

## Application Details

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### Research and Development Minigrants for 2017-2018: Application Review

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**Application Title:** A Multidisciplinary Approach to Building Next Generation Social Networks

**Application ID:** #000056

**Review Deadline:** Jan 27, 2017 11:59:00 PM

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**Primary Appointment Title:** Assistant Professor

#### Proposal Summary:

The overarching goal of this project is to introduce undergraduate students to multidisciplinary research in online social networks (OSN). OSN research is inherently multidisciplinary, which draws upon theories from social science, or how end-users interact within OSNs, and computer science, or how OSNs can effectively represent and communicate information to end-users. In line with CI's mission, this minigrant provides the opportunity to bridge disciplines and allow students from multiple majors to work on analyzing existing OSN data and design new OSN features. Additionally, this proposal specifically seeks students from multicultural backgrounds, which will allow for a better exploration of the socio-technical factors that affect technology adoption.

Specifically, this project can be broken down into four phases. In Phase 1, students will analyze existing online academic conversations extracted from undergraduate online discussion-boards at CI. These conversations will be analyzed for pattern extraction and a social network analysis will be performed focusing on factors such as quality and sentiment. This social network analysis will be used as input for Phase 2, which will focus on the development of a new OSN design component as informed by Phase 1. Phase 3 involves implementing the Phase 2 design in an existing OSN platform and incorporating it into the Spring 2018 section of COMP342, a course that is cross-listed with Sociology and Communication. Phase 4 involves measuring the impact of the new design in an educational setting and reporting the results at appropriate peer-reviewed academic outlets.

#### Comments to the Administrator(s):

My proposal is 2-4 pages, but I have a set of references at the end. I hope this does not count towards the page count. If so, please disregard the references.

Also, I am getting a submission error stating that I must upload a co-applicant CV. Since there is no co-applicant, I uploaded another copy of my own CV.

# BRIAN PATRICK THOMS

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## EDUCATION

### Information Systems and Technology, PhD 2010

*Claremont Graduate University, Claremont, CA*  
 Dissertation: Design Science Research on the construction and implementation of a reputation and recommender system in online collaborative software.  
 Activities: 2008 – 2010 School Student Council President (V.P. 2007-2008).

### Information Systems, MS 2006

*Stevens Institute of Technology, Hoboken, NJ*  
 Thesis: Trends in information technology outsourcing.

### Computer Science, BS 2001

*Fordham University, Bronx, NY*  
 Dean's List Student, Atlantic-10 Scholar Athlete.  
 Activities: *Division-1 Soccer, Computer Science Club, Computer Science Tutor.*

## DEGREE PUBLICATIONS

### PhD Dissertation

Expanding Learning and Social Interaction through Intelligent Systems Design: Implementing a Reputation and Recommender System for the Claremont Conversation Online.

### MS Thesis

Outsourcing: Inside Out and Outside In, Stevens Institution of Technology.

## TEACHING POSITIONS

### Assistant Professor 2014 – Present

*CSU Channel Islands, Camarillo, CA*

Teach undergraduate and graduate courses in computer science and information technology, serve on department- and college-wide committees and perform research in social and health informatics. Class sizes up to 24 students in traditional and hybrid learning environments.

### Assistant Professor 2010 – 2014

*SUNY Farmingdale, Farmingdale, NY*

Teach classes in information systems and computer programming, serve on department- and college-wide committees and perform research in social learning and health informatics. Class sizes up to 26 students in traditional, online and hybrid learning environments.

### Lecturer 2008 – 2010

*San Diego State University, San Diego, CA*

Taught general courses in information systems. Class sizes up to 250

students.	
<b>Online Instructor / Course Lead</b> <i>Kaplan University</i> Taught various courses in database technologies. Class sizes up to 30 students.	<b>2010- 2012</b>
<b>Instructor</b> <i>California Art Institute, Orange County, CA</i> Taught courses on systems analysis and design and user interface design. Class sizes fewer than 10 students.	<b>2010</b>
<b>TEACHING POSITIONS (CONT'D)</b>	
<b>Preparing Future Faculty Fellow</b> <i>Claremont Graduate University, Claremont, CA</i> The Preparing Future Faculty program had four major goals: prepare students to teach and advise, prepare students to be outstanding researchers, prepare students to perform service at the departmental and university level, and prepare students for the academic job market.	<b>2006 -2007</b>
<b>RESEARCH POSITIONS</b>	
<b>Research Fellow / Software Engineer for HealthATM</b> <i>Kay Center for E-health Research, Claremont, CA</i> As <u>Chief Software Engineer</u> , my responsibilities center on the analysis, design and development of HealthATM, a complete web-based health information system for e-health kiosks and tablet computers. Our software leverages cloud computing services to deliver secure personal health records for safety-net populations. We are currently constructing mobile agents and intelligent agents to greater facilitate personal health management and care provider support. As <u>Research Fellow</u> , my responsibilities focus on measuring the impact of HealthATM within clinical settings. My role has helped launch HealthATM Inc., <a href="http://www.HealthATM.com">www.HealthATM.com</a> . Technologies: C#, PHP, MySQL, XML/XSL, AJAX/HTML.	<b>2009 -2010</b>
<b>Research Assistant / Associate</b> <i>Social Learning Software Lab, Claremont, CA</i> As <u>Senior Research Assistant</u> for SL <sup>2</sup> , my role centered on the research and design of social software in educational settings in addition to helping set strategy for new research projects. Specifically, my research focused on the design, implementation and measurement of intelligent social software systems to enhance learning and interaction in educational environments (see Dissertation). Technologies: PHP, MySQL, XML, AJAX/HTML.	<b>2005 -2010</b>
<b>Research Associate</b> <i>Safe Road Maps / Crash Help Lab, Claremont, CA</i> As <u>Research Associate</u> for the Safe Road Maps Project, <a href="http://www.SafeRoadmaps.org">www.SafeRoadmaps.org</a> , my role focused on implementing creative solutions for the SRM web-based platform. Technologies: ArcGIS, Google Earth / Maps, C#, MSSQL, XML/XSL, AJAX/HTML.	<b>2009 -2010</b>
<b>Research Assistant</b>	<b>2005 -2006</b>

<p><i>Intelligent Systems Lab, Claremont, CA</i>                  As <u>Research Assistant</u>, I focused on using natural language processing to reduce the complexity of health information across the Internet.</p>	
<p><b>PROFESSIONAL POSITIONS</b></p>	
<p><b>Chief Software Engineer and co-Founder</b>  <i>Health e-Services LLC, Providence, RI</i>                  Facilitate healthy lifestyles in at-risk populations through innovative systems development and data analytics. View Health e-Services online at <a href="http://www.HealthEServices.com">www.HealthEServices.com</a>.</p>	<p><b>2013 – present</b></p>
<p><b>Software / IT Consultant</b>  <i>BrianThoms.com, Orange / Los Angeles / San Diego, CA, New York, NY</i>                  Work closely with small-to-midsize organizations on various projects to develop customized web-based information and ecommerce systems in a variety of technologies.  <i>Technologies</i>: Java, .Net, PHP, MySQL/MSSQL, XML/XSL/JSON, AJAX/JavaScript.</p>	<p><b>2009 – present</b></p>
<p><b>Chief Software Engineer</b>  <i>HealthATM, Claremont, CA</i>                  Performed analysis, design and development for HealthATM, a complete web-based health information system for e-health kiosks and tablet computers.</p>	<p><b>2009 – 2013</b></p>
<p><b>PROFESSIONAL POSITIONS (CONT'D)</b></p>	
<p><b>Software Contractor</b>  <i>San Diego County Office of Education, San Diego, CA</i>                  Architected and developed a web-based information system for the Migrant Education Program. The system provides service workers with an electronic method of recording educational services for the families of the migrant workforce via mobile/tablet computing.  <i>Technologies</i>: C#/.Net, SQL, XML, AJAX/HTML.</p>	<p><b>2007 – 2009</b></p>
<p><b>Programmer / Analyst</b>  <i>Salomon Smith Barney - Global Finance Desk, New York, NY</i>                  Systems analyst and software programmer for the Global Finance Desk Trading System. Responsibilities involved strategic problem solving and creative data analysis for Finance Desk business partners. Role also involved project leadership and management of onshore and offshore global development projects.  <i>Technologies</i>: Java, C/C++, perl, UML, PHP, HTML, XML, Encryption Schemas, SQL, UNIX, MS Project.</p>	<p><b>2001 –2005</b></p>
<p><b>Web Developer / Designer</b>  <i>ClearDev, New York, NY</i>                  Assisted in creating, uploading and maintaining web sites for small-to-midsize commercial businesses during the Dotcom Era.  <i>Technologies</i>: PERL, HTML, JavaScript, ASP, Databases, Photoshop, Flash.</p>	<p><b>1998 –2001</b></p>
<p><b>ACADEMIC AND PROFESSIONAL PUBLICATIONS</b></p>	
<p><b><u>Blog (s)</u></b></p> <ul style="list-style-type: none"> <li>• <b>B. Thoms</b>. “Social XYZ Blog”, Blog available at <a href="http://blog.SocialXYZ.com">http://blog.SocialXYZ.com</a>.</li> </ul>	
<p><b><u>In-Progress</u></b></p> <ul style="list-style-type: none"> <li>• “Code Red: Using Heatmaps to Facilitate Software Programming</li> </ul>	

Education.” To be submitted one of these days.

- “The Role of Sentiment in Online Learning Conversations: An analysis of sentiment across pedagogical constructs.” To be submitted to IEEE TLT spring 2016.

**Manuscripts Under Double-Blind Peer-Review**

- “Online Social Networking Software as Ad-Hoc Project Management Software in Capstone Project Courses,” submitted to *International Journal On Advances in Intelligent Systems*, September, 2016.
- “How Design Science Research Helps Improve Learning Efficiency in Online Conversations.” Submitted to Communications of the Association for Information Systems on Dec. 4, 2016.
- “Patient Generated Data Sharing Preferences of the Underserved: Implications for Health Information Exchange Models of e-Consent,” submitted to *International Journal of Healthcare Technology and Management* September, 2016.

**2017**

- **B. Thoms**, E. Eryilmaz, G. Mercado, B. Ramirez, J. Rodriguez. “Towards A Sentiment Analyzing Discussion Board,” *Hawaiian Intl. Conference on System Sciences (HICSS 50)*.

**2016**

- E. Eryilmaz, **B. Thoms**, J. Mary, R. Kim and A. Fuchsman. “Learning Effects of Attention Guidance in Online Discussions,” *AMCIS 2016*, August 11-14, 2016, San Diego, CA.
- **B. Thoms**. “Towards the Construction of Next Generation Online Discussion Boards – Mining Online Conversations at Channel Islands for Useful Design Patterns,” 2015 Faculty Project Award and Report, submitted to CSU CI Foundation.
- E. Eryilmaz, **B. Thoms**, J. Mary, R. Kim, J. Canelon. Task Oriented Reading of Instructional Materials and Its Relationship to Message Scores in Online Learning Conversations, *Hawaiian Intl. Conference on System Sciences (HICSS 49)*, January 5-8, 2016, Kauai, Hawaii.

