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Vitae of Christopher P. Paolini, Ph.D.

Education

- (2007) Ph.D. degree in Computational Science and Engineering, Claremont Graduate University and San Diego State University
Dissertation title: *A Service-Oriented Architecture for Thermochemical Computation*
- (1998) M.S. degree in Computer Science from San Diego State University
Thesis title: *Integration of Heterogeneous Robotic Apparatus using CORBA*
- (1991) B.S. degree in Computer Science from San Diego State University
Magna Cum Laude, Graduation with Distinction

Honors and Awards

- ARCS Foundation Scholar, 2002-2005
- Unisys Corporation Scholarship for Academic Merit, 1990

Research Grants Awarded

- *NASA Grant NRA NNH09ZTT001N: Research Opportunities in Combustion Science, Residence Time Driven Flame Spread Over Solid Fuels, \$398,614.00.*
- *US Department of Energy (DOE), National Energy Technology Laboratory (NETL), Web-based CO₂ Subsurface Modeling, Geologic Sequestration Training and Research Funding Opportunity Number: DE-FOA-0000032, Simulation and Risk Assessment, \$288,691.00.*
- *NSF Office of CyberInfrastructure MRI Grant 0922702, MRI: Acquisition of High Speed Network Infrastructure for High Performance Distributed Computation in the Colleges of Science and Engineering, \$255,873.00.*
- *NSF Office of CyberInfrastructure CI-TEAM Grant 0753283, CI-TEAM Demonstration Project: CyberCHEQS: A Service-Oriented Cyberinfrastructure (SOCI) for Thermochemical Data and Computation Services,- \$249,796.00.*

Vitae of Christopher P. Paolini, Ph.D. (continued)

Articles in Refereed Journals

- Paolini, C., Bhattacharjee, S., IGE Model: An Extension of the Ideal Gas Model to Include Chemical Composition as Part of the Equilibrium State, *Journal of Thermodynamics*, (accepted, October 2011).
- Sarkar, M. and Paolini, C., A QoS Guaranteeing MAC Layer Protocol for the "Underdog" Traffic, *EURASIP Journal on Wireless Communications and Networking 2011*, 2011:131 doi:10.1186/1687-1499-2011-131.
- Paolini, C., Bhattacharjee, S., Solving Chemical Equilibrium Problems Online, *J. Chem. Educ.*, 2010, 87(4), p 456-.
- Bhattacharjee, S. and Paolini, C. P., Property Evaluation in The Expert System for Thermodynamics ("TEST") Web Application, *Journal of Computer Coupling of Phase Diagrams and Thermochemistry - CALPHAD*, 33(2), p 343-352, June 2009.
- Paolini, C. P. and Bhattacharjee, S., A Web Service Infrastructure for Thermochemical Data, *J. Chem. Inf. Model.* 2008; 48(7); 1511-1523.
- Subrata Bhattacharjee, Matthew D. King, and Christopher Paolini. Structure of downward spreading flames: a comparison of numerical simulation, experimental results and a simplified parabolic theory. *Combustion Theory and Modeling*, 8:2339, March 2004.

Articles in Refereed Proceedings

- Bhattacharjee, S., Bundy, M., Paolini, C., Patel, G., and Tran, W., *A Novel Apparatus for Flame Spread Study*, 34th International Symposium on Combustion, Warsaw, Poland, July 29 - August 3, 2012, (accepted).
- Paolini, C., Bhattacharjee, S., *An Equilibrium Approach to Modeling O₂-H₂ Combustion Kinetics*, 2012 Spring Technical Meeting of the Western States Section of the Combustion Institute, Hosted by the Arizona State University, Tempe, AZ, March 11-12, 2012, Paper 12S-36.

