

# **Dave A. Berque**

## **Curriculum Vitae**

### **Last Updated: February 27, 2024**

**Computer Science Department  
DePauw University  
Greencastle, IN 46135  
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#### **Education**

Ph.D. in Computer Science, Rensselaer Polytechnic Institute, August 1991. Thesis: Implicit Set Manipulation: Theory and Practice. Advisor: Dr. Mark K. Goldberg.

M.S. in Computer Science, Rensselaer Polytechnic Institute, December 1987.

B.A. in Computer Science (Independent Major), Haverford College, May 1985.

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#### **Academic Work Experience and Selected Academic Leadership Experience**

Vice President for Academic Affairs, DePauw University