**ACADEMIC AND PROFESSIONAL PUBLICATIONS (CONT'D)**

**2015**

- **B. Thoms**, E. Eryilmaz. “Online Learning Community Software to Support Success in Project Teams,” *Fifth International Conference on Advanced Collaborative Networks, Systems and Applications*, Oct., 2015.
- E. Eryilmaz, **B. Thoms**, J. Mary, R. Kim, J. Van der Pol. 2015). “Instructor versus Peer Attention Guidance in Online Learning Conversations,” *AIS Transactions of Human Computer Interaction*, v7(4). (Acceptance Rate 0.36).

**2014**

- S. Peterson, S. Hovick, A. Burton-Chase, F. Ba, K Basen-Engquist, M. Fisch, N. Botts, T. Horan, **B. Thoms**, F. Stingo, R. Yzquierdo, C. Galvan, A. Rieber, “Preferences for eHealth Technology in Meeting the Health Information Needs of Underserved Cancer Survivors,” *PSYCHO-ONCOLOGY*, Oct., 2014, v23.
- **B. Thoms**, E. Eryilmaz, “How Media Choice Affects Learner Interactions in Distance Learning Classes,” *Computers & Education*, June, 2014, v75.
- E. Eryilmaz, M. Chiu, **B. Thoms**, J. Mary, R. Kim, “Design and evaluation of instructor-based and peer-oriented attention guidance functionalities in an open source anchored discussion system,” *Computers & Education*, Feb., 2014, v71.
- **B. Thoms**, E. Eryilmaz, “Designing a Peer Support Network for

Introductory Computer Programming Courses using Social Networking Software,” *Hawaiian Intl. Conference on System Sciences 47*, Jan. 2014.

- E. Eryilmaz, **B. Thoms**, J. Mary, R. Kim, J. Van der Pol, “Facilitating Guidance in Online Learning Conversations,” *Hawaiian Intl. Conference on System Sciences 47*, Jan. 2014.

**2013**

- **B. Thoms**, E. Eryilmaz, “Introducing a Twitter Discussion Board to Support Learning in Online and Blended Learning Environments,” *Education & Information Technologies*, Sept. 2013.

**2012**

- **B. Thoms**. “Perceptions and Outcomes of Microblogging in Higher Education.” *Journal of Information Technology Education (JITE)*, May 2012, Vol. 11.
- **B. Thoms**. “Integrating Blogging and Microblogging to Foster Learning and Social Interaction in Online Learning Communities,” *Hawaiian Intl. Conference on System Sciences (HICSS 45)*, Jan., 2012, Maui, HI.

**2011**

- **B. Thoms**. “A Dynamic Social Feedback System to Support Learning and Social Interaction in Higher Education,” *IEEE Transactions on Learning Technologies*, Issue: 99, Mar. 2011. (**Winner of the SUNY Outstanding Publication Award**)
- N. Botts, **B. Thoms**, T., Horan. “Cloud Computing Architectures for the Underserved: Public Health Cyberinfrastructures through a Network of HealthATMs,” *American Journal of Preventive Medicine*, May 2011. 40(5), pp. S115-S122.

**2010**

- **B. Thoms**, N. Garrett, T. Ryan. “The Design and Evaluation of a Peer Ratings System for Online Learning Communities.” *Hawaiian Intl. Conference on System Sciences (HICSS 43)*, Jan., 2010, Kauai, HI.
- N. Botts, **B. Thoms**, A. Noamani, T. Horan. “Cloud Computing Architectures for the Underserved: Public Health Cyberinfrastructures through a Network of HealthATMs.” *Hawaiian Intl. Conference on System Sciences (HICSS 43)*, Jan., 2010, Kauai, HI.

**2009**

- **B. Thoms**, N. Garrett, T. Ryan. “Enhancing Scholarly Conversation through an Online Learning Community,” *In Advances in Cognitive Informatics and Natural Intelligence book series, “ICTs for Modern Educational and Instructional Advancement: New Approaches to Teaching,”* Oct. 2009.

**ACADEMIC AND PROFESSIONAL PUBLICATIONS (CONT'D)****2009 (Cont'd)**

- **B. Thoms**, N. Garrett and T. Ryan, "Online Learning Communities in the New 'U'. *Intl. Journal of Networking and Virtual Organisations*, 6(5), pp. 499-517, 2009.
- N. Garrett, **B. Thoms**, T. Ryan and N. Alrushiedat, "Developing the Social Portfolio," *On the Horizon*, 17(3), 2009.
- N. Botts, **B. Thoms**, T. Horan. "HealthATM: Interactive Services for Underserved Populations," In *AMIA 2009 Symposium*, San Francisco, CA, Nov. 14-18.
- **B. Thoms**. "Expanding Learning and Social Interaction through Intelligent Systems Design: Implementing a Reputation and Recommender System for the Claremont Conversation Online,". *Claremont Graduate University*, Claremont, CA, Jul. 2009.
- N. Botts, **B. Thoms**, T. Horan. "HealthATM Technical Specifications," White Paper.

**2008**

- **B. Thoms**, N. Garrett, M. Soffer and T. Ryan, "Resurrecting Graduate Conversation through an Online Learning Community," *Intl. Journal of Information Communication and Technology Education (IJICTE)*, Issue #15 Vol. 4 No.3 Jul-Sep 2008.
- **B. Thoms**, N. Garrett, JC Herrera and T. Ryan, "Understanding the Roles of Knowledge Sharing and Trust in Online Learning Communities," *Hawaiian Intl. Conference on System Sciences (HICSS 41)* Jan., 2008, Waikoloa, HI (**Best Paper Nomination**).

**2007**

- **B. Thoms**, N. Garrett, M. Soffer and T. Ryan, "Resurrecting Graduate Conversation through an Online Learning Community," *IADIS Multi Conference on Computer Science and Information Systems* July, 2007, Lisbon, Portugal (**Best Research Paper Award**).
- N. Garrett, **B. Thoms**, M. Soffer and T. Ryan, "Extending the Elgg Social Networking System to Enhance the Campus Conversation," *Second Annual Design Research in Information Systems (DESRIST)* May, 2007, Pasadena, CA (**Best Research Paper Nomination**).
- T. Miller, G. Leroy, S. Chatterjee, J. Fan, and **B. Thoms**, "A Classifier to Evaluate Language Specificity of Medical Documents," *Hawaiian Intl. Conference on System Sciences (HICSS 40)* Jan., 2007, Waikoloa, HI. (**Best Research Paper Award**).

**2004**

- **B. Thoms**, *Outsourcing: Inside Out and Outside In*. (MSIS Thesis). Stevens Institute of Technology, Hoboken, New Jersey, Jan. 2004.

**PRESENTATIONS AND INVITED LECTURES****2017**

- "Towards a Sentiment-Analyzing Discussion Board," HICSS 50, Jan. 4-7, Waikaloa, HI.

**2016**

- "Post-2016 Presidential Election: Trends in Online Social Networking", Guest speaker on 1590 KVTa News Talk Radio, December 19, 2016.
- "Introducing Speq-DB: A Simple Program for Enhancing Quality in Online Discussion Boards," Research to be presented by Rafael Hernandez at Southern California Conference on Undergraduate Research (SCCUR), UC Riverside, Nov. 14, 2016.
- "Towards a Sentiment-Analyzing Discussion Board," Computer Science Colloquium, Sonoma State University, Sonoma, CA, October 20, 2016

(scheduled).

- “Introducing Speq-DB: A Simple Program for Enhancing Quality in Online Discussion Boards,” Research to be presented by Sara Colon Cerezo at the National Diversity in STEM Conference, Long Beach Convention Center, Long Beach, CA, Oct. 13-15, 2016.
- “Get SMART (Social Media Applications and Really-useful Tools),” Library Lecture Series, Newbury Park, CA, October 10, 2016 (scheduled).
- “Learning Effects of Attention Guidance in Online Discussions,” AMCIS 2016, San Diego, CA, August 12, 2016 .

## PRESENTATIONS AND INVITED LECTURES (CONT'D)

### **2016 Cont'd**

- “Introducing SPEQ-DB: A Simple Program for Enhancing Quality in Online Discussion Boards,” Project ACESSO Poster Session, June 22, 2015, Camarillo, CA.
- Creating SAD: The Sentiment Analyzing DiscussionBoard," CWIC Southern California 2016, student research presented by Glo Mercado, April 9, 2016, Ventura, CA.
- “Social Software Approaches for Non-Profits,” Guest Lecture, CSU Channel Islands, March 8, 2016, Camarillo, CA.
- “Task Oriented Reading of Instructional Materials and Its Relationship to Message Scores in Online Learning Conversations ,” HICSS 49, (research presented by Evren Eryilmaz), January 5-8, 2016, Kauai, HI.

### **2015**

- “Challenges in Knowledge Sharing,” Panel invitation at COLLA 2015, St. Juliens, Malta, October 12, 2015.
- “Online Learning Community Software to Support Success in Project Teams,” COLLA 2015, St. Juliens, Malta, October 12-14, 2015.
- “Social Network Analysis Lab 1,” Summer Scholars Institute, August 5, 2015, Camarillo, CA.
- “Social Network Analysis Lab 2,” Summer Scholars Institute, August 5, 2015, Camarillo, CA.
- “Introducing S.A.D.: The Sentiment Analyzing Discussion Board,” Project ACESSO Poster Session, June 21, 2015, Camarillo, CA.
- “Social Software Supports STEM Students,” Computer Science Lecture Series, March 11, 2015, Camarillo, CA.

### **2014**

- "Attention Guidance in Online Learning Conversations," HICSS 47, Jan. 6-9, Waikaloa, HI.
- “How Social Networking Software can Facilitate Peer Support in Computer Programming Courses,” School of Business Research Colloquia, Feb. 20, 2014, Farmingdale, NY.
- "Designing a Peer Support System for Computer Programming Courses using Online Social Networking Software," HICSS 47, Jan. 6-9, Waikaloa, HI.

### **2013**

- “Constructing Intelligent Social Software for College Campuses.” SUNY New Paltz, Nov. 8, 2013, New Paltz, NY.
- “Case Studies in Persuasive Design.” School of Arts and Sciences, CSU Channel Islands, Oct. 18, 2013, Camarillo, CA.
- “Student Perceptions of Microblogging: Integrating Twitter with an Online Discussion Board to Support Learning and Interaction,” *9th Annual Teaching and Learning Technologies Conference* , Apr. 26, 2013, SUNY Old Westbury.
- “A Dynamic Social Feedback System to Support Learning and Social



Interaction in Higher Education,” SUNY Farmingdale CTLT Award Ceremony for Outstanding Scholarly Publication, Farmingdale State University, Apr. 17, 2013, Farmingdale, NY.