Vitae of Christopher P. Paolini, Ph.D. (continued)

- Bhattacharjee, S., Al Ghamdi, A., Miller, F., Tran, W., and Paolini, C., *Measurement of Temperature Field in a Stabilized Downward Spreading Flame*, 2012 Spring Technical Meeting of the Western States Section of the Combustion Institute, Hosted by the Arizona State University, Tempe, AZ, March 11-12, 2012, Paper 12S-07.
- Paolini, C., Huber, G., Collier, Q., Lee, G. K., *A Web-Based Mobile Robotic System for Control and Sensor Fusion Studies*, 24th International Conference on Computers and Their Applications in Industry and Engineering (CAINE-2011), November 16-18, 2011, Honolulu, Hawaii.
- Paolini, C., Tran, W., Parker, M., Miller, F., Bhattacharjee, S., *A remote controlled automated experimental apparatus for real-time flame spread measurement* (paper 11F-65), 2011 fall technical meeting of the Western States Sections of the Combustion Institute (WSS/CI), University of California, Riverside, October 17-19, 2011, Riverside, California.
- Paolini, C., Park, A. J., Binter, C., and Castillo, J. E., *An investigation of the variation in the sweep and diffusion front displacement as a function of reservoir temperature and seepage velocity with implications in CO₂ sequestration*, 47th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit and the 9th Annual International Energy Conversion Engineering Conference, 31 Jul - 3 Aug 2011, San Diego Convention Center, San Diego, California.
- Bhattacharjee, S., Paolini, C. P., Miller, F., and Nagarkar, R., *Radiation Signature in Microgravity Flame Spread*, 7th International Conference on Computational Heat and Mass Transfer, July 18-22, 2011, Istanbul, Turkey.
- Binter, C., Paolini, C., Park, A. J., and Castillo, J. E., *Utilization of Reaction-Transport Modeling Software to Study the Effects of Reservoir Temperature and Seepage Velocity on the Sweep Diffusion Front Displacement Formed after CO₂-Rich Water Injection*, Tenth Annual Conference on Carbon Capture and Sequestration, May 2-5, 2011, Pittsburgh, Pennsylvania.

Vitae of Christopher P. Paolini, Ph.D. (continued)

- Gallardo, A., Taylor, J., Paolini, C., Lee, H.K. and Lee, G., *An ANFIS-Based Multi-Sensor Structure for a Mobile Robotic System*, Proc. of the IEEE Symposium on Computational Intelligence, April 11-15, 2011, Paris, France.
- Johnson, C., Paolini, C. and Bhattacharjee, S., *Design of a Rich Internet Application for Gas Turbine Engine Simulations*, ASME Turbo Expo, June 6-10, 2011, Vancouver, Canada.
- Bhattacharjee, S., Agrawal, A., Paolini, C., Takahashi, S., and Wakai, K., *Opposed-Flow Flame Spread and Extinction in a Microgravity Environment*, Proceedings of the Eighth Asia-Pacific Conference on Combustion (ASPACC-10), December 10-13, 2010, Hyderabad, India.
- Paolini, C. and Bhattacharjee, S., *The IGE Model: An Extension of the Ideal Gas Model to Include Chemical Composition as Part of the Equilibrium State*, Proceedings of the 2010 ASME International Mechanical Engineering Congress and Exposition IMECE 2010, November 12-18, 2010, Vancouver, Canada.
- Paolini, C. and Natarajan, S., *Adaptive AJAX-Based Streaming Video for the iRobot Create Platform for Use in Buildings with Infrastructure Mode 802.11 Networks*, World Automation Congress (WAC 2010 / ISSCI 2010 Symposium), September 19 - September 23, 2010, Kobe International Conference Center, Kobe, Japan (ISSCI paper #377).
- Sahasrabudhe, S. and Paolini, C. P., *A Load Balancing Scheme for ebXML Registries*, International Workshop on Compilers, Languages, and Architectures for Web Services (CLAWS 2010), 39th International Conference on Parallel Processing (ICPP 2010), San Diego, California, September 13-16, 2010.
- Bhattacharjee, S., Wakai, K., and Takahashi, S., Paolini, C. P., *Correlating Flame Geometry in Opposed Flow Flame Spread over Thin Fuels*, 33rd International Symposium on Combustion, Beijing, China, August 1-6, 2010.

