometry, Carleton University, Ottawa, Canada, Aug. 19-22, 2007.

Ruth Haas, Audrey Lee, Ileana Streinu and Louis Theran. *Characterizing Sparse Graphs by Map Decompositions.* Journal of Combinatorial Mathematics and Combinatorial Computing (JCMCC), vol. 62, 2007.

Audrey Lee and Ileana Streinu. *Flexibility of Subdivided Polyhedral Complexes.* In Proc. Fall Workshop on Computational Geometry 2005, University of Pennsylvania, Philadelphia, PA, November 2005.

Audrey Lee, Ileana Streinu and Oliver Brock. *A Methodology for Efficiently Sampling the Conformation Space of Molecular Structures.* In Physical Biology 2, SPECIAL FOCUS: Flexibility in biomolecules, Nov. 2005, S108-S115.

Audrey Lee, Ileana Streinu and Louis Theran. *Finding and Maintaining Rigid Components.* In Proc. 17th Canadian Conference on Computational Geometry Univ. of Windsor, Ontario, Canada, Aug. 10-12, 2005.

Mohanty, N., Rath, T., Lee, A. and Manmatha, R., *Learning Shapes for Classification and Retrieval.* In: Proc. of the International Conference on Image and Video Retrieval (CIVR), 589-598, 2005. *To appear as a chapter in the Handbook of Statistics, Vol. 31.*

Audrey Lee. *Single Vertex Origami.* Masters thesis, May 2003.

Presentations/ Posters

Audrey St. John. *Rigidity for multi-robot formations* **(presentation)**, Geometric rigidity theory and applications, International Centre for Mathematical Sciences (ICMS), Edinburgh, Scotland, May 2016.

Heather Pon-Barry, Audrey St. John, Becky Wai-Ling Packard, and Barbara Rotundo. *Megas and Gigas Educate (MaGE): A Curricular Peer Mentoring Program* **(poster)**. In: Proceedings of the 47th Special Interest Group on Computer Science Education (SIGCSE) Technical Symposium, Memphis, Tennessee, March 2016. [acceptance rate 51.5%]

Audrey St. John. *Make Tech Accessible with iDesign Studio* **(presentation, peer-reviewed for acceptance)**. AAC&U's Crossing Boundaries: Transforming STEM Education, Seattle, WA, November 2015.

Audrey St.John *Rigidity Theory for Robotics, Drug Design and CAD* **(invited talk for Clare Boothe Luce program)**, Amherst College, Amherst, MA, April 2, 2015.

Audrey St.John *Rigidity Theory for Robotics, Drug Design and CAD* **(invited talk for CS women's group)**, UMass Amherst, Amherst, MA, March 10, 2015.

Audrey St. John (joint work with James Farre, Helena Kleinschmidt, Jessica Sidman, Stephanie Stark, Louis Theran and Xilin Yu) *Generic Rigidity of CAD Systems* **(invited talk)**, Workshop on Making Models: Stimulating Research In Rigidity Theory And Spatial-Visual Reasoning, Fields Institute, Toronto, Ontario, August 2014.

Audrey St. John (joint work with James Farre, Helena Kleinschmidt, Jessica Sidman, Stephanie Stark and Louis Theran) *Detecting dependencies in geometric constraint systems* **(presentation)**, 10th International Workshop on Automated Deduction in Geometry (ADG 2014), Coimbra, Portugal, July 2014.

Audrey Lee-St.John (joint work with Christopher Clement and Jessica Sidman) *Hyperbanana Graphs* **(presentation)**, 25th Canadian Conference on Computational Geometry, Waterloo, ON, August 2013.

Audrey Lee-St.John (joint work with James Farre, Linnea LaMon and Jessica Sidman) *Rigidity Theory for Computer Aided Design* **(invited talk)**, Discrete Geometry Seminar, Freie Universität, Berlin, Germany, November 2012.

Audrey Lee-St.John (joint work with Jessica Sidman) *Combinatorics and the Rigidity of CAD Systems* **(presentation)**, Symposium on Solid & Physical Modeling, Dijon, France, October 2012.

Audrey Lee-St.John *Kinematic Joint Recognition in CAD Constraint Systems* **(presentation)**, Canadian Conference on Computational Geometry '12, Charlottetown, PEI, 2012.

Audrey Lee-St.John *Rigidity Theory: from Foundations to Applications* **(invited colloquium talk)**, Williams College, Williamstown, MA, 2011.

Audrey Lee-St.John *Rigidity Theory: from Foundations to Applications* **(seminar talk)**, College of the Holy Cross, Worcester, MA, February 7, 2011.

Audrey Lee-St.John *Rigidity Theory: from Foundations to Applications* **(invited colloquium talk)**, Dartmouth College, Hanover, NH, 2011.

Audrey Lee-St.John (joint work with Rittika Shamsuddin*) *The Joint Recognition Problem: from CAD Constraints to Kinematic Joints* **(poster)**, Fall Workshop on Computational Geometry 2010, Stony Brook University, Stony Brook, NY, Oct. 29-30, 2010.

Audrey Lee-St.John (joint work with Ileana Streinu) *Angular rigidity in 3D: combinatorial characterizations and algorithms* **(presentation)**, Canadian Conference on Computational Geometry '09, Vancouver, BC, 2009.

Audrey Lee-St.John (joint work with Kirk Haller, Meera Sitharam, Ileana Streinu and Neil White) *Body-and-cad geometric constraint systems* **(presentation)**, Special Session on Discrete Geometry and Combinatorics at AMS Spring 2009 Eastern Section Meeting, Worcester Polytechnic Institute, Worcester, MA, April 25-26, 2009.