**2012**

- “Online Learning Communities to Support Teaching and Learning.” CTLT 2nd Annual Conference on Teaching and Learning: Current Research in the Scholarship of Teaching and Learning, Farmingdale State University, Apr. 27, 2012, Farmingdale, NY.
- “Effective Teaching using Transdisciplinary Methods,” School of Business, CSU Channel Islands, Camarillo, CA, Feb. 3.
- “Integrating Blogging and Microblogging to Foster Learning and Social Interaction in Online Learning Communities.” *HICSS 45*, Jan. 4-7, 2012, Maui, HI.

**PRESENTATIONS AND INVITED LECTURES (CONT'D)**

**2011**

- “Combining Microblogging with Blogging to foster Learning and Social Interaction in Online Learning Communities,” School of Information Systems and Technology at Claremont Graduate University, Jun. 6, 2011, Claremont, CA.
- “Elgg Mash-up with Twitter to foster Learning and Social Interaction in Higher Education,” Department of Computer and Information Systems at the School of Business, Farmingdale State University, Mar. 24, 2011, Farmingdale, NY.

**2010**

- “Server-side Programming: A Technology Tutorial,” Department of Computer and Information Systems at the School of Business at Farmingdale State University, Nov. 4, 2010, Farmingdale, NY.
- “Binary Search Trees: A Technology Tutorial,” Department of Computer and Information Systems at the School of Business at Farmingdale State University, Apr. 23, 2010, Farmingdale, NY.
- “The Design and Evaluation of a Peer Ratings System for Online Learning Communities.” 43rd Annual Hawaiian Int’l Conference on System Sciences, Jan. 4-7, 2010, Kauai, HI.

**2009 (Cont’d)**

- “Cloud Computing Architectures for the Underserved: Public Health Cyberinfrastructures through a Network of HealthATMs.” HICSS 43, *Jan. 4-7, 2010, Kauai, HI*.
- “Lecture on User Experiences and Systems Design”, California Art Institute, Dec. 15, 2009, Santa Ana, CA.
- “Expanding Learning and Social Interaction through Intelligent Systems Design”, School of Information Systems and Technology, Claremont Graduate University, Jul. 29, 2009, Claremont, CA.
- “Lecture on Strategic Information Systems”, IT 509 MBA course at Woodbury University, Jun. 13, 2009, Burbank, CA.
- “Database Normalization: A Technology Tutorial”, Dept. of Computer and Information Systems, School of Business, SUNY Farmingdale, Apr. 23, 2009, Farmingdale, NY.
- “Web Development Roundtable”, Craig School of Business at California State University, Fresno, Apr. 3, 2009, Fresno, CA.
- “Expanding Learning and Social Interaction through Intelligent Systems Design”, Craig School of Business at California State University, Fresno, Apr. 3, 2009, Fresno, CA.

**2008**

- “Claremont Conversation Online Open Source Tutorial”, Guest Lecture on Social Technologies, Nov. 6, 2008, Claremont, CA.
- “July 2008 Claremont Conversation Online Update”, Social Learning Software Lab. Jul. 30, 2008, Claremont CA.
- “Beyond the Claremont Conversation”, Educational Studies Faculty & Board of Visitors. Apr. 03, 2008, Claremont CA.
- "Understanding the Roles of Knowledge Sharing and Trust in Online Learning Communities," *HICSS 41*, Jan. 7-10, Waikaloa, HI.

**2007**

- “Beyond the Claremont Conversation”, Faculty Senate. Nov. 26, 2007, Claremont CA.
- “Graduate Student Success with the e-Portfolio”, Graduate Student Success Symposium. Nov. 2, 2007, Claremont, CA.
- “Elgg Open Source Tutorial,” Guest Lecture on Social Technologies. Oct. 17, 2007, Claremont, CA.

- “Resurrecting Graduate Conversation through an Online Learning Community,” IADIS Multi Conference on Comp. Science and Info. Systems, Lisbon, Portugal, Jul. 3-8, 2007.

**PRESENTATIONS AND INVITED LECTURES (CONT'D)**

**2007 Cont'd**

- “Extending the Elgg Social Networking System to Enhance the Campus Conversation,” 2nd Design Research in Information Systems (DESRIST), Pasadena, CA, May 14-15, 2007.
- “Graduate Students & Their Advisors: Ships That Pass in the Night?” NACADA Pacific Region 9 Conference San Diego, CA Mar. 21-23, 2007.
- “Please Advise!: Faculty and Student Perceptions of Graduate School Advising,” 19th Annual Lilly-West Mar. 16-17, 2007 at the Kellogg West Ranch at Cal Poly Pomona.

**2006**

- CIO Roundtable Presentation on Online Social Learning / Social Networking, Harper Hall, Claremont, CA Apr. 11, 2006.

**COURSES TAUGHT**

**Spring 2017 (Scheduled)**

- COMP 597, Master Thesis
- COMP 520, Advanced Database Systems
- COMP / IT 499, Capstone Project
- COMP / IT 491, Capstone Preparation
- COMP / IT 420, Database Systems
- COMP / COMM / SOC 342, Internet-Based Social Networking

**Fall 2016**

- COMP 597, Master Thesis
- COMP / 494, Independent Research
- COMP / IT 491, Capstone Preparation
- IT 401, Web Intelligence
- COMP / IT 420, Database Systems

**Spring 2016**

- COMP 597, Master Thesis
- COMP / IT 499, Capstone Project
- COMP 494, Independent Research
- COMP / IT 420, Database Systems
- COMP / COMM / SOC 342, Internet-Based Social Networking

**Fall 2015**

- COMP 597, Master Thesis
- COMP 520, Advanced Database Systems
- COMP / IT 491, Capstone Preparation
- HIT 152, Programming for Health Informatics

**Spring 2015**

- COMP / IT 420, Database Systems
- COMP / COMM / SOC 342, Internet-Based Social Networking

**Fall 2014**

- COMP 572, Multiagent Systems
- COMP / IT 420, Database Systems

**Past Courses**

- BCS 430, Capstone Project
- BCS 370, Data Structures (Advanced Programming with C++)
- BCS 350, Web Database Development (PHP and MySQL)
- BCS 345, Programming in Java
- BCS 301, Systems Analysis and Design
- BCS 300, Management of Information Systems
- BCS 120, Programming Concepts and Problem Solving (VB and C++)
- Database Administration x 4 courses (SQL Server, Oracle, MS Access and MySQL)

## PEER REVIEWS

- ACM Transactions on Computing Education
- AIS Transactions on Human-Computer Interaction
- Americas Conference on Information Systems (AMCIS)
- Computers and Education (C&E)
- Decision Support Systems (DSS)
- Education and Information Technologies (EIT)
- Hawaiian International Conference on System Sciences (HICSS)
- IEEE Transactions on Learning Technologies (TLT)
- Intl. Journal of Networking and Virtual Organizations (IJNVO)
- Intl. Journal of Information and Communication Technology Education (IJICTE)
- Intl. Information Management Association (IIMA)
- Intl. Conference on Information Systems (ICIS)
- Journal of Information Technology Education (JITE)
- Persuasive Conference

## PROFESSIONAL MEMBERSHIPS

- Institute of Electrical and Electronics Engineers (IEEE). Member #90443970.
- Association for Information Systems (AIS), past member.
- Informing Science Institute (ISI), past member.

## ACTIVITIES AND AWARDS

### 2017

- IRA #845 – Field Trip to Cal Tech Seminar Series (\$2,535.00). Awarded in Fall 2016, this awards will accommodate a group of CI students to attend Dr. Adam Wierman’s presentation, “How Clean is the Cloud.” The trip will provide students the opportunity to tour the Cal Tech campus, which consists of unique academic buildings and high-tech labs, as well as attend Dr. Wierman’s presentation, which is a part of the Earnest C. Watson Lecture Series.
- IRA #851 – Competitive Programming Preparation (\$1,150.00). Awarded in Fall 2016, With support from IRA funding, resources will be used to facilitate 3 programming meet-ups, in preparation for the Computer Science (CS) Programming Guru Contest, which will be held on April 21, 2017 and the ACM International Collegiate Programming Contest (ICPC). The greater goal of these meet-ups is to introduce and open up participation to a larger population of students.

### 2016

- [CIValues.org](http://civalues.org) – Constructed the webspace for civalues.org, which allows CI faculty to publicly renew their commitment to CI’s mission pillars and support diversity. Construction of the site involved the purchase of civalues.org, software development using PHP for server-side coding, MySQL for database development and Bootstrap for the website’s look and feel. This effort involved coordination with other members of the CI faculty including Blake Gillespie, Brad Monsma and Sean Kelly.
- Project ACCESO Summer Research – Provides small teams of students an opportunity to conduct research with CI faculty in STEM disciplines. In 2016, students from CI, Oxnard College and Santa Barbara City College collaborated on a data mining project analyzing online discussion data. The analysis helped guide the construction of new discussion software that aims to improve the quality of online discussions in educational settings. A write-up of the project can be found here: <http://blog.socialxyz.com/a-simple-program-for-enhancing-quality-in->

[online-discussion-boards.](#)

## ACTIVITIES AND AWARDS CONT'D

- CI Foundation Funds – Toward the Construction of Next Generation Online Discussion Boards (\$3,610). Awarded in December 2015, the foundation funds allowed two undergraduate researchers from computer science and sociology. A complete report can be found online: [http://socialxyz.com/pubs/Foundation\\_Report-brianthoms.pdf](http://socialxyz.com/pubs/Foundation_Report-brianthoms.pdf).
- CI Minigrant Award – Health e-Consent Framework for Patient Generated Data: Considering the Needs of At-Risk Populations (\$5,400). Awarded in spring 2016, the three-unit buyout for fall 2016 / spring 2017 will provide course release to work towards a framework for guiding electronic consent (e-Consent) policies to help govern increasing multitudes of personal medical devices, health apps and related personal health information systems (PHIS).
- IRA #806 – 2016 ACM Intercollegiate Programming Contest (\$2,520.00). Awarded in Spring 2016, the funds will afford Computer Science to send four teams to compete in the 2016-2017 ACM International Collegiate Programming Contest at Riverside Community College in November. Past results can be found here: <http://compsci.csuci.edu/news-and-events/acm-programming-results-2015.htm>.
- ALAS/OLAS/CIS Faculty Fellowship (\$1,300) – The Fellowship is designed to help faculty include high impact practices into their courses. During this program, COMP / COMM / SOC 342 was redesigned to include a community-based learning component, where students work and learn alongside community partners as they work towards completing course milestones.
- ACM ICPC Coach – As an ACM Coach, I am responsible for all logistics involed for the ACM programming competition. This involves setting up each of CI's four teams, arranging travel (supported by IRA #806) and bringing and ensuring the safe return of all student participants.
- Spring 2016 Capstone Celebration – Launched Computer Science's first-ever capstone poster event.