Vitae of Christopher P. Paolini, Ph.D. (continued)

- Patterson, M., Paolini, C., and Bhattacharjee, S., *Design and Implementation of a Rich Internet Application (RIA) for the Simulation of a Combustion Chamber*, in 2010 ASEE Annual Conference & Exposition, Louisville, Kentucky, June 20-23, 2010.
- Thomas, M. P., Cheng, C., Edwards, R. A., Paolini, C. P., *Improving the Performance of Thermochemical Computations Using Many-Task Computing Methods*. CSRC Technical Report, 2010.
- Paolini, C., Bhattacharjee, S., Takahashi, S. and Wakai, K., *Correlating Flame Geometry in Opposed Flow Flame Spread over Thin Fuels Using Scale Analysis and Numerical Solution*, Sixth International Symposium on Scale Modeling (ISSM-6), Kauai, Hawaii, September 13-16, 2009.
- Paolini, C. P., Jain, H. B., and Bhattacharjee, S., *Integration of Thermodynamic Properties from Different Databases with Data Derived from DFT and Ab-Initio Methods, and their Delivery through Web Services*, Seventeenth Symposium on Thermophysical Properties, June 21-26, 2009, Boulder, CO, paper #513.
- Bhattacharjee, S. and Paolini, C. P., *The Chemical Thermodynamic Module of The Expert System for Thermodynamics (TEST) Web Application*, 2009 ASEE Annual Conference & Exposition, June 14-17, 2009, Austin, TX.
- Paolini, C. P. and Bhattacharjee, S., *A Web Service Infrastructure for Distributed Chemical Equilibrium Computation*, Proceedings of the 6th International Conference on Computational Heat and Mass Transfer (ICCHMT), May 18-21, 2009, Guangzhou, China, p. 413-418.
- Paolini, C. P. and Bhattacharjee, S., *An Object-Oriented Online Tool for Solving Generalized Chemical Equilibrium Problems*, Proceedings of the 2008 ASME International Mechanical Engineering Congress and Exposition IMECE08, October 31 - November 6, 2008, Boston, Massachusetts, USA.

Vitae of Christopher P. Paolini, Ph.D. (continued)

- Bhattacharjee, S., Paolini, C. P., Wakai, K., and Takahashi, S., *Opposed-Flow Flame Spread Over Thin Films of PMMA in a Microgravity Environment - A Comparison of Experimental Results with Computational and Theoretical Predictions*, ACSESS 2008, San Diego, March 3, 2008.
- Paolini, C., Bobba, K., Surana, P., and Bhattacharjee, S., *A Java Based Web Application for Performing Chemical Equilibrium Analysis in Thermodynamics Courses*, 36th ASEE/IEEE Frontiers in Education Conference, October 28 31, 2006, San Diego, CA.
- Paolini, C., Udgaonkar, A., Bhattacharjee, S., Takahashi, S., and Wakai, K., *A Numerical Investigation of Flame Geometry in Opposed Flow, Thermal Regime Flame Spread over Thin Fuels*. Technical Report CSRCR 2006-01, Computational Science Research Center, San Diego State University, October 27, 2006 (Japan).
- Takahashi, S., Wakai, K., Paolini, C., Bhattacharjee, S., *Transition between Concurrent and Opposed Flow Flame Spread over Thin Films of PMMA in a Microgravity Environment*, Proceedings of Thermal Engineering Conference, 2005, p. 211-212.
- S. Bhattacharjee, C. Paolini, C. Phi, K. Wakai, and S. Takahashi. *Opposed-flow flame spread over thin films of PMMA in a microgravity environment - a comparison of computational, theoretical, and experimental results*, In Proceedings of the International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, Cairo, Egypt, September 2005.
- C. Paolini, A. Udgaonkar, S. Bhattacharjee, S. Takahashi, and K. Wakai. *A numerical investigation of flame geometry in opposed flow flame spread over thin fuels*, In Proceedings of 5th Asia-Pacific Conference on Combustion, The University of Adelaide, Adelaide, Australia, July 2005.
- S. Bhattacharjee, C. Paolini, K. Wakai, and S. Takahashi. *Flammability map for microgravity flame spread*, In Strategic Research to Enable NASAs Exploration Missions Conference, NASA/TM-2004-213114, June 2004.

Vitae of Christopher P. Paolini, Ph.D. (continued)