Audrey Lee-St.John (joint work with Kirk Haller, Meera Sitharam, Ileana Streinu and Neil White) *Body-and-cad geometric constraint systems* **(presentation)**, 24th Annual ACM Symposium on Applied Computing, Technical Track on Geometric Constraints and Reasoning GCR'09, Honolulu, HI, Mar. 8-12, 2009.

Kirk Haller, Audrey Lee-St.John, Meera Sitharam, Ileana Streinu and Neil White. *Body-and-cad geometric constraint systems* **(poster)**, Fall Workshop on Computational Geometry 2008, Rensselaer Polytechnic Institute, Troy, NY, Oct. 31 - Nov. 1, 2008.

Audrey Lee and Louis Theran. *Analyzing Rigidity with Pebble Games* **(poster and demo)**, Fall Workshop on Computational Geometry 2007, IBM T.J. Watson Research Center, Hawthorne, NY, Nov. 9-10, 2007. **Winner of best poster/multimedia presentation.**

Audrey Lee, Aaron St.John and Ileana Streinu. *2D Motion Simulation with Constraints* **(poster)**, Rigidity, Flexibility and Motion in Biomolecules Workshop, Tempe, Arizona, May 13-17, 2006.

Audrey Lee (joint work with Oliver Brock and Ileana Streinu) *A Methodology for Efficiently Sampling the Conformation Space of Molecular Structures* **(informal talk)**, Workshop on Dynamics under Constraints, Barbados, January 2006.

Audrey Lee (joint work with Ileana Streinu). *Pebble Game Algorithms and* $(k, a)$*-Sparse Graphs* **(presentation)**, Theory Seminar, UMass Amherst, November 2005.

Audrey Lee and Ileana Streinu (joint work with Oliver Brock). *A Methodology for Efficiently Sampling the Conformation Space of Molecular Structures* **(presentation)**, ASU FlexWeb NetMeeting, November 2005.

Audrey Lee (joint work with Ileana Streinu). *Pebble Game Algorithms and* $(k, a)$*-Sparse Graphs* **(presentation)**, EuroComb 2005, Berlin, Germany, September 2005.

Audrey Lee (joint work with Ileana Streinu). *Finding and Maintaining Rigid Components* **(presentation)**, Canadian Conference on Computational Geometry '05, University of Windsor, Windsor, CA, August 2005.

Audrey Lee (joint work with Ileana Streinu). *Pebble Game Algorithms for* $(k, a)$*-Sparse Graphs* **(presentation)**, Graph Theory with Altitude, University of Colorado at Denver, May 2005.

Audrey Lee, Ileana Streinu and Louis Theran. *Detecting Rigid Components of Graphs* **(poster)**, NSF/CARGO Review, Santa Fe, NM, May 2005.

Oliver Brock, Audrey Lee and Ileana Streinu. *Efficient Motion Simulation of Molecule-Like Structures* **(poster)**, NSF/CARGO Review, Santa Fe, NM, May 2005.

Audrey Lee (joint work with Ileana Streinu). *Pebble Game Algorithms* **(informal talk)**, Workshop on NMR Geometry, Barbados, January 2005.

Audrey Lee (joint work with Ileana Streinu). *Single Vertex Origami* **(presentation)**, Theory Seminar, UMass Amherst, May 2004.

Audrey Lee and Ileana Streinu. *Single Vertex Origami* **(poster)**, NSF/CARGO Review, Madison, WI, May 2004.

Conferences/ Workshops attended

Workshop on Geometric Rigidity *(invited participant)*, University of Lancaster, Lancaster, UK, June 2016

Geometric rigidity theory and applications *(invited participant)*, International Centre for Mathematical Sciences (ICMS), Edinburgh, UK, May 2016.

SIGCSE '16: 47th Special Interest Group on Computer Science Education, Memphis, Tennessee, March 2016.

AAC&U's Crossing Boundaries: Transforming STEM Education, Seattle, WA, November 2015.

Advances in Combinatorial and Geometric Rigidity *(invitation only)*, Banff International Research Station, Banff, Alberta, Canada, July 12 - 17, 2015.

ACM Richard Tapia Celebration of Diversity in Computing, Boston, MA, February 18-21, 2015.

Workshop on Configuration spaces of linkages *(invitation only)*, American Institute of Mathematics, Palo Alto, CA, October 27-31, 2014.

Workshop on Making Models: Stimulating Research In Rigidity Theory And Spatial-Visual Reasoning *(invited participant)*, Fields Institute, Toronto, Ontario, August 5-9, 2014.

10th International Workshop on Automated Deduction in Geometry (ADG 2014), Coimbra, Portugal, July 2014.

25th Canadian Conference on Computational Geometry, Waterloo, ON, August 8-10, 2013.

SIGCSE: The Changing Face of Computing, Denver, CO, March 6-9, 2013.

2013 Joint Mathematics Meetings, San Diego, CA, January 9-12, 2013.

Symposium on Solid & Physical Modeling, University of Burgundy, Dijon, France, October 29-31, 2012.

CCCG '12, Charlottetown, PEI, August 8-10, 2012.

Workshop on Rigidity Theory: Progress, Applications and Key Open Problems *(invitation only)*, Banff International Research Station, Vancouver, BC, July 15-20, 2012.

Workshop on Inductive Constructions in Rigidity Theory *(invitation only)*, Banff International Research Station, Vancouver, BC, July 20-22, 2012.

Workshop on Rigidity *(invitation only)*, Fields Institute in Toronto, ON, Oct. 11-14, 2011.

20th Fall Workshop on Computational Geometry, Stony Brook University, Stony Brook, NY, Oct. 29-30, 2010.

Workshop on Rigidity Theory and applications, McGill University's Bellairs Research Institute, Barbados, Jan. 1-8, 2010.

19th Fall Workshop on Computational Geometry, Tufts University, Medford, MA, Nov 13-14, 2009.