### 2015

- Project ACCESO Summer Research – Provides small teams of students an opportunity to conduct research with CI faculty in STEM disciplines. In 2015, students from CI and Ventura College collaborated on a data mining project analyzing online discussion data. The analysis helped guide the construction of new discussion software that measured the sentiment of online conversations.
- IRA #718 – 2015 ACM Intercollegiate Programming Contest (\$2,220.00). Awarded in July 2015, the funds afforded Computer Science to send four teams to compete in the 2015 ACM International Collegiate Programming Contest at Riverside Community College in fall 2015. More information can be found online: <http://compsci.csuci.edu/news-and-events/acm-programming-results.htm>. Approved Funding (\$2,220)
- IRA #690 – Logging-on to Internet-based Social Networks Offline (\$5,520.00). Awarded in January 2015, the IRA fund were put to use in spring 2016, where a group of students toured the Facebook campus, met with job recruiters and visited The Tech Museum in Palo Alto. A summary of the field trip can be found online: <http://blog.socialxyz.com/?p=320>.
- Blended Learning Preparation Program (BLPP) Cohort V (\$1,500) – BLPP is designed to improve student learning at CI by improving the use of technology in teaching. During this course COMP / COMM / SOC 342 was redesigned to include a course learning community. More specifically, course learning objectives were designed in a way to integrate widely popular social networking software such as Twitter.

- ACM ICPC Coach – As an ACM Coach, I am responsible for all logistics involved for the ACM programming competition. This involves setting up each of CI's four teams, arranging travel (supported by IRA #718) and bringing and ensuring the safe return of all student participants.
- Fall 2015 Capstone Celebration – Launched Computer Science's first-ever capstone poster event.



**AWARDS AND ACTIVITIES (CONT'D)****2014**

**ACM ICPC Coach** – As an ACM Coach, I am responsible for all logistics involed for the ACM programming competition. This involves setting up each of CI's four teams, arranging travel (supported by IRA #524) and bringing and ensuring the safe return of all student participants.

**2013**

- Outstanding Scholarly Publication Award, State University of New York

**2012**

- SUNY Title III “Strengthening Institutions”
- UUP Individual Development Award (sp. 2012)

**2008- 2009**

- CGU Research Travel Award (HICSS)
- HICSS Best Paper Nomination
- Student Council President (f. 2008 – sp. 2009)

**2007**

- IADIS Award for Best Research Paper
- HICSS Best Paper Nomination
- DESRIST Best Paper Nomination
- CGU Research Travel Award (IADIS)
- Hillcrest Transdisciplinary Grant (awarded 2007)
- SISAT Doctoral Screening Exam (Passed with Distinction)
- Student Council Vice President
- CGU Faculty Learning Community

**2006**

- Kozmetsky Award for Transdisciplinary Research (for 2006-2007)
- Preparing Future Faculty Fellow (2006-2007)

**UNIVERSITY AND DEPARTMENT SERVICE****2014 - 2017**

- CSU CI Computer Science Web Content Manager (f. 2014 - present)
- CSU CI Extended Education Advisory Committee (f. 2016 - present)
- CSU CI Student Activities Policies and Procedures Committee (f. 2016 - present)
- CSU CI Faculty Affairs Committee (f. 2014 through sp. 2016)
- CSU CI Faculty Search Committee (f. 2014, f. 2015, sp. 2016, sp. 2017)
- CSU CI CS Lab Coordinator (f. 2014 - present)
- CSU CI CS Tutor Coordinator (f. 2014 - present)
- CSU CI Computer Science Club Advisor (f. 2014 – present)
- CSU CI Graduation Faculty Marshall (s. 2015, s 2016)

**2010 - 2016**

- SUNY Farmingdale Board of Experts in IT (sp. 2012-2014)
- SUNY Farmingdale Gaming and Anime Club Adviser (f. 2011 – 2014)
- SUNY Farmingdale International Education Committee (f. 2011, Chair in 2013)
- SUNY Farmingdale Tech Fee Committee (f. 2012 – sp. 2014)
- SUNY Fulbright Panel
- SUNY Farmingdale Tech Club co-Adviser (sp. 2010 – sp. 2014)
- SUNY Farmingdale Systems Track Committee (f. 2010 – sp. 2014)
- SUNY Farmingdale Programming Track Committee (f. 2010 – sp. 2014)
- SUNY Farmingdale Teaching and Learning Technology Community (f. 2010 – sp. 2014)
- SUNY Farmingdale Health IT Program Development Committee
- SUNY Farmingdale College of Business Promotions Committee
- SUNY Farmingdale Faculty Search Committee (f. 2011 – sp. 2013; Chair

f. 2013)

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[HTTP://BRIANTHOMS.COM](http://brianthoms.com) / [HTTP://SOCIALXYZ.COM](http://socialxyz.com)

# BRIAN PATRICK THOMS

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## EDUCATION

### Information Systems and Technology, PhD 2010

*Claremont Graduate University, Claremont, CA*  
 Dissertation: Design Science Research on the construction and implementation of a reputation and recommender system in online collaborative software.  
 Activities: 2008 – 2010 School Student Council President (V.P. 2007-2008).

### Information Systems, MS 2006

*Stevens Institute of Technology, Hoboken, NJ*  
 Thesis: Trends in information technology outsourcing.

### Computer Science, BS 2001

*Fordham University, Bronx, NY*  
 Dean's List Student, Atlantic-10 Scholar Athlete.  
 Activities: *Division-1 Soccer, Computer Science Club, Computer Science Tutor.*

## DEGREE PUBLICATIONS

### PhD Dissertation

Expanding Learning and Social Interaction through Intelligent Systems Design: Implementing a Reputation and Recommender System for the Claremont Conversation Online.

### MS Thesis

Outsourcing: Inside Out and Outside In, Stevens Institution of Technology.

## TEACHING POSITIONS

### Assistant Professor 2014 – Present

*CSU Channel Islands, Camarillo, CA*

Teach undergraduate and graduate courses in computer science and information technology, serve on department- and college-wide committees and perform research in social and health informatics. Class sizes up to 24 students in traditional and hybrid learning environments.

### Assistant Professor 2010 – 2014

*SUNY Farmingdale, Farmingdale, NY*

Teach classes in information systems and computer programming, serve on department- and college-wide committees and perform research in social learning and health informatics. Class sizes up to 26 students in traditional, online and hybrid learning environments.

### Lecturer 2008 – 2010

*San Diego State University, San Diego, CA*

Taught general courses in information systems. Class sizes up to 250

students.	
<b>Online Instructor / Course Lead</b> <i>Kaplan University</i> Taught various courses in database technologies. Class sizes up to 30 students.	<b>2010- 2012</b>
<b>Instructor</b> <i>California Art Institute, Orange County, CA</i> Taught courses on systems analysis and design and user interface design. Class sizes fewer than 10 students.	<b>2010</b>
<b>TEACHING POSITIONS (CONT'D)</b>	
<b>Preparing Future Faculty Fellow</b> <i>Claremont Graduate University, Claremont, CA</i> The Preparing Future Faculty program had four major goals: prepare students to teach and advise, prepare students to be outstanding researchers, prepare students to perform service at the departmental and university level, and prepare students for the academic job market.	<b>2006 -2007</b>
<b>RESEARCH POSITIONS</b>	
<b>Research Fellow / Software Engineer for HealthATM</b> <i>Kay Center for E-health Research, Claremont, CA</i> As <u>Chief Software Engineer</u> , my responsibilities center on the analysis, design and development of HealthATM, a complete web-based health information system for e-health kiosks and tablet computers. Our software leverages cloud computing services to deliver secure personal health records for safety-net populations. We are currently constructing mobile agents and intelligent agents to greater facilitate personal health management and care provider support. As <u>Research Fellow</u> , my responsibilities focus on measuring the impact of HealthATM within clinical settings. My role has helped launch HealthATM Inc., <a href="http://www.HealthATM.com">www.HealthATM.com</a> . Technologies: C#, PHP, MySQL, XML/XSL, AJAX/HTML.	<b>2009 -2010</b>
<b>Research Assistant / Associate</b> <i>Social Learning Software Lab, Claremont, CA</i> As <u>Senior Research Assistant</u> for SL <sup>2</sup> , my role centered on the research and design of social software in educational settings in addition to helping set strategy for new research projects. Specifically, my research focused on the design, implementation and measurement of intelligent social software systems to enhance learning and interaction in educational environments (see Dissertation). Technologies: PHP, MySQL, XML, AJAX/HTML.	<b>2005 -2010</b>
<b>Research Associate</b> <i>Safe Road Maps / Crash Help Lab, Claremont, CA</i> As <u>Research Associate</u> for the Safe Road Maps Project, <a href="http://www.SafeRoadmaps.org">www.SafeRoadmaps.org</a> , my role focused on implementing creative solutions for the SRM web-based platform. Technologies: ArcGIS, Google Earth / Maps, C#, MSSQL, XML/XSL, AJAX/HTML.	<b>2009 -2010</b>
<b>Research Assistant</b>	<b>2005 -2006</b>