- Christopher Paolini, Kyoung H. Yeo, and Subrata Bhattacharjee. *An object oriented formulation for unsteady 3d heat transfer*, In Proceedings of CHT-04 ICHMT International Symposium on Advances in Computational Heat Transfer, April 2004
- Christopher Paolini, Kyoung H. Yeo, and Subrata Bhattacharjee. *An object oriented formulation for the finite volume simpler algorithm*, In Proceedings of the Western States Section/The Combustion Institute, October 2003.
- Subrata Bhattacharjee, Christopher Paolini, K. Wakai, and S. Takahashi. *Extinction criteria for opposed-flow flame spread in a microgravity environment*, In Proceedings of the Seventh International Microgravity Combustion Workshop. NASA, May 2003.
- Christopher Paolini and Marko Vuskovic. *Integration of a robotics laboratory using CORBA*, In 1997 International Conference on Systems, Man, and Cybernetics, Orlando, FL, October 1997.
- Binter, C., Park, A. J., Castillo, J. E., and Paolini, C., *Incorporation of New Web-based Technology to Expand the Accessibility and Flexibility of RTM Software for use in Modeling CO₂ Sequestration*, Tenth Annual Conference on Carbon Capture and Sequestration, May 2-5, 2011, Pittsburgh, Pennsylvania.
- Sanchez Peiro, E., Park, A. J., Castillo, J. E., and Paolini, C., *Mimetic Finite Difference Methods: An Application in Modeling Geological Sequestration of Carbon Dioxide*, Tenth Annual Conference on Carbon Capture and Sequestration, May 2-5, 2011, Pittsburgh, Pennsylvania.
- A. Gallardo, C. Paolini, and G. Lee, *Implementation of the Vector Field Histogram and Virtual Force Field Methods for Mobile Robots*, Society for Advancement of Chicanos and Native Americans in Science (SACNAS), September 30 - October 03, 2010, Anaheim, California.
- Bhattacharjee, S., Paolini, C., and Patterson M., *A Web Based Equilibrium Analysis Tool and its Application to Simulate a Combustion Chamber*, Poster presentation, 33rd International Symposium on Combustion, Beijing, Aug 1-9, 2010.

Poster Presentations

Vitae of Christopher P. Paolini, Ph.D. (continued)

- Cheng, C., Thomas, M. P, Edwards, R. A., Castillo, J. E., Paolini, C. P., *Improving the Performance of Thermochemical Computations Using Many-Task Computing Methods*, Presented at the 7th Annual Applied Computational Science and Engineering Student Support (ACSESS) Meeting, March, 2010.
- C. Paolini, R. J. Mellors, J. Castillo, and A. J. Park, *Running a reaction-transport-mechanical simulator on a web-based platform: Putting together water-rock interaction, multi-phase and heat flow, a composite petrophysics model, and a fracture mechanics region*, 2009 American Geophysical Union (AGU) Fall Meeting, December 14-18, San Francisco, California.

Experience

- **Instructor**, Computational Science, San Diego State University, Spring 2008 - present.
- **Instructor**, Department of Computer Science, San Diego State University, Spring 2006 - present.
- **Operating System Analyst, *Expert Classification***, College of Engineering, San Diego State University, 1996 - present.
- **Lead Staff Software Specialist**, Telecommunications and Network Services, San Diego State University, 1994-1996.
- **Associate Software Engineer**, IC CAD Layout Division, Unisys Corporation, 1990-1994.
- **Computer Laboratory Assistant**, Department of Mathematical Sciences, San Diego State University, 1989-1990.

Student Mentoring

- Aguirre, C., Bhutani, A., Graves, Q., Kalapatapu, A., Kode, S., Ramanna, V., 2011 Lavin VentureStart Competition, **First Place Win**, Mobile Network Innovations, LLC (graduate and undergraduate).
- Gallardo, A., *Implementation of the Vector Field Histogram and Virtual Force Field Methods for Mobile Robots*, 2010 McNair Scholars Summer Research Program (undergraduate).