CCCG '09, University of British Columbia, Vancouver, CA, August 17-19, 2009.

AMS Spring 2009 Eastern Section Meeting (including Special Session on Discrete Geometry and Combinatorics), Worcester Polytechnic Institute, Worcester, MA, April 25-26, 2009.

24th Annual ACM Symposium on Applied Computing (including Technical Track on Geometric Constraints and Reasoning GCR'09), Honolulu, HI, Mar. 8-12, 2009.

Workshop on Geometric constraints with applications in CAD and biology, McGill University's Bellairs Research Institute, Barbados, Jan. 2-9, 2009.

18th Fall Workshop on Computational Geometry, Rensselaer Polytechnic Institute, Troy, NY, Oct. 31 - Nov. 1, 2008.

Workshop on Rigidity and Enumeration, McGill University's Bellairs Research Institute, Barbados, Feb. 23 - Mar. 1, 2008.

IMA Workshop: Protein Folding, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, MN, January 14-18, 2008.

IMA Tutorial: Mathematics of Proteins, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, MN, January 10-11, 2008.

17th Fall Workshop on Computational Geometry, IBM T.J. Watson Research Center, Hawthorne, NY, Nov. 9-10, 2007.

CCCG '07, Carleton University, Ottawa, CA, August 20-22, 2007.

A Discrete Mathematics Day in the Northeast, Pace University, White Plains, NY, June 16, 2007.

CRA-W Career Mentoring Workshop, San Diego, CA, June 9-10, 2007.

Workshop on Dynamics under Constraints II, McGill University's Bellairs Research Institute, Barbados, Feb. 9-16, 2007.

16th Fall Workshop on Computational Geometry, Smith College, Northampton, MA, Nov. 10-11, 2006.

Rigidity, Flexibility and Motion in Biomolecules, Tempe, Arizona, May 13-17, 2006.

Workshop on Dynamics under Constraints, McGill University's Bellairs Research Institute, Barbados, Jan. 13-20, 2006.

15th Fall Workshop on Computational Geometry, University of Pennsylvania, Philadelphia, PA, November 18-19, 2005.

EuroComb 2005, Berlin, Germany, September 5-9, 2005.

CCCG '05, University of Windsor, Windsor, CA, August 10-12, 2005.

Graph Theory with Altitude, University of Colorado at Denver, May 17-20th, 2005.

Workshop on NMR Geometry, Barbados, Jan. 14-21, 2005.

14th Fall Workshop on Computational Geometry, MIT, Cambridge, MA, November 19-20, 2004.

CCCG '04, Concordia University, Montreal, CA, August 9-11, 2004.

SoCG '04, Polytechnic University, Brooklyn, New York, June 9-11, 2004.

Workshop on the Geometry of Modeling Proteins, McGill University's Bellairs Research Institute, Barbados, Jan. 16-23, 2004.

## Scholarly Service

*Reviewer:* Journal of Symbolic Computing, 2015-16.
*Panel participant:* NSF, Spring 16.
*Reviewer:* Computer Aided Design, 2012-15.
*Reviewer:* National Science Foundation, 2013-14.
*Reviewer:* European Journal of Combinatorics, 2013-14.
*Reviewer:* Contributions to Discrete Mathematics, 2012.
*Additional reviewer:* IEEE International Conference on Computational Advances in Bio and Medical Sciences (ICCABS) 2012.
*Additional reviewer:* 28th Symposium on Computational Geometry, 2012.
*Reviewer:* Discrete Applied Mathematics, 2011.
*Reviewer:* Journal of Heuristics, 2011.
*Reviewer:* European Journal of Operational Research, 2011. *Reviewer:* Computational Geometry: Theory and Applications, 2010.
*Reviewer:* Transactions on Sensor Networks, 2010.
*Reviewer:* Discrete and Computational Geometry, 2010.
*Additional reviewer:* 25th Annual Symposium on Computational Geometry, 2009.
*Program committee:* 19th Fall Workshop on Computational Geometry, Tufts University, Medford, MA, Nov 13-14, 2009.

*Session chair:* Special Session on Discrete Geometry and Combinatorics, AMS Spring 2009 Eastern Section Meeting, Worcester Polytechnic Institute, Worcester, MA, April 25-26, 2009.
*Program committee:* 18th Fall Workshop on Computational Geometry, Rensselaer Polytechnic Institute, Troy, NY, Oct. 31 - Nov. 1, 2008.
*Additional reviewer:* 23rd Annual Symposium on Computational Geometry, 2007.
*Organizing committee:* 16th Fall Workshop on Computational Geometry, Smith College, Northampton, MA, Nov. 10-11, 2006.

## Funding and Research Program Involvement

Co-supervised REU group (5 students) as part of National Science Foundation DMS grant to Mathematics & Statistics Dept., Mount Holyoke College, Summer '12.

Supervised student through HHMI Research Program, Mount Holyoke College, Summer '11.

Supervised pair of students through HHMI Cascade Mentoring Program, Mount Holyoke College, Summer '10.