<p><i>Intelligent Systems Lab, Claremont, CA</i>                  As <u>Research Assistant</u>, I focused on using natural language processing to reduce the complexity of health information across the Internet.</p>	
<p><b>PROFESSIONAL POSITIONS</b></p>	
<p><b>Chief Software Engineer and co-Founder</b>  <i>Health e-Services LLC, Providence, RI</i>                  Facilitate healthy lifestyles in at-risk populations through innovative systems development and data analytics. View Health e-Services online at <a href="http://www.HealthEServices.com">www.HealthEServices.com</a>.</p>	<p><b>2013 – present</b></p>
<p><b>Software / IT Consultant</b>  <i>BrianThoms.com, Orange / Los Angeles / San Diego, CA, New York, NY</i>                  Work closely with small-to-midsize organizations on various projects to develop customized web-based information and ecommerce systems in a variety of technologies.  <i>Technologies</i>: Java, .Net, PHP, MySQL/MSSQL, XML/XSL/JSON, AJAX/JavaScript.</p>	<p><b>2009 – present</b></p>
<p><b>Chief Software Engineer</b>  <i>HealthATM, Claremont, CA</i>                  Performed analysis, design and development for HealthATM, a complete web-based health information system for e-health kiosks and tablet computers.</p>	<p><b>2009 – 2013</b></p>
<p><b>PROFESSIONAL POSITIONS (CONT'D)</b></p>	
<p><b>Software Contractor</b>  <i>San Diego County Office of Education, San Diego, CA</i>                  Architected and developed a web-based information system for the Migrant Education Program. The system provides service workers with an electronic method of recording educational services for the families of the migrant workforce via mobile/tablet computing.  <i>Technologies</i>: C#/.Net, SQL, XML, AJAX/HTML.</p>	<p><b>2007 – 2009</b></p>
<p><b>Programmer / Analyst</b>  <i>Salomon Smith Barney - Global Finance Desk, New York, NY</i>                  Systems analyst and software programmer for the Global Finance Desk Trading System. Responsibilities involved strategic problem solving and creative data analysis for Finance Desk business partners. Role also involved project leadership and management of onshore and offshore global development projects.  <i>Technologies</i>: Java, C/C++, perl, UML, PHP, HTML, XML, Encryption Schemas, SQL, UNIX, MS Project.</p>	<p><b>2001 –2005</b></p>
<p><b>Web Developer / Designer</b>  <i>ClearDev, New York, NY</i>                  Assisted in creating, uploading and maintaining web sites for small-to-midsize commercial businesses during the Dotcom Era.  <i>Technologies</i>: PERL, HTML, JavaScript, ASP, Databases, Photoshop, Flash.</p>	<p><b>1998 –2001</b></p>
<p><b>ACADEMIC AND PROFESSIONAL PUBLICATIONS</b></p>	
<p><b><u>Blog (s)</u></b></p> <ul style="list-style-type: none"> <li>• <b>B. Thoms</b>. “Social XYZ Blog”, Blog available at <a href="http://blog.SocialXYZ.com">http://blog.SocialXYZ.com</a>.</li> </ul>	
<p><b><u>In-Progress</u></b></p> <ul style="list-style-type: none"> <li>• “Code Red: Using Heatmaps to Facilitate Software Programming</li> </ul>	

Education.” To be submitted one of these days.

- “The Role of Sentiment in Online Learning Conversations: An analysis of sentiment across pedagogical constructs.” To be submitted to IEEE TLT spring 2016.

**Manuscripts Under Double-Blind Peer-Review**

- “Online Social Networking Software as Ad-Hoc Project Management Software in Capstone Project Courses,” submitted to *International Journal On Advances in Intelligent Systems*, September, 2016.
- “How Design Science Research Helps Improve Learning Efficiency in Online Conversations.” Submitted to Communications of the Association for Information Systems on Dec. 4, 2016.
- “Patient Generated Data Sharing Preferences of the Underserved: Implications for Health Information Exchange Models of e-Consent,” submitted to *International Journal of Healthcare Technology and Management* September, 2016.

**2017**

- **B. Thoms**, E. Eryilmaz, G. Mercado, B. Ramirez, J. Rodriguez. “Towards A Sentiment Analyzing Discussion Board,” *Hawaiian Intl. Conference on System Sciences (HICSS 50)*.

**2016**

- E. Eryilmaz, **B. Thoms**, J. Mary, R. Kim and A. Fuchsman. “Learning Effects of Attention Guidance in Online Discussions,” *AMCIS 2016*, August 11-14, 2016, San Diego, CA.
- **B. Thoms**. “Towards the Construction of Next Generation Online Discussion Boards – Mining Online Conversations at Channel Islands for Useful Design Patterns,” 2015 Faculty Project Award and Report, submitted to CSU CI Foundation.
- E. Eryilmaz, **B. Thoms**, J. Mary, R. Kim, J. Canelon. Task Oriented Reading of Instructional Materials and Its Relationship to Message Scores in Online Learning Conversations, *Hawaiian Intl. Conference on System Sciences (HICSS 49)*, January 5-8, 2016, Kauai, Hawaii.

**ACADEMIC AND PROFESSIONAL PUBLICATIONS (CONT'D)**

**2015**

- **B. Thoms**, E. Eryilmaz. “Online Learning Community Software to Support Success in Project Teams,” *Fifth International Conference on Advanced Collaborative Networks, Systems and Applications*, Oct., 2015.
- E. Eryilmaz, **B. Thoms**, J. Mary, R. Kim, J. Van der Pol. 2015). “Instructor versus Peer Attention Guidance in Online Learning Conversations,” *AIS Transactions of Human Computer Interaction*, v7(4). (Acceptance Rate 0.36).

**2014**

- S. Peterson, S. Hovick, A. Burton-Chase, F. Ba, K Basen-Engquist, M. Fisch, N. Botts, T. Horan, **B. Thoms**, F. Stingo, R. Yzquierdo, C. Galvan, A. Rieber, “Preferences for eHealth Technology in Meeting the Health Information Needs of Underserved Cancer Survivors,” *PSYCHO-ONCOLOGY*, Oct., 2014, v23.
- **B. Thoms**, E. Eryilmaz, “How Media Choice Affects Learner Interactions in Distance Learning Classes,” *Computers & Education*, June, 2014, v75.
- E. Eryilmaz, M. Chiu, **B. Thoms**, J. Mary, R. Kim, “Design and evaluation of instructor-based and peer-oriented attention guidance functionalities in an open source anchored discussion system,” *Computers & Education*, Feb., 2014, v71.
- **B. Thoms**, E. Eryilmaz, “Designing a Peer Support Network for

Introductory Computer Programming Courses using Social Networking Software,” *Hawaiian Intl. Conference on System Sciences 47*, Jan. 2014.

- E. Eryilmaz, **B. Thoms**, J. Mary, R. Kim, J. Van der Pol, “Facilitating Guidance in Online Learning Conversations,” *Hawaiian Intl. Conference on System Sciences 47*, Jan. 2014.

**2013**

- **B. Thoms**, E. Eryilmaz, “Introducing a Twitter Discussion Board to Support Learning in Online and Blended Learning Environments,” *Education & Information Technologies*, Sept. 2013.

**2012**

- **B. Thoms**. “Perceptions and Outcomes of Microblogging in Higher Education.” *Journal of Information Technology Education (JITE)*, May 2012, Vol. 11.
- **B. Thoms**. “Integrating Blogging and Microblogging to Foster Learning and Social Interaction in Online Learning Communities,” *Hawaiian Intl. Conference on System Sciences (HICSS 45)*, Jan., 2012, Maui, HI.

**2011**

- **B. Thoms**. “A Dynamic Social Feedback System to Support Learning and Social Interaction in Higher Education,” *IEEE Transactions on Learning Technologies*, Issue: 99, Mar. 2011. (**Winner of the SUNY Outstanding Publication Award**)
- N. Botts, **B. Thoms**, T., Horan. “Cloud Computing Architectures for the Underserved: Public Health Cyberinfrastructures through a Network of HealthATMs,” *American Journal of Preventive Medicine*, May 2011. 40(5), pp. S115-S122.

**2010**

- **B. Thoms**, N. Garrett, T. Ryan. “The Design and Evaluation of a Peer Ratings System for Online Learning Communities.” *Hawaiian Intl. Conference on System Sciences (HICSS 43)*, Jan., 2010, Kauai, HI.
- N. Botts, **B. Thoms**, A. Noamani, T. Horan. “Cloud Computing Architectures for the Underserved: Public Health Cyberinfrastructures through a Network of HealthATMs.” *Hawaiian Intl. Conference on System Sciences (HICSS 43)*, Jan., 2010, Kauai, HI.

**2009**

- **B. Thoms**, N. Garrett, T. Ryan. “Enhancing Scholarly Conversation through an Online Learning Community,” *In Advances in Cognitive Informatics and Natural Intelligence book series, “ICTs for Modern Educational and Instructional Advancement: New Approaches to Teaching,”* Oct. 2009.

**ACADEMIC AND PROFESSIONAL PUBLICATIONS (CONT'D)**

**2009 (Cont'd)**

- **B. Thoms**, N. Garrett and T. Ryan, "Online Learning Communities in the New 'U'. *Intl. Journal of Networking and Virtual Organisations*, 6(5), pp. 499-517, 2009.
- N. Garrett, **B. Thoms**, T. Ryan and N. Alrushiedat, "Developing the Social Portfolio," *On the Horizon*, 17(3), 2009.
- N. Botts, **B. Thoms**, T. Horan. "HealthATM: Interactive Services for Underserved Populations," In *AMIA 2009 Symposium*, San Francisco, CA, Nov. 14-18.
- **B. Thoms**. "Expanding Learning and Social Interaction through Intelligent Systems Design: Implementing a Reputation and Recommender System for the Claremont Conversation Online,". *Claremont Graduate University*, Claremont, CA, Jul. 2009.
- N. Botts, **B. Thoms**, T. Horan. "HealthATM Technical Specifications," White Paper.

**2008**

- **B. Thoms**, N. Garrett, M. Soffer and T. Ryan, "Resurrecting Graduate Conversation through an Online Learning Community," *Intl. Journal of Information Communication and Technology Education (IJICTE)*, Issue #15 Vol. 4 No.3 Jul-Sep 2008.
- **B. Thoms**, N. Garrett, JC Herrera and T. Ryan, "Understanding the Roles of Knowledge Sharing and Trust in Online Learning Communities," *Hawaiian Intl. Conference on System Sciences (HICSS 41)* Jan., 2008, Waikoloa, HI (**Best Paper Nomination**).

**2007**

- **B. Thoms**, N. Garrett, M. Soffer and T. Ryan, "Resurrecting Graduate Conversation through an Online Learning Community," *IADIS Multi Conference on Computer Science and Information Systems* July, 2007, Lisbon, Portugal (**Best Research Paper Award**).
- N. Garrett, **B. Thoms**, M. Soffer and T. Ryan, "Extending the Elgg Social Networking System to Enhance the Campus Conversation," *Second Annual Design Research in Information Systems (DESRIST)* May, 2007, Pasadena, CA (**Best Research Paper Nomination**).
- T. Miller, G. Leroy, S. Chatterjee, J. Fan, and **B. Thoms**, "A Classifier to Evaluate Language Specificity of Medical Documents," *Hawaiian Intl. Conference on System Sciences (HICSS 40)* Jan., 2007, Waikoloa, HI. (**Best Research Paper Award**).

**2004**

- **B. Thoms**, *Outsourcing: Inside Out and Outside In*. (MSIS Thesis). Stevens Institute of Technology, Hoboken, New Jersey, Jan. 2004.

**PRESENTATIONS AND INVITED LECTURES**

**2017**

- "Towards a Sentiment-Analyzing Discussion Board," HICSS 50, Jan. 4-7, Waikaloa, HI.