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SDSU Campus Research Events

- Binter, Christopher, *Implementation of the Helgeson-Kirkham-Flowers (HKF) Model to Calculate Reservoir Temperature Evolution During Injection of CO₂-rich Water in Deep Brine Aquifers*, Student Research Symposium, Session C-3 Carbon, Nitrogen, and Water Cycles, Friday, March 9, 2012.
- Sanchez, Eduardo, *High Performance Computing in Water Rock Interaction and Reactive Transport Modeling for Simulation of Geologic Carbon Dioxide Sequestration*, Student Research Symposium, Session C-3 Carbon, Nitrogen, and Water Cycles, Friday, March 9, 2012.
- Kalapatapu, Abhishek, *Mobile Social Networking Device for Automated Human Relationship Formation*, Student Research Symposium, Session D-1 Social Networking Device Data Processing, Friday, March 9, 2012.
- Kode, Swati, *A Relational Interval Tree for Efficient Insertion and Searching of Real-time Mobile Social Networking Device Transaction Data*, Student Research Symposium, Session D-1 Social Networking Device Data Processing, Friday, March 9, 2012.
- Bhutani, Archit, *An Efficient Network Architecture for Mobile Social Networking Devices*, Student Research Symposium, Session D-1 Social Networking Device Data Processing, Friday, March 9, 2012. **Won President's Award.**
- Binter, Christopher, *Effects of Varying CO₂ Injectant Concentration and Seepage Velocity on Reservoir Porosity and Permeability for Applications in Carbon Capture and Sequestration*, Student Research Symposium, Session B-11, Chemistry I, March 4-5, 2011, Aztec Center.
- Sanchez, Eduardo, and Paolini, Christopher, *Mimetic Finite Difference Methods: An Application in Modeling Geological Sequestration of Carbon Dioxide*, Applied Computational Sciences and Engineering & Computational Science Curriculum Development (ACSESS 2011), March 11, 2011, Parma Payne Goodall Alumni Center.

Vitae of Christopher P. Paolini, Ph.D. (continued)

- Binter, Christopher, Park, Tony, and Paolini, Christopher, *Incorporation of New Web-Based Technology to Expand the Accessibility and Flexibility of RTM Software for Use in Modeling CO₂ Sequestration*, Applied Computational Sciences and Engineering & Computational Science Curriculum Development (ACSESS 2011), March 11, 2011, Parma Payne Goodall Alumni Center.
- Binter, Christopher, Park, Tony, and Paolini, Christopher, *Utilization of Reaction-Transport Modeling Software to Study the Effects of Reservoir Temperature and Seepage Velocity on the Sweep-Diffusion Front Displacement Formed after CO₂-Rich Water Injection*, Applied Computational Sciences and Engineering & Computational Science Curriculum Development (ACSESS 2011), March 11, 2011, Parma Payne Goodall Alumni Center.

Masters Thesis Supervision and Committee Service

- Shukla, H., *Design of an Error Concealment Scheme for H.264 AVC Video Bitstream*, Electrical Engineering, San Diego State University, spring 2012.
- Nanavati, K., *Channel Bonding/Loading for TV Whitespaces in IEEE 802.11af*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2012.
- Nagarkar, R., *Numerical Study of Interactions of Hydrodynamics, Kinetics, and Radiation in Flames*, Master's Thesis, Mechanical Engineering, San Diego State University, fall 2012.
- Girvanesh, K., *QoS Aware on Demand Multipath Routing Schemes in MANETs*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2012.
- Gopal, D., *A Service Oriented Cross-Platform Approach to Perform Thermodynamic Calculations*, Master's Thesis, Computer Science, San Diego State University, spring 2012.
- Chavady, N. Z., *Multi Channel Multi Hop Ad-Hoc Network*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2012.

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- Al Ghamdi, A., *Measurement of Gas Temperature field in a Flame Spreading Over Solid Fuel*, Master's Thesis, Mechanical Engineering, San Diego State University, fall 2011.
- Tulip, K., *An AJAX-Based Event Calendar for a Course Management System*, Master's Thesis, Computer Science, San Diego State University, fall 2011.
- Rao, S., *Spectrum Sensing for Cognitive Radio Networks*, Master's Thesis, Electrical Engineering, San Diego State University, fall 2011.
- King, W., *Interactive Graphical Interface for Printed Glycan Array Data Analysis*, Master's Thesis, Computer Science, San Diego State University, fall 2011.
- Kannappan, S., *3/4 Technique for PAPR Reduction in OFDM Systems*, Master's Thesis, Electrical Engineering, San Diego State University, fall 2011.
- Garhwal, A., *Ultra Wideband Pulse Generation using Discrete Prolate Spheroidal Sequences: Design and Analyses*, Master's Thesis, Electrical Engineering, San Diego State University, fall 2011.
- Mahalle, A., *Interpolated Tree Orthogonal Multiplexing Scheme for Cognitive Radio Designs*, Master's Thesis, Electrical Engineering, San Diego State University, fall 2011.
- Sampathu, D., *Implementation of Direct Digital Frequency Synthesizers (DDFS) using Legendre Polynomial Approximation*, Master's Thesis, Electrical Engineering, San Diego State University, fall 2011.
- Paravastu, N., *Mobile Cell Search and Synchronization in LTE*, Master's Thesis, Electrical Engineering, San Diego State University, fall 2011.
- Peri, S., *An Ajax-Based Communication Among Users of a Course Management System*, Master's Thesis, Computer Science, San Diego State University, summer 2011.