## Teaching and undergraduate research

Most courses have web sites linked from `http://minerva.cs.mtholyoke.edu/teaching.php`

**Spring 2016**

- COMSC 106 - Intro to Scientific Computing *course release funded by NSF IIS-1253146*
- Independent studies (research):
  - Alyxander Burns '17: *Multi-robot formations* (honors thesis)
  - Linh Dang '18, Mahima Ghale '17, Paula Kayongo '17: *Matroid theory and sparse graphs*
  - Anh Ho '17, Ziyi (Zoe) Liang '18: *Robotics*
  - Phuong Le '18: *A tool in Unity for body-and-cad*
  - Xilin Yu '16: *Circuits Classification for Computer Aided Design* (honors thesis)
- Independent studies (topic):
  - Nikita Khan '16: *Color-changing Chameleon*
  - Sarah Robinson '17: *IHart: interactive hallways for attraction and retention to technology*
  - Xinyun Xing '16: *Programming a web app*

**Fall 2015**

- COMSC 101 - Problem Solving & Object-Oriented Programming
- COMSC 311 - Theory of Computation
- Independent studies (research):
  - Khue (Kayla) Nguyen '18: *Computer vision for robotics*
  - Xilin Yu '16: *Circuits Classification for Computer Aided Design* (honors thesis)
- Independent studies (topic):
  - Nikita Khan '16 (lead), Lisa Chen '17, Zineb El Mechrafi '18, Sanaa Mansoor '18, Sumatra Dhimoyee '18, Raeesa Mehjabeen '18, Tien Dao '18: *IHart: interactive hallways for attraction and retention to technology*
  - Xinyun Xing '16: Programming a web app

**Summer 2015**

- Undergraduate research projects
  - Alyxander Burns '17, Khue (Kayla) Nguyen '18: *Multi-robot formations* (funded by NSF IIS-1253146)
  - Audrey Fahey '18 and Sophie Manum '18 (in collaboration with Kathryn McMenimen): *Computational Methods for Protein Motion Prediction* (part of 4CBC program)

**Spring 2015**

- COMSC 243RW - Robotics Workshop *course release funded by NSF IIS-1253146*
- Independent studies (research):
  - Pragya Bajoria '15: *Robotics*
  - Xilin Yu '16: *Rigidity theory*
- Independent studies (topic):
  - Pavlina Lejskova '15 (lead), Barsha Shrestha '15, Nikita Khan '16, Amna Aftab '17, Yavneeka Patel '17, Kayla Nguyen '18, Miriam Cherayil '18: *IHart: interactive hallways for attraction and retention to technology*

**Fall 2014**

- COMSC 101 - Problem Solving & Object-Oriented Programming
- COMSC 211 - Data Structures
- Independent studies (research):
  - Pragya Bajoria and Alyxander Burns '17: *Robotics*

  - Ngan (Sylvia) Hoang '16 and Keying Gu '17: *Computational biology*
- Independent studies (topic):
  - Pavlina Lejskova '15 (lead), Ning Xie '14, Emma Romeo '15, Saadia Gabriel '17, Safae Lahgazi Alaoui '17, Sarah Robinson '17 and Hashma Shahid '17: *IHart: interactive hallways for attraction and retention to technology*

**Summer 2014**

- Undergraduate research projects
  - Alyxander Burns '17, Keying Gu '17, Katerina (Lia) Poulos '16, Xilin Yu '16: *Rigidity theory for multi-robot formations* (funded by NSF IIS-1253146 and the Clare Boothe Luce Foundation)
  - Ngan (Sylvia) Hoang '16 (in collaboration with Kathryn McMenimen): *Computational Methods for Protein Motion Prediction*

**Spring 2014**

- COMSC 201 - Advanced Object-oriented Programming
- COMSC 311 - Theory of Computation
- Independent studies (research):
  - Ruimin Cai '13, Dana Fry '14, Mina Khan '14, Ressi Miranda '14, Stephanie Stark '14, Helena Kleinschmidt '15 and Xilin Yu '15 (in collaboration with Jessica Sidman): *Rigidity theory*
  - Aysha Mehjabeen '14, Pragya Bajoria '15 and Mina Khan '15: *Robotics*
- Independent studies (topic):
  - Pavlina Lejskova '14: *IHart: interactive hallways for attraction and retention to technology*
  - Jingjing Rong '14: *3D printer trouble-shooting*

**Fall 2013**

- COMSC 105 - iDesign Studio (FYS)
- COMSC 201 - Advanced Object-oriented Programming
- Independent studies (research):
  - Ruimin Cai '13: *Rigidity theory*
  - Aysha Mehjabeen '14, Humaira Orchee '15 and Mina Khan '15: *Robotics*
  - Xinyun (Cis) Xing '15: *Computer Aided Design*
- Independent studies (topic):
  - Kimberly Faughnan '14: *IHart: interactive hallways for attraction and retention to technology*
  - Shani Mensing '14: *3D modeling, printing and perception*
  - Ressi Miranda '14: *Developing a touch table using a Raspberry Pi*

**Summer 2013**

- Undergraduate research projects
  - Aysha Mehjabeen '14 and Yineng (Phoebe) Sun '15: *Multi-robot formations*
  - Shani Mensing '15 and Nicole Hoffler '16: *Wearable Technology and iDesign Studio* (funded through the Clare Boothe Luce Foundation)

**Fall 2012 - Spring 2013** *on sabbatical*

**Summer 2012**

- Undergraduate research projects (via NSF REU program in Mathematics & Statistics Department)
  - David Breese (Pomona College): *Swarms of robots maintaining formation*
  - Christopher Clement (University of Michigan): *Hyperbananas: A Family of Flexible Frameworks* (winner of Outstanding Presentation at JMM '13 Undergraduate Poster Session)
  - James Farre (University of Texas at Austin): *Finding Special Embeddings of Bar-and-Body Frameworks* (winner of Outstanding Presentation at JMM '13 Undergraduate Poster Session)
  - Laura Gioco (Fairfield University): *Edge-Disjoint Spanning Trees and Inductive Constructions*
  - Linnea LaMon (Carnegie Mellon University): *A Combinatorial Characterization of 2D Body-and-cad Rigidity*

**Spring 2012**

- COMSC 101 - Problem Solving & Object Oriented Programming
- COMSC 211 - Data Structures
- Independent studies (research):
  - Felicia Cordeiro '12: *Motion Simulation of Geometric Constraint Structures* (honors thesis)
  - Rittika Shamsuddin '12: *Using Rigidity Theory To Identify Hinge Joints in Proteins* (honors thesis, winner of Best senior honors thesis or research project at NEUCS '12, awarded summa cum laude)
- Independent studies (topic):