**2016**

- "Post-2016 Presidential Election: Trends in Online Social Networking", Guest speaker on 1590 KVTa News Talk Radio, December 19, 2016.
- "Introducing Speq-DB: A Simple Program for Enhancing Quality in Online Discussion Boards," Research to be presented by Rafael Hernandez at Southern California Conference on Undergraduate Research (SCCUR), UC Riverside, Nov. 14, 2016.
- "Towards a Sentiment-Analyzing Discussion Board," Computer Science Colloquium, Sonoma State University, Sonoma, CA, October 20, 2016



(scheduled).

- “Introducing Speq-DB: A Simple Program for Enhancing Quality in Online Discussion Boards,” Research to be presented by Sara Colon Cerezo at the National Diversity in STEM Conference, Long Beach Convention Center, Long Beach, CA, Oct. 13-15, 2016.
- “Get SMART (Social Media Applications and Really-useful Tools),” Library Lecture Series, Newbury Park, CA, October 10, 2016 (scheduled).
- “Learning Effects of Attention Guidance in Online Discussions,” AMCIS 2016, San Diego, CA, August 12, 2016 .

## PRESENTATIONS AND INVITED LECTURES (CONT'D)

### **2016 Cont'd**

- “Introducing SPEQ-DB: A Simple Program for Enhancing Quality in Online Discussion Boards,” Project ACESSO Poster Session, June 22, 2015, Camarillo, CA.
- Creating SAD: The Sentiment Analyzing DiscussionBoard," CWIC Southern California 2016, student research presented by Glo Mercado, April 9, 2016, Ventura, CA.
- “Social Software Approaches for Non-Profits,” Guest Lecture, CSU Channel Islands, March 8, 2016, Camarillo, CA.
- “Task Oriented Reading of Instructional Materials and Its Relationship to Message Scores in Online Learning Conversations ,” HICSS 49, (research presented by Evren Eryilmaz), January 5-8, 2016, Kauai, HI.

### **2015**

- “Challenges in Knowledge Sharing,” Panel invitation at COLLA 2015, St. Juliens, Malta, October 12, 2015.
- “Online Learning Community Software to Support Success in Project Teams,” COLLA 2015, St. Juliens, Malta, October 12-14, 2015.
- “Social Network Analysis Lab 1,” Summer Scholars Institute, August 5, 2015, Camarillo, CA.
- “Social Network Analysis Lab 2,” Summer Scholars Institute, August 5, 2015, Camarillo, CA.
- “Introducing S.A.D.: The Sentiment Analyzing Discussion Board,” Project ACESSO Poster Session, June 21, 2015, Camarillo, CA.
- “Social Software Supports STEM Students,” Computer Science Lecture Series, March 11, 2015, Camarillo, CA.

### **2014**

- "Attention Guidance in Online Learning Conversations," HICSS 47, Jan. 6-9, Waikaloa, HI.
- “How Social Networking Software can Facilitate Peer Support in Computer Programming Courses,” School of Business Research Colloquia, Feb. 20, 2014, Farmingdale, NY.
- "Designing a Peer Support System for Computer Programming Courses using Online Social Networking Software," HICSS 47, Jan. 6-9, Waikaloa, HI.

### **2013**

- “Constructing Intelligent Social Software for College Campuses.” SUNY New Paltz, Nov. 8, 2013, New Paltz, NY.
- “Case Studies in Persuasive Design.” School of Arts and Sciences, CSU Channel Islands, Oct. 18, 2013, Camarillo, CA.
- “Student Perceptions of Microblogging: Integrating Twitter with an Online Discussion Board to Support Learning and Interaction,” *9th Annual Teaching and Learning Technologies Conference* , Apr. 26, 2013, SUNY Old Westbury.
- “A Dynamic Social Feedback System to Support Learning and Social

Interaction in Higher Education,” SUNY Farmingdale CTLT Award Ceremony for Outstanding Scholarly Publication, Farmingdale State University, Apr. 17, 2013, Farmingdale, NY.

**2012**

- “Online Learning Communities to Support Teaching and Learning.” CTLT 2nd Annual Conference on Teaching and Learning: Current Research in the Scholarship of Teaching and Learning, Farmingdale State University, Apr. 27, 2012, Farmingdale, NY.
- “Effective Teaching using Transdisciplinary Methods,” School of Business, CSU Channel Islands, Camarillo, CA, Feb. 3.
- “Integrating Blogging and Microblogging to Foster Learning and Social Interaction in Online Learning Communities.” *HICSS 45*, Jan. 4-7, 2012, Maui, HI.

**PRESENTATIONS AND INVITED LECTURES (CONT'D)**

**2011**

- “Combining Microblogging with Blogging to foster Learning and Social Interaction in Online Learning Communities,” School of Information Systems and Technology at Claremont Graduate University, Jun. 6, 2011, Claremont, CA.
- “Elgg Mash-up with Twitter to foster Learning and Social Interaction in Higher Education,” Department of Computer and Information Systems at the School of Business, Farmingdale State University, Mar. 24, 2011, Farmingdale, NY.

**2010**

- “Server-side Programming: A Technology Tutorial,” Department of Computer and Information Systems at the School of Business at Farmingdale State University, Nov. 4, 2010, Farmingdale, NY.
- “Binary Search Trees: A Technology Tutorial,” Department of Computer and Information Systems at the School of Business at Farmingdale State University, Apr. 23, 2010, Farmingdale, NY.
- “The Design and Evaluation of a Peer Ratings System for Online Learning Communities.” 43rd Annual Hawaiian Int’l Conference on System Sciences, Jan. 4-7, 2010, Kauai, HI.

**2009 (Cont’d)**

- “Cloud Computing Architectures for the Underserved: Public Health Cyberinfrastructures through a Network of HealthATMs.” HICSS 43, Jan. 4-7, 2010, Kauai, HI .
- “Lecture on User Experiences and Systems Design”, California Art Institute, Dec. 15, 2009, Santa Ana, CA.
- “Expanding Learning and Social Interaction through Intelligent Systems Design”, School of Information Systems and Technology, Claremont Graduate University, Jul. 29, 2009, Claremont, CA.
- “Lecture on Strategic Information Systems”, IT 509 MBA course at Woodbury University, Jun. 13, 2009, Burbank, CA.
- “Database Normalization: A Technology Tutorial”, Dept. of Computer and Information Systems, School of Business, SUNY Farmingdale, Apr. 23, 2009, Farmingdale, NY.
- “Web Development Roundtable”, Craig School of Business at California State University, Fresno, Apr. 3, 2009, Fresno, CA.
- “Expanding Learning and Social Interaction through Intelligent Systems Design”, Craig School of Business at California State University, Fresno, Apr. 3, 2009, Fresno, CA.

**2008**

- “Claremont Conversation Online Open Source Tutorial”, Guest Lecture on Social Technologies, Nov. 6, 2008, Claremont, CA.
- “July 2008 Claremont Conversation Online Update”, Social Learning Software Lab. Jul. 30, 2008, Claremont CA.
- “Beyond the Claremont Conversation”, Educational Studies Faculty & Board of Visitors. Apr. 03, 2008, Claremont CA.
- "Understanding the Roles of Knowledge Sharing and Trust in Online Learning Communities," *HICSS 41*, Jan. 7-10, Waikaloa, HI.

**2007**

- “Beyond the Claremont Conversation”, Faculty Senate. Nov. 26, 2007, Claremont CA.
- “Graduate Student Success with the e-Portfolio”, Graduate Student Success Symposium. Nov. 2, 2007, Claremont, CA.
- “Elgg Open Source Tutorial,” Guest Lecture on Social Technologies. Oct. 17, 2007, Claremont, CA.

- “Resurrecting Graduate Conversation through an Online Learning Community,” IADIS Multi Conference on Comp. Science and Info. Systems, Lisbon, Portugal, Jul. 3-8, 2007.

**PRESENTATIONS AND INVITED LECTURES (CONT'D)**

**2007 Cont'd**

- “Extending the Elgg Social Networking System to Enhance the Campus Conversation,” 2nd Design Research in Information Systems (DESRIST), Pasadena, CA, May 14-15, 2007.
- “Graduate Students & Their Advisors: Ships That Pass in the Night?” NACADA Pacific Region 9 Conference San Diego, CA Mar. 21-23, 2007.
- “Please Advise!: Faculty and Student Perceptions of Graduate School Advising,” 19th Annual Lilly-West Mar. 16-17, 2007 at the Kellogg West Ranch at Cal Poly Pomona.

**2006**

- CIO Roundtable Presentation on Online Social Learning / Social Networking, Harper Hall, Claremont, CA Apr. 11, 2006.

**COURSES TAUGHT**

**Spring 2017 (Scheduled)**

- COMP 597, Master Thesis
- COMP 520, Advanced Database Systems
- COMP / IT 499, Capstone Project
- COMP / IT 491, Capstone Preparation
- COMP / IT 420, Database Systems
- COMP / COMM / SOC 342, Internet-Based Social Networking

**Fall 2016**

- COMP 597, Master Thesis
- COMP / 494, Independent Research
- COMP / IT 491, Capstone Preparation
- IT 401, Web Intelligence
- COMP / IT 420, Database Systems

**Spring 2016**

- COMP 597, Master Thesis
- COMP / IT 499, Capstone Project
- COMP 494, Independent Research
- COMP / IT 420, Database Systems
- COMP / COMM / SOC 342, Internet-Based Social Networking

**Fall 2015**

- COMP 597, Master Thesis
- COMP 520, Advanced Database Systems
- COMP / IT 491, Capstone Preparation
- HIT 152, Programming for Health Informatics

**Spring 2015**

- COMP / IT 420, Database Systems
- COMP / COMM / SOC 342, Internet-Based Social Networking

**Fall 2014**

- COMP 572, Multiagent Systems
- COMP / IT 420, Database Systems

**Past Courses**

- BCS 430, Capstone Project
- BCS 370, Data Structures (Advanced Programming with C++)
- BCS 350, Web Database Development (PHP and MySQL)
- BCS 345, Programming in Java
- BCS 301, Systems Analysis and Design
- BCS 300, Management of Information Systems
- BCS 120, Programming Concepts and Problem Solving (VB and C++)
- Database Administration x 4 courses (SQL Server, Oracle, MS Access and MySQL)