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- Limbachia, Sneh, *Huffman Coding Based JavaScript Compression for AJAX Applications*, Master's Thesis, Computer Science, San Diego State University, summer 2011.
- Dalal, N., *Experimental Approach in Measuring Flame Spread Rate*, Master's Thesis, Mechanical Engineering, San Diego State University, spring 2011.
- Neergund, V., *Iterative Successive Interference Cancellation Scheme to Remove Multiuser Interference Due to Carrier Frequency Offsets in OFDMA Uplink*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2011.
- Sahasrabudhe, S., *A Load Balancing Scheme for ebXML Registries*, Master's Thesis, Computer Science, San Diego State University, spring 2011.
- Shetty, P., *Circle Detection in Images*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2011.
- Vishwanath, H., *Morphological Transformation Based Feature Extraction and its Application to License Plate Localization*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2011.
- Malhotra, V., *FPGA Based Geometric Measurement of Facial Features*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2011.
- Kannepalli, S., *Smart Slice Prioritization in H.264 AVC*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2011.
- George, A., *Supersonic Tandem Wedge Flow in Extreme Ground Effect*, Aerospace Engineering, spring 2011.
- Ngo, A., *A Novel AJAX User Interface for Telerobotic Control*, Computer Science, San Diego State University, fall 2010.
- Khadse, S., *An AJAX Based Editor for an Online Repository of Engineering Problems and Solutions*, Computer Science, San Diego State University, fall 2010.

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- Barrios, L., *Real-Time Control of a Multi-Fingered Robot Hand Using EMG Signals*, Master's Thesis, Computer Science, San Diego State University, summer 2010.
- Zheng, W., *Minimax optimization algorithm to design a Square-root Nyquist Filter*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2010.
- Fuhrer, N., *The S-Transform: Applications in Music Recognition*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2010.
- Johnson, C. H., *A Rich Internet Application for Gas Turbine Engine Simulations*, Master's Thesis, Mechanical Engineering, San Diego State University, spring 2010.
- Desmond, R. R., *An Adaptable Active Load Test Fixture for Space Vehicle Transponder Power Supplies*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2010.
- Haddad, D., *Implementation Techniques of Frequency Domain Equalizer for Single Carrier OFDMA System*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2010.
- Patterson, M., *Web Service Based Tool for Combustion Equilibrium Calculation*, Master's Thesis, Mechanical Engineering, San Diego State University, fall 2009.
- Seligman, E. P., *Solutions for Network Security in a Virtualized Environment*, Master's Thesis, Computer Science, San Diego State University, fall 2009.
- Gregorich, N. A., *Audio frequency shifting on FPGA*, Master's Thesis, Electrical Engineering, San Diego State University, spring 2009.
- Chowdhury, F., *A Wiki-Enriched Dynamic Help System for an AJAX-based Web Application*, Master's Thesis, Computer Science, San Diego State University, spring 2009.

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- Natatajan, S., *An Adaptive Streaming Video Infrastructure for a Wireless iRobot Create Platform*, Master's Thesis, Computer Science, San Diego State University, spring 2009.
- Alonso, J. C., *An XML-based Testing Framework for Thermodynamic Applications*, Master's Thesis, Mechanical Engineering, San Diego State University, spring 2009.
- Chen, Q., *An AJAX-Based Mail User Agent (MUA) for Course Management Systems*, Master's Thesis, Computer Science, San Diego State University, fall 2008.
- Bhatt, P., *A Dynamic Database Driven Approach for Loading JavaScript using the XMLHttpRequest API*, Master's Thesis, Computer Science, San Diego State University, fall 2008.
- Soni, R. P., *An AJAX Enabled Web Spreadsheet*, Master's Thesis, Computer Science, San Diego State University, fall 2008.
- Jain, H. B., *A Web Service Based Testing Framework for Thermodynamic Data*, Master's Thesis, Computer Science, San Diego State University, spring 2008.
- Chan, W. W., *A Service-Oriented Architecture (SOA) Model for Performing Chemical Equilibrium Analysis in a Distributed Framework by Consuming Java-based Equilibrium Web Services*, Master's Thesis, Computer Science, San Diego State University, fall 2007.
- Bobba, B. K. Sri Rama, *Web Service Enabled Unit Converter - A Framework for Distributed Community Computing*, Master's Thesis, Computer Science, San Diego State University, summer 2007.
- Surana, P., *Java Application for Finding the Optimum Solution for Thermodynamic Equilibrium*, Master's Thesis, Computer Science, San Diego State University, spring 2007.
- Devalia, B. V., *Preliminary Implementation of Thermochemical Data Web Services*, Master's Thesis, Computer Science, San Diego State University, fall 2006.