  - Gabby Snyder '13, Ruimin Cai '14, Phuong Vu '14, Linh Le '14, Erin Pierce '15: *IHart: Interactive Hallways for Attraction and Retention to Technology*
  - Jessie Hamelin '13 (in collaboration with Dr. Dan Barry): *Robotics and mobile devices*
  - Jingjing Rong '15 and Liye Fu '15 (in collaboration with Dr. Dan Barry): *Developing a Robotic Pet* (winner of a 2012 Harold Grinspoon Foundation Entrepreneurial Spirit Award)

**Fall 2011**

- COMSC 101 - Problem Solving & Object-Oriented Programming
- COMSC 311 - Theory of Computation
- Independent studies (research):
  - Felicia Cordeiro '12: *Motion Simulation of Geometric Constraint Structures* (honors thesis)
  - Rittika Shamsuddin '12: *Using Rigidity Theory To Identify Hinge Joints in Proteins* (honors thesis)
  - Chelsea Walker '12: *Computational modeling of allosteric conformational changes in proteins*
- Independent studies (topic):
  - Ruimin Cai '14, Bei Li '13 and Jessie Hamelin '13 (in collaboration with Dr. Dan Barry): *Robotics and mobile devices.*

**Summer 2011**

- Undergraduate research projects:
  - Rittika Shamsuddin '12: *Analysis of hinge joints using rigidity theory, extended to Identifying hinge motion in proteins* (funded through HHMI)
  - Chelsea Walker '12: *Computational modeling of allosteric conformational changes in proteins*
  - Felicia Cordeiro '12 and Tracy Whelen '14: *Interactive motion simulation techniques for proteins* (funded through the Clare Boothe Luce Foundation)

**Spring 2011**

- COMSC 101 - Problem Solving & Object Oriented Programming
- COMSC 341 - Topics in Robotics and HCI
- Independent studies (research):
  - Surabhi Gupta '11: *A Model of hierarchical spatial reasoning* (honors thesis)
  - Courtney Schirf '11: *Automated protein classification using rigidity analysis* (honors thesis)
  - Cleo Schneider '11: *Polygonal simplification for shape recognition and representation* (honors thesis)
  - Rittika Shamsuddin '12: *Analysis of hinge joints using rigidity theory*
- Independent studies (topic):
  - Maria Fiske '13: *Complexity theory*
  - Eyitemi Popo '12: *Flash Animation: Mohobot's Digital World*
  - Andreea Bancila '13 (in collaboration with Dr. Daniel Barry): *Autonomous robotic mobile chair*

**Fall 2010**

- COMSC 101 - Problem Solving & Object-Oriented Programming
- COMSC 311 - Theory of Computation
- Independent studies (research):
  - Cleo Schneider '11: *Shape Recognition using Polygonal Simplification* (honors thesis)
  - Courtney Schirf '11: *Automatic Protein Classification Using Rigidity Analysis* (honors thesis)
  - Surabhi Gupta '11: *Using Holographic Reduced Representations to Model Hierarchical Spatial Reasoning in a 3D Environment* (honors thesis)
  - Gabriella Snyder '13: *Green Computing and HCI*
  - Felicia Cordeiro '12: *Interactive Media Development*
  - Cade Friedenbach '13, Hilary Katz '12, Bei Li '13, Yihan Li '13, Angela Wang '13, Claudia Mingjia Zhang '13 (in collaboration with Dr. Daniel Barry): *Autonomous robotic mobile chair*
- Independent study (topic):
  - Yaa Asantewaa Appiah Korang '11: *SQL and related technologies*

**Summer 2010**

- Undergraduate research projects:
  - Rittika Shamsuddin '12 - *Joint recognition problem for CAD* (funded through a research grant from SolidWorks Corp.)
  - Felicia Cordeiro '12 - *A feature-mapping approach to CAD interoperability* (co-advised with Jack Wileden via an REU with UMass e-Design lab)
  - Cleo Schneider '11 - *CV (Computer Vision) and HCI (Human Computer Interaction)* (funded through HHMI Cascade Mentoring Program)

  - Gabriella Snyder '13 - *An HCI approach to raising green computing awareness, in collaboration with Maria Kazandjieva (Stanford)* (funded through HHMI Cascade Mentoring Program)

**Spring 2010**

- COMSC 101 - Problem Solving & Object-Oriented Programming
- COMSC 240 - Interactive Media
- Independent studies (research):
  - Milka Doktorova '10: *Computational Analysis of Statics and Dynamics of Macromolecules* (honors thesis, awarded summa cum laude)
  - Cleo Schneider '11: *IHart: Interactive Hallways for Attraction and Retention to Technology*
  - Abby Drury '10, Melissa Frechette '11, Rittika Shamsuddin (in cooperation with Dr. Dan Barry): *Autonomous robotic mobile chair* (chosen to be one of 4 presentations and won a poster award at NEUCS '10)

**Fall 2009**

- COMSC 101 - Problem Solving & Object-Oriented Programming
- COMSC 311 - Theory of Computation
- Independent studies (research):
  - Milka Doktorova '10: *Computational Analysis of Statics and Dynamics of Macromolecules* (honors thesis)
  - Cleo Schneider '11: *Interactive Media Development*
- Independent studies (topic):
  - Courtney Schirf '11: *Bioinformatics*
  - Claire Boyd '12: *Web Design with Flash*

**Summer 2009**

- Undergraduate research projects:
  - Milka Doktorova '10: *Computational Analysis of Statics and Dynamics of Macromolecules*
  - Ilene Magpiong '12: *Protein flexibility*
  - Tonje Stolpestad '10 (Smith College): *SolidWorks*