<b>PEER REVIEWS</b>
<ul style="list-style-type: none"> <li>• ACM Transactions on Computing Education</li> <li>• AIS Transactions on Human-Computer Interaction</li> <li>• Americas Conference on Information Systems (AMCIS)</li> <li>• Computers and Education (C&amp;E)</li> <li>• Decision Support Systems (DSS)</li> <li>• Education and Information Technologies (EIT)</li> <li>• Hawaiian International Conference on System Sciences (HICSS)</li> <li>• IEEE Transactions on Learning Technologies (TLT)</li> <li>• Intl. Journal of Networking and Virtual Organizations (IJNVO)</li> <li>• Intl. Journal of Information and Communication Technology Education (IJICTE)</li> <li>• Intl. Information Management Association (IIMA)</li> <li>• Intl. Conference on Information Systems (ICIS)</li> <li>• Journal of Information Technology Education (JITE)</li> <li>• Persuasive Conference</li> </ul>
<b>PROFESSIONAL MEMBERSHIPS</b>
<ul style="list-style-type: none"> <li>• Institute of Electrical and Electronics Engineers (IEEE). Member #90443970.</li> <li>• Association for Information Systems (AIS), past member.</li> <li>• Informing Science Institute (ISI), past member.</li> </ul>
<b>ACTIVITIES AND AWARDS</b>
<p><b><u>2017</u></b></p> <ul style="list-style-type: none"> <li>• <u>IRA #845</u> – Field Trip to Cal Tech Seminar Series (\$2,535.00). Awarded in Fall 2016, this awards will accommodate a group of CI students to attend Dr. Adam Wierman’s presentation, “How Clean is the Cloud.” The trip will provide students the opportunity to tour the Cal Tech campus, which consists of unique academic buildings and high-tech labs, as well as attend Dr. Wierman’s presentation, which is a part of the Earnest C. Watson Lecture Series.</li> <li>• <u>IRA #851</u> – Competitive Programming Preparation (\$1,150.00). Awarded in Fall 2016, With support from IRA funding, resources will be used to facilitate 3 programming meet-ups, in preparation for the Computer Science (CS) Programming Guru Contest, which will be held on April 21, 2017 and the ACM International Collegiate Programming Contest (ICPC). The greater goal of these meet-ups is to introduce and open up participation to a larger population of students.</li> </ul> <p><b><u>2016</u></b></p> <ul style="list-style-type: none"> <li>• <u>CIValues.org</u> – Constructed the webspace for civalues.org, which allows CI faculty to publicly renew their commitment to CI’s mission pillars and support diversity. Construction of the site involved the purchase of civalues.org, software development using PHP for server-side coding, MySQL for database development and Bootstrap for the website’s look and feel. This effort involved coordination with other members of the CI faculty including Blake Gillespie, Brad Monsma and Sean Kelly.</li> <li>• <u>Project ACCESO Summer Research</u> – Provides small teams of students an opportunity to conduct research with CI faculty in STEM disciplines. In 2016, students from CI, Oxnard College and Santa Barbara City College collaborated on a data mining project analyzing online discussion data. The analysis helped guide the construction of new discussion software that aims to improve the quality of online discussions in educational settings. A write-up of the project can be found here: <a href="http://blog.socialxyz.com/a-simple-program-for-enhancing-quality-in-">http://blog.socialxyz.com/a-simple-program-for-enhancing-quality-in-</a></li> </ul>

[online-discussion-boards.](#)

## ACTIVITIES AND AWARDS CONT'D

- CI Foundation Funds – Toward the Construction of Next Generation Online Discussion Boards (\$3,610). Awarded in December 2015, the foundation funds allowed two undergraduate researchers from computer science and sociology. A complete report can be found online: [http://socialxyz.com/pubs/Foundation\\_Report-brianthoms.pdf](http://socialxyz.com/pubs/Foundation_Report-brianthoms.pdf).
- CI Minigrant Award – Health e-Consent Framework for Patient Generated Data: Considering the Needs of At-Risk Populations (\$5,400). Awarded in spring 2016, the three-unit buyout for fall 2016 / spring 2017 will provide course release to work towards a framework for guiding electronic consent (e-Consent) policies to help govern increasing multitudes of personal medical devices, health apps and related personal health information systems (PHIS).
- IRA #806 – 2016 ACM Intercollegiate Programming Contest (\$2,520.00). Awarded in Spring 2016, the funds will afford Computer Science to send four teams to compete in the 2016-2017 ACM International Collegiate Programming Contest at Riverside Community College in November. Past results can be found here: <http://compsci.csuci.edu/news-and-events/acm-programming-results-2015.htm>.
- ALAS/OLAS/CIS Faculty Fellowship (\$1,300) – The Fellowship is designed to help faculty include high impact practices into their courses. During this program, COMP / COMM / SOC 342 was redesigned to include a community-based learning component, where students work and learn alongside community partners as they work towards completing course milestones.
- ACM ICPC Coach – As an ACM Coach, I am responsible for all logistics involved for the ACM programming competition. This involves setting up each of CI's four teams, arranging travel (supported by IRA #806) and bringing and ensuring the safe return of all student participants.
- Spring 2016 Capstone Celebration – Launched Computer Science's first-ever capstone poster event.

### 2015

- Project ACCESO Summer Research – Provides small teams of students an opportunity to conduct research with CI faculty in STEM disciplines. In 2015, students from CI and Ventura College collaborated on a data mining project analyzing online discussion data. The analysis helped guide the construction of new discussion software that measured the sentiment of online conversations.
- IRA #718 – 2015 ACM Intercollegiate Programming Contest (\$2,220.00). Awarded in July 2015, the funds afforded Computer Science to send four teams to compete in the 2015 ACM International Collegiate Programming Contest at Riverside Community College in fall 2015. More information can be found online: <http://compsci.csuci.edu/news-and-events/acm-programming-results.htm>. Approved Funding (\$2,220)
- IRA #690 – Logging-on to Internet-based Social Networks Offline (\$5,520.00). Awarded in January 2015, the IRA fund were put to use in spring 2016, where a group of students toured the Facebook campus, met with job recruiters and visited The Tech Museum in Palo Alto. A summary of the field trip can be found online: <http://blog.socialxyz.com/?p=320>.
- Blended Learning Preparation Program (BLPP) Cohort V (\$1,500) – BLPP is designed to improve student learning at CI by improving the use of technology in teaching. During this course COMP / COMM / SOC 342 was redesigned to include a course learning community. More specifically, course learning objectives were designed in a way to integrate widely popular social networking software such as Twitter.



- ACM ICPC Coach – As an ACM Coach, I am responsible for all logistics involved for the ACM programming competition. This involves setting up each of CI's four teams, arranging travel (supported by IRA #718) and bringing and ensuring the safe return of all student participants.
- Fall 2015 Capstone Celebration – Launched Computer Science's first-ever capstone poster event.

**AWARDS AND ACTIVITIES (CONT'D)**

**2014**

**ACM ICPC Coach** – As an ACM Coach, I am responsible for all logistics involed for the ACM programming competition. This involves setting up each of CI’s four teams, arranging travel (supported by IRA #524) and bringing and ensuring the safe return of all student participants.

**2013**

- Outstanding Scholarly Publication Award, State University of New York

**2012**

- SUNY Title III “Strengthening Institutions”
- UUP Individual Development Award (sp. 2012)

**2008- 2009**

- CGU Research Travel Award (HICSS)
- HICSS Best Paper Nomination
- Student Council President (f. 2008 – sp. 2009)

**2007**

- IADIS Award for Best Research Paper
- HICSS Best Paper Nomination
- DESRIST Best Paper Nomination
- CGU Research Travel Award (IADIS)
- Hillcrest Transdisciplinary Grant (awarded 2007)
- SISAT Doctoral Screening Exam (Passed with Distinction)
- Student Council Vice President
- CGU Faculty Learning Community

**2006**

- Kozmetsky Award for Transdisciplinary Research (for 2006-2007)
- Preparing Future Faculty Fellow (2006-2007)

**UNIVERSITY AND DEPARTMENT SERVICE**

**2014 - 2017**

- CSU CI Computer Science Web Content Manager (f. 2014 - present)
- CSU CI Extended Education Advisory Committee (f. 2016 - present)
- CSU CI Student Activities Policies and Procedures Committee (f. 2016 - present)
- CSU CI Faculty Affairs Committee (f. 2014 through sp. 2016)
- CSU CI Faculty Search Committee (f. 2014, f. 2015, sp. 2016, sp. 2017)
- CSU CI CS Lab Coordinator (f. 2014 - present)
- CSU CI CS Tutor Coordinator (f. 2014 - present)
- CSU CI Computer Science Club Advisor (f. 2014 – present)
- CSU CI Graduation Faculty Marshall (s. 2015, s 2016)

**2010 - 2016**

- SUNY Farmingdale Board of Experts in IT (sp. 2012-2014)
- SUNY Farmingdale Gaming and Anime Club Adviser (f. 2011 – 2014)
- SUNY Farmingdale International Education Committee (f. 2011, Chair in 2013)
- SUNY Farmingdale Tech Fee Committee (f. 2012 – sp. 2014)
- SUNY Fulbright Panel
- SUNY Farmingdale Tech Club co-Adviser (sp. 2010 – sp. 2014)
- SUNY Farmingdale Systems Track Committee (f. 2010 – sp. 2014)
- SUNY Farmingdale Programming Track Committee (f. 2010 – sp. 2014)
- SUNY Farmingdale Teaching and Learning Technology Community (f. 2010 – sp. 2014)
- SUNY Farmingdale Health IT Program Development Committee
- SUNY Farmingdale College of Business Promotions Committee
- SUNY Farmingdale Faculty Search Committee (f. 2011 – sp. 2013; Chair

f. 2013)

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[HTTP://BRIANTHOMS.COM](http://brianthoms.com) / [HTTP://SOCIALXYZ.COM](http://socialxyz.com)

## **Title: A Multidisciplinary Approach to Building Next Generation Social Networks**

### **Proposal Narrative**

#### **Project Summary**

The overarching goal of this project is to introduce undergraduate students to multidisciplinary research in online social networks (OSN). OSN research is inherently multidisciplinary, which draws upon theories from social science, or how end-users interact within OSNs, and computer science, or how OSNs can effectively represent and communicate information to end-users. In line with CI's mission, this minigrant provides the opportunity to bridge disciplines and allow students from multiple majors to work on analyzing existing OSN data and design new OSN features. Additionally, this proposal specifically seeks students from multicultural backgrounds, which will allow for a better exploration of the socio-technical factors that affect technology adoption.

Specifically, this project can be broken down into four phases. In Phase 1, students will analyze existing online academic conversations extracted from undergraduate online discussion-boards at CI. These conversations will be analyzed for pattern extraction and a social network analysis will be performed focusing on factors such as quality and sentiment. This social network analysis will be used as input for Phase 2, which will focus on the development of a new OSN design component as informed by Phase 1. Phase 3 involves implementing the Phase 2 design in an existing OSN platform and incorporating it into the Spring 2018 section of COMP342, a course that is cross-listed with Sociology and Communication. Phase 4 involves measuring the impact of the new design in an educational setting and reporting the results at appropriate peer-reviewed academic outlets.

#### **Project Goals and Outcomes**

Project goals and outcomes are as follows.

- 1) The outcome of Phase 1 will be a complete analysis of existing online conversations. The outcome of Phase 1 is typically a sociogram with detailed interpretation of its meaning based on social networking concepts such as homophily and propinquity. The output is typically

introduced in the introduction of an academic paper and formulates the rationale for a new proposed design.