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Courses Taught

- CS 576 - Introduction to Networks and Distributed Systems
- CS 696 - Advanced Networks and Distributed Systems
- COMP 670 - Seminar: Problems in Computational Science
- COMP 696 - Carbon Capture and Sequestration
- ENGR 120 - Engineering Problem Analysis
- DEFCON Introduction to the Unix Operating System
- DEFCON Introduction to Internet Information Systems

Invited Talks and Workshops

- Paolini, C., Sanchez Peiro, E., Park, A. J., Castillo, J. E., A Distributed Mimetic Approach to Simulating Water-Rock Interaction following CO₂ Injection in Sedimentary Basins, 2011 SIAM Conference on Analysis of Partial Differential Equations, San Diego, California, November 14-17, 2011.
- Gordon Summer Institute, San Diego Supercomputer Center, University of California, San Diego, La Jolla, California, August 8 - 12, 2011.
- 8th annual Cyberinfrastructure Summer Institute for Geoscientists (CSIG'11) , San Diego Supercomputer Center, University of California, San Diego, La Jolla, California, August 8 - 12, 2011.
- CI-TEAM Demonstration Project CyberCHEQS: A Service-Oriented Cyberinfrastructure (SOCI) for Thermochemical Data and Computation Services, Subrata Bhattacharjee and Christopher Paolini, CI-TEAM Principal Investigators' Meeting, May 24-26, 2011 Champaign-Urbana, Illinois.
- Project CyberCHEQS: A Service-Oriented Cyberinfrastructure (SOCI) for Thermochemical Data and Computation Services (CI-TEAM): Subrata Bhattacharjee, Christopher Paolini, Kris Stewart, Mary Thomas, Ofodike Ezekoye, NSF Showcase, SIGCSE 2011: The 42nd ACM Technical Symposium on Computer Science Education, March 9-12, 2011, Dallas, Texas.

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- Cyberinfrastructure for Thermochemical Computation, Global CyberBridges - Calit2 Student Summer Workshop and Project GreenLight Education and Outreach Summer Workshop, University of California, San Diego, La Jolla, California, July 1-2, 2009.
 - Introduction to Insight II, San Diego State University, May 18, 2006.
 - ARCS Scholarship Career Talk, Thursday Club of San Diego, March 3, 2005.
- Service
- CSUEU Communications Committee: 2006 - 2010.
 - Recruitment Committee Member: Dean, College of Engineering, 2001.
 - Recruitment Committee Member: PC Administrator, 2000.
- References
- Dr. Subrata (Sooby) Bhattacharjee, Professor (Ph.D. Advisor), Department of Mechanical Engineering, San Diego State University, San Diego, CA 92182, Tel: (619) 594-6080 (Office), Email: subrata@thermo.sdsu.edu, Homepage: <http://sb.sdsu.edu/>
 - Dr. Jose Castillo, Professor and Director of the Computational Science Research Center, Department of Mathematical Sciences, San Diego State University, San Diego, CA 92182, Tel: (619) 594-3430, Email: castillo@myth.sdsu.edu, Homepage: <http://www.csrc.sdsu.edu/csrc/index.php>
 - Dr. Marko Vuskovic, Professor (M.S. Thesis Advisor), Department of Computer Science, San Diego State University, San Diego, CA 92182, Tel: (619) 594-4302 (Office), Email: marko@cs.sdsu.edu, Homepage: <http://medusa.sdsu.edu/Robotics/index.htm>
 - Dr. Pieter A. Frick, Professor and Dean, School of Engineering and Computer Science, Oakland University, Rochester, MI 48309, Tel: (248) 370-2217, Email: frick@oakland.edu, Homepage: <http://www2.oakland.edu/secs/dispfac.asp>