**Spring 2009**

- COMSC 102 - Object-Oriented Programming
- COMSC 341 - Computational Geometry in Video Games
- Independent study (research):
  - Milka Doktorova '10: *Rigidity theory with applications to biology*

**Fall 2008**

- COMSC 102 - Object-Oriented Programming
- COMSC 311 - Theory of Computation
- Independent study (topic):
  - Valerie Galluzzi '09: *Introduction to Rigidity Theory*

Course development

*Spring '16:* **COMSC 106: Intro to Scientific Computing** – Developed an intro non-majors CS course to introduce students to scientific computing and the basic skills to read and modify code via an overarching theme of computer vision problems. The initial programming language students are exposed to is python, but students were also challenged to learn new environments during lab time to increase their confidence working with unfamiliar technical tools. Final projects were tailored towards the students individual interests and included computer vision approach for quantifying optical microscopy images. Funded by NSF award IIS-1253146.

*Spring '15:* **COMSC 243RW: Robotics Workshop** – Developed an intermediate CS course to introduce students to microcontrollers and basic electronics, enabling them to pitch and develop their own robots. Piloted a collaboration with Studio Art faculty to have 5 cross-disciplinary projects. Funded by NSF award IIS-1253146.

*Fall '13:* **COMSC 201: Advanced Object-oriented Programming** – Designed new material (assignments, lectures and labs) increase exposure to basic data structures.

*Fall '13:* **COMSC 105: iDesign Studio** – Developed a first year seminar on design and technology. This course features a sequence of hands-on workshops on electronics basics and microcontroller programming to provide sufficient comfort and background in technology required for students to produce prototypes of their own original designs.

*Spring '10:* **COMSC 240 Interactive Media** – Designed new course on interactive media. This project-based course gave students the experience of pitching and developing their own applications, ranging from an interactive molecular viewer to a touch table (built from scratch) to a virtual piano.

*Fall '09:* **COMSC 101 Problem Solving & Object-oriented Programming** – Designed new material (assignments, lectures and labs) using Flash and ActionScript to increase attraction and retention.

*Spring '09:* **COMSC 341 Computational Geometry in Video Games** – Designed new course on core computational geometry problems motivated by practical applications to video games.

*Fall '08:* **COMSC 102 Advanced Object Oriented Programming** – Designed new material and lectures using Flash and ActionScript for the first part of the semester. **COMSC 311 Theory of Computation** – Redesigned lecture notes from a previous teaching of the course.

## Ongoing Undergraduate Projects

**IHart: Interactive Hallways for attraction and retention in technology.** Project to create an infrastructure for quickly developing interactive hallway installations; goal is to increase excitement about the field by creating an immersive and fun experience. Current progress includes a team of students working on an SDK and sample applications. Initial SDK was developed by Cleo Schneider '11 and allowed students of COMSC 240 to create interactive projects, including a Virtual Piano (created by Michelle DeVeaux '12 in two weeks, having only taken COMSC 101 prior – winner of NEUCS '10 poster award). Current web site: `http://ihart-mhc.github.io`.

**Robotics research with undergraduates.** Collaboration with Dr. Daniel Barry to involve students in robotics research. Projects include: development of mobile device apps to control telepresence robot, iterative testing/refining a robotic mobile chair, design and development of robotic pet. Involved work with: Spaulding Rehabilitation Center (Boston, MA) to determine safety and usability of the chair, Dr. Holly Yanco and Kate Tsui of UMass Lowell on heuristic evaluation project.

## Selected Professional Activities

Keynote speaker at BCCHacks (first community college hackathon in Massachusetts), Berkschire Community College, Pittsfield, MA, April 2016.

Member of external review committee for CS department at liberal arts college (ranked in U.S. News' top 20).

*MassMutual Women in Technology Conference* (**invited panelist**). MassMutual Center, Springfield, MA, April 24, 2015.

*New England Undergraduate Computing Symposium (NEUCS) (***part of Organizing Committee***)*: Annual symposium for *Celebrating Excellence and Diversity in Computing*. Northeastern University, Boston, MA, April 22, 2015.

*CSSociety (***advisor***)*: Student-run club that organizes co-curricular activities to increase diversity in CS. These include programming aimed at CS students (e.g., GitHub workshop), prospective students (e.g., mentoring program awarded an NCWIT Student Seed Fund), outreach (e.g., workshops at local middle schools) and general community (e.g., celebrating National CS Education Week). Latest event was HackHolyoke (Nov 7-8, 2014), a 24-hour event with more than 150 participants from area institutions; over 50% of the participants were women. Planning for a Spring HackHolyoke (April 3, 2015) on a larger scale is in progress.

*Mount Holyoke College LITS Advisory Committee* (**chair, Spring '15**): led committee of 9, whose main charge is to serve as a liaison between the faculty and Library, Information &Technology Services office.

*iDesign Studio (***presenter***)*: Invited by Dr. William Kennedy to give a talk about iDesign Studio to all-school (grades 9-12) assembly. Class was adopted and taught Fall '14. Dublin School, Dublin, NH. May 22, 2014.

*Partners 4 CS workshop (***invited presenter***):* Led 2 sessions to introduce IHart to a group of 5 high school students and 50 middle school and high school teachers. University of Delaware, Newark, DE. June 24-28, 2013.

*Pi Day, Mamaroneck High School (***invited presenter***):* Computer Vision activity and IHart demos with alumna Cleo Schneider '11 – two assemblies of 100-150 students. Mamaroneck High School, Mamaroneck, NY. March 15, 2013.