- 2) Phase 2 outcomes will be the construction of a new OSN design. The design is a tangible IT artifact that is used to guide the construction of new OSN component. The design typically illustrates and details all software components and how they will interact with end-users.
- 3) The penultimate goal of this project is to implement the new design (Phase 3) informed by (Phases 1 and 2) into the Spring 2018 section of COMP342.
- 4) Finally, Phase 4 is the reflection stage and will focus on the analysis and reporting of the results from Phase 3 at appropriate academic outlets. I have had tremendous success presenting student-authored papers in the past at highly reputable academic conferences such as HICSS 50 [1], AMCIS 2016 [2] and HICSS 47 [3] (detailed in the References section).

### **Significance of the Research**

Engagement theory states that students must be meaningfully engaged in learning activities through interaction with others, facilitated and enabled by technology [4]. This research builds atop [5] and explores how innovative OSN design can foster greater levels of student engagement compared to traditional learning management systems such as Blackboard and Moodle. Furthermore, finding innovative ways to keep students engaged in course learning objectives can be tantamount to their success.

Additionally, and in line with the mission of the university, this proposal adopts an interdisciplinary approach that looks to bridge students from Communication, Sociology, Computer Science or Information Technology in tackling some of the problems of student engagement.

### **Research plan and methodology**

This research adopts a Design Science Research methodology. This methodology involves the analysis, design, implementation and evaluation of innovative information technology (IT) artifacts to improve our understanding of how humans interact with computers [6, 7]. In this research, the end-goal is to implement and measure the effect of an innovative OSN component within an educational setting. Since this research is largely exploratory, no presuppositions can be made concerning the IT artifact we aim to implement and measure. Instead, the design will be informed by the analysis of over 2000 historical online conversations.

## **Professional development benefits for faculty**

There are numerous professional development benefits. Firstly, I currently teach the cross-listed course COMP342 (cross listed with COMM and SOC), which centers on numerous topics across the social media landscape. Secondly, I perform OSN research, where my focus is largely on how persuasive design can bring about more connected communities and streamline information dissemination. Thus, this type of research benefits both my teaching and my research and, in fact, helps to bridge the two.

Furthermore, as a tenure-track faculty member, I am expected to publish in high-quality peer-reviewed academic outlets. Minigrant funds provide an important catalyst for expanding my research agenda and supporting these pursuits.

Finally, introducing undergraduate students to my research interests has been a rewarding part of my job, but it is also rewarding for students. Since initiating my own research lab in 2010, I have co-authored three peer-reviewed conference papers with five undergraduate students at three international conferences. Students have also had the opportunity to present research posters at multiple academic outlets including HICSS 50, HICSS 47 and AMCIS 2016 as well as the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), the Southern California Conferences for Undergraduate Research (SCCUR) and the Celebration of Women in Computing (CWIC).

## **Benefits to the University, School, Program, and the applicant's teaching**

One of CI's four mission pillars is integrative studies. As multidisciplinary research, this project aims to provide support for undergraduate researchers in Computer Science or Information Technology and Sociology or Communication.

Another CI pillar is multicultural engagement. In addition to drawing students from multiple disciplines, this research aims to draw students from multicultural backgrounds. This will allow us to explore multicultural factors of technology adoption, known in human computer interaction research as socio-technical factors.

Additionally, the motivations of this research center on constructing innovative software to elevate levels of engagement and community within

the college classroom, which can be seen as a tangible benefit for the CS program, the School of Arts and Sciences as well as CI as a whole.

### **Dissemination plan**

There are numerous plans for dissemination of this research which include the following.

- 1) Submitting student co-authored papers to double-blind, peer-reviewed conferences. On January 7, 2017, I will be presenting work co-authored with three undergraduate students at the 50th Annual Hawaiian Conference on System Sciences, a prestigious conference in my field. Using the results from this research project, I would hope to have the same success.
- 2) Additionally, I will present my work locally through guest lectures, seminars and poster presentations. This past year, my students and I have presented our work across numerous venues including at SCCUR, SACNAS, CWIC and CSUCI's Computer Science Capstone Poster Session.
- 3) Finally, I also maintain my own personal blog, [blog.socialxyz.com](http://blog.socialxyz.com), which I use as a mechanism to disseminate current trends and topics in social networking research.

### **Project Assessment**

This research will use pre-validated survey instruments based on the Technology Acceptance Model (TAM). TAM looks at two factors when measuring a software design's success. The first is Perceived Usefulness, which measures how useful the software is in supporting its predefined objectives. The second is Perceived Ease-of-Use, which measures how easy the software is to use. The model is simple, to the point and effective at measuring the success of a new technology. Open-ended survey questions will also allow students to provide more detailed feedback on the proposed design.

### **Project Timeline**

This project will adopt an agile research development approach, which involves overlapping and iterative phases of analysis and development beginning in Fall 2017 and completing in Spring 2018. The timeline can be broken into the following phases:

Phase 1-a: The research project will kick off in Fall 2017 with a two-week analysis of existing literature and overview of trends in current Online Social Networking (OSN) research.

Phase 1-b: A social network analysis of existing online conversations will take place at the end of September. The analysis phase should wrap-up by the end of October.

Phase 2: The OSN design phase will take place in November.

Phase 3: Construction and implementation of the new OSN system component will take place over the 2017/2018 winter break and be integrated into COMP342 in Spring 2018.

Phase 4: The software will be assessed using the Technology Acceptance Model (TAM) in Summer 2018 and results will be written-up and submitted to appropriate academic outlets at this time.

## **Budget**

The total minigrant amount I am requesting is **\$6,100**, which will provide for 2 undergraduate student researchers from different majors, 1 unit of faculty release time for project supervision and 2 copies of 2 different textbooks, which will be used as references for student researchers. The complete details are itemized below.

1. Support for two undergraduate researchers in Fall 2017:

- 1 Student Researcher from Computer Science or Information Technology at 8 weekly hours x 14 weeks x \$14/hour = **\$1,680**.
- 1 Student Researcher from Communication or Sociology at 8 weekly hours x 14 weeks x \$14/hour = **\$1,680**.

2. Support for 1 unit of release time for Fall 2017 to supervise the project:

- 1 unit of reassigned time for faculty supervision = **\$2,540**.

3. 2 copies of the following textbooks, as resources for student researchers = **\$200**:

- Social Networks Analysis (978-1446209042) = \$50 x 2 = 100 + tax/shipping.



- Analyzing Social Media Networks with NodeXL: Insights from a Connected World (978-0123822291 = \$22.50 x 2 = \$45 + tax/shipping).

## References

1. Thoms, B., Eryilmaz, E., Mercado, G., Ramirez, B. and Rodriguez, J. "Towards a Sentiment Analyzing Discussion-board," Accepted for inclusion in *Proceedings of the 50th Annual Hawaiian International Conference on System Sciences (HICSS-50)*, Jan. 4-7, 2017.
2. Eryilmaz, E., Thoms, B., Mary, J., Kim, Mary, J. and Fuchsman, A. (2016). Learning Effects of Attention Guidance in Online Discussions, *Proceedings of the Americas Conference on Information Systems (AMCIS-2016)* Aug. 11-14, 2016, San Diego, California.
3. Thoms, B., Eryilmaz, E., and Gerbino, S. (2014). Designing a Peer Support System for Computer Programming Courses using Online Social Networking Software, *Proceedings of the 47th Hawaii International Conference on System Sciences (HICSS-47)*, Jan. 6-9, 2014, Waikoloa, Hawaii.
4. Kearsley, G. and Schneiderman, B. (1999). "Engagement theory: A framework for technology-based learning and teaching," Retrieved Jun. 26, 2013, from <http://home.sprynet.com/~gkearsley/engage.htm>.
5. Thoms, B. and Eryilmaz, E. (2014). "How Media Choice Affects Learner Interactions in Distance Learning Classes," *Computers & Education*, v75, pp.112-126.
6. Simon, H. (1996). *The Sciences of the Artificial Third Edition*, Cambridge, MA : MIT Press.
7. Kuechler B and Vaishnavi V. (2008). "On theory development in design science research: Anatomy of a research project". *European Journal of Information Systems*, 17(5), pp 489-504.

## CV (attached)

## Research and Development Minigrants for 2017-2018: Review Form

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**Routing Step:** Initial Committee Review

**Application Title:** A Multidisciplinary Approach to Building Next Generation Social Networks

**Application ID:** #000056

**Review Deadline:** Jan 27, 2017 11:59:00 PM

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**\*Project Goals and Outcomes:**

*The proposal sets clear goals and outcomes for the project, and it explains the steps that will be taken to realize project goals.*

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**Rating Scale 1 (1 weakest to 11 strongest):**

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**\*Research Plan and Methodology:**

*The proposal conveys a complete and well thought-out plan for the project that describes the activities of all individuals involved in the project. If support is requested for student research assistance, the proposal must also include a description of their role in the project and how the faculty*

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**Rating Scale 2 (1 weakest to 11 strongest):**

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**\*Professional Development Benefits for the Faculty:**

*The proposed makes clear how the project will advance each individual applicant's or research, scholarship, creative activity, or innovation in teaching. The proposal discusses whether the applicant(s) intend to pursue external funding and identifies those external funding opportunities.*

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**Rating Scale 3 (1 weakest to 11 strongest):**

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**\*Project Benefits:**

*To what extent does the proposed qualify for special consideration (e.g., applicant is*

*probationary, applicant has not had minigrant funding in the past, applicant has been especially successful in the use of past minigrant funding, project scope is particularly ambitious but realizable).*

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**Rating Scale 4 (1 weakest to 11 strongest):**

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**\*Dissemination Plans:**

*The level and type of dissemination is appropriate for the project, its goals, and its outcomes.*

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**Rating Scale 5 (1 weakest to 11 strongest):**

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**\*Project Timeline:**

*The project goals and objectives are attainable within the timeline of the proposal.*

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**Rating Scale 6 (1 weakest to 11 strongest):**

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**\*Project Assessment:**

*The proposal describes how the product(s) of the project will be assessed and evaluated to determine the degree of success achieved.*

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**Rating Scale 7 (1 weakest to 11 strongest):**

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**\*Project Budget:**

*The proposed budget is reasonable in the context of the project description, and the project costs are necessary to achieve project goals and outcomes.*

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**Rating Scale 8 (1 weakest to 11 strongest):**

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**\*Other considerations:**

*To what extent does the proposed qualify for special consideration (e.g., applicant is probationary, applicant has not had minigrant funding in the past, applicant has been especially successful in the use of past minigrant funding, project scope is particularly ambitious but realizable).*

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**Rating Scale 9 (1 weakest to 11 strongest):**

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