*IHart HitPoint GameJam (***organizer***):* Worked with Computer Science Club and local video game company HitPoint Studios to organize a 24 hour game jam with over 20 participants. March 3-4, 2012. `http://minerva.cs.mtholyoke.edu/ihart/gamejam12`.

*CRA-W/CDC Distinguished Lecturer Series (***organizer***):* Worked with faculty from the Five College Consortium (Amherst College, Hampshire College, Mount Holyoke College, Smith College, UMass Amherst) and CAITE (Commonwealth Alliance for Information Technology Education) to apply for and organize CRA-W/CDC DLS event. The two-day event included lectures by two distinguished researches in computer science, a graduate school panel and informal meet-and-greet opportunities at four of the five campuses. Oct 21-22, 2010. `http://minerva.cs.mtholyoke.edu/dls`.

*Tech Rendezvous with Alumnae (***organizer***):* Partnered with Suchi Saria '04 to organize event with 5 alumnae delivering talks virtually, followed by a "virtual coffeehouse" with about 10 alumnae via Skype, April 1, 2010.

`http://minerva.cs.mtholyoke.edu/alumnae`.

*Sammet Lecture Spring '10 (***organizer***):* Invited Robert Lang and helped to organize events (including a movie screening and folding workshop) culminating in a tutorial, workshop and lecture entitled **From Flapping Birds to Space Telescopes: The Modern Science of Origami**, April 21, 2010.

*Each One, Teach One (***participant***):* Participated in day-long event organized by Dean Whitmal to bring middle-school girls to campus; held a workshop where students each created Flash greeting cards, September 18, 2009.

*Sammet Lecture Fall '08 (***organizer***):* Invited Afra Zomorodian and helped to organize tutorial and lecture entitled **Geometry of Colon Cancer and Topology of Lipid Fusion**, Nov. 18, 2008.

## News and media

*HackHolyoke inspires student hackathon.* Mount Holyoke College news story, `https://www.mtholyoke.edu/media/hackhoyoke-inspires-student-hackathon`, May 19, 2016.

*'BCC Hacks': Students, engineers set to hack new ground.* The Berkshire Eagle, `http://www.berkshireeagle.com/learning/ci_29843308/bcc-hacks-students-engineers-set-hack-new-ground`, May 3, 2016.

*Mount Holyoke College explores technology and the future of jobs with an interdisciplinary approach.* Mount Holyoke College news story (originally appeared in the May/June 2016 edition of Robot magazine, `https://www.mtholyoke.edu/media/mhc-featured-robot-magazine`, April 25, 2016.

*"Girls in Tech" Conference is coming to MHC.* Mount Holyoke College news story, `https://www.mtholyoke.edu/media/girls-tech-conference-coming-mhc`, March 4, 2016.

*MHC to host Future of Jobs conference.* Mount Holyoke College news story, `https://www.mtholyoke.edu/media/mhc-host-future-jobs-conference`, February 10, 2016.

*An exploration of where art and science meet.* Mount Holyoke College news story `https://www.mtholyoke.edu/media/exploration-where-art-and-science-meet`, September 21, 2015.

*Tech-tinkering class: A STEM gateway.* Mount Holyoke College news story, `https://www.mtholyoke.edu/media/tech-tinkering-class-stem-gateway`, September 14, 2015.

*"Huffington Post" highlights MHC STEM camps.* Mount Holyoke College news story, `https://www.mtholyoke.edu/media/huffington-post-highlights-mhc-stem-camps`, September 9. 2015.

*Google Maps project helps junior find her way.* (about my advisee Sarah Robinson '17) Mount Holyoke College news story, `https://www.mtholyoke.edu/media/google-maps-project-helps-junior-find-her-way-0`, August 27, 2015.

*Students' innovative ideas wow judges at Grinspoon Entrepreneurship Initiative in Holyoke.* MassLive.com news story covering event, where my advisee Mina Khan '15 won 3rd place in elevator pitch contest. `http://www.masslive.com/business-news/index.ssf/2015/04/a_wallet_you_cant_lose_grinspoon_entrepr.html`, April 24, 2015.

*MassMutual conference in Springfield aims to get more women into computer science.* MassLive.com news story covering conference where I was invited as a panelist, `http://www.masslive.com/business-news/index.ssf/2015/04/massmutual_hosts_women_in_technology_con.html"`, April 24, 2015.

*The Power of Undergraduate Researchers.* AMS Blog on Teaching and Learning Mathematics, `http://blogs.ams.org/matheducation/2015/04/01/the-power-of-undergraduate-researchers/#more-663`, April 1, 2015.

*She's Google-bound.* Mount Holyoke College news story featuring my advisee Mina Khan '15, `https://www.mtholyoke.edu/media/shes-google-bound`, March 23, 2015.

*Google funds new computer science initiative.* Mount Holyoke College news story, `https://www.mtholyoke.edu/media/google-funds-new-computer-science-initiative`, March 11, 2015.

*Can Women's Colleges Create the Tech Role Models We Need?* Boston.com news story, `http://www.boston.com/jobs/news/2015/03/09/can-women-colleges-create-the-tech-role-models-need/1DkRsGjGBh7Mt9AG50Lt4O/story.html`, March 9, 2015.

*Faculty recognized for research, teaching.* Mount Holyoke College news story, `https://www.mtholyoke.edu/media/faculty-recognized-research-teaching`, March 4, 2015.

*Eva Snyder '17: a model for women in tech.* Mount Holyoke College news story featuring my advisee, `https://www.mtholyoke.edu/media/eva-snyder-17-model-women-tech`, November 11, 2014.

HackHolyoke news and media coverage (I was faculty advisor to the student organizers)

*Hashtag gloves, robot camera and virtual archery some inventions from HackHolyoke hackathon promoting women hackers.* MassLive.com, http://www.masslive.com/news/index.ssf/2014/11/hashtag_gloves_robot_camera_an.html#incart_river?hootPostID=8e4ac627b62368ba78fd91ed4529ec97, November 14, 2014.

*Students unleash creativity at computer hack.* Mount Holyoke College news story, https://www.mtholyoke.edu/media/students-unleash-creativity-computer-hack, November 11, 2014.

*24 Hour Hackathon Kicks-Off at Mount Holyoke College.* WGGB.com, http://www.wggb.com/2014/11/07/24-hour-hackathon-kicks-off-at-mount-holyoke-college/, November 7, 2014.

*'HackHolyoke' at Mount Holyoke College wants to have women represented equally at tech competition.* MassLive.com, http://www.masslive.com/news/index.ssf/2014/10/hackholyoke_at_mount_holyoke_c.html October 29, 2014.

*Against the odds: What it takes to be a young woman in tech.* USA Today College Correspondence piece, http://college.usatoday.com/2014/11/06/against-the-odds-what-it-takes-to-be-a-young-woman-in-tech/, November 6, 2014.

*C. B. Luce Program supports women in science.* Mount Holyoke College news and video story, https://www.mtholyoke.edu/media/c-b-luce-program-supports-women-science, October 21, 2014.

*What These STEM College Women Are Doing This Summer.* Huffington Post (featuring summer research student Lia Poulos '16), http://www.huffingtonpost.com/diane-propsner/what-these-stem-college-w_b_5589233.html, July 16, 2014.

*Computer Students Build Robots from Scratch.* Mount Holyoke College news story, https://www.mtholyoke.edu/media/computer-students-build-robots-scratch, June 23, 2014.

*Seminar focuses on creating pipeline of computer-savvy workforce in Pioneer Valley.* MassLive.com, http://www.masslive.com/business-news/index.ssf/2014/06/it_pipeline_creating_a_supply_of_compute.html#incart_river_default, June 4, 2014.

*Less Geek, More Chic.* Clare Boothe Luce inaugural edition of Momentum newsletter, http://www.hluce.org/files/documents/Momentum1c.pdf June 1, 2014.

*Event Brings Together Alumnae in Tech Work.* Mount Holyoke College news story, https://www.mtholyoke.edu/media/event-brings-together-alumnae-tech-work, May 2, 2014.

*Eva Snyder Gets Creative with Computer Code.* Mount Holyoke College news and video story about a student from my iDesign FYS, https://www.mtholyoke.edu/media/eva-snyder-gets-creative-computer-code, March 14, 2014.

*The Shy Cameleon (completely designed and created by Meaghan Sullivan '17).* YouTube video of a final project from my iDesign FYS, https://www.youtube.com/watch?feature=youtu.be&v=V1uZ4nFzirc, February 17, 2014.

*Women in Technology.* Difficult Dialogues with President Pasquerella, https://archive.org/details/DifficultDialogues2714, February 7, 2014.

*Embracing Change: Mount Holyoke women lead in ways big and small.* Mount Holyoke College Alumnae Quarterly, http://alumnae.mtholyoke.edu/blog/embracingchange/#sthash.D1h2DPev.dpbs, November 5, 2013.

*Major NSF Grant Funds Robotics Research.* Mount Holyoke College news story, https://www.mtholyoke.edu/media/all-together-now-major-grant-funds-robotics-research, September 24, 2013.

*Design Frenzy Generates New Video Games.* Mount Holyoke College news and video story, http://www.mtholyoke.edu/news/stories/5684249, February 7, 2013.

*Women Wanted: Female Computer Scientist Seeks More of Same.* Mount Holyoke College Alumnae Quarterly magazine, http://issuu.com/mhcalumnae/docs/sum12q_issuu_1.1?mode=window (page 7), Summer 2012.

*Robots Emerge from Computer Science.* Mount Holyoke College news and video story, http://www.mtholyoke.edu/news/channels/35/stories/5683873, May 16, 2012.

*NSF Video Footage of MHC CS students.* YouTube video via ICT Center, http://youtu.be/x72uanmevqc, April 24, 2012.

*The Business of Designing Games – in 24 Hours.* Mount Holyoke College news story, http://www.mtholyoke.edu/news/channels/22/stories/5683737, March 2, 2012.

*New Lab a Meeting Place for Technology and Art.* Mount Holyoke College news story, http://www.mtholyoke.edu/news/channels/22/stories/5683728, February 27, 2012.

*Named a Distinguished Alumna.* Wellesley CS Department Winter 2012 Newsletter, http://cs.wellesley.edu/~cs/Newsletters/newsletter-w12.pdf.

*LITS Joins Computer Science in celebrating Computer Science Education Week.* LITS blog, `https://pub.mtholyoke.edu/journal/LITS/entry/lits_joins_computer_science_in`, December 7, 2011.

*Computer Science Students Bring Interactive Games to Info Commons.* LITS blog, `https://pub.mtholyoke.edu/journal/LITS/entry/computer_science_programmers_bring_their`, October 28, 2011.

*Machine adds new dimension to DIY manufacturing.* Boston.com news story, `http://articles.boston.com/2011-08-01/business/29839280_1_wi-fi-system-data-plan-audi-a6`, August 1, 2011.

*3-D Printer Makes Robotics a Piece of Cake.* Mount Holyoke College news and video story, `http://www.mtholyoke.edu/news/stories/5682933`, July 18, 2011.

*Robotic wheelchair bolsters mobility.* Boston.com news story, `http://www.boston.com/business/technology/articles/2011/03/14/robotic_wheelchair_bolsters_mobility`, March 14, 2011.

*Students Building Autonomous Wheelchair.* Mount Holyoke College news and video story, `http://www.mtholyoke.edu/news/channels/35/stories/5682732`, March 2, 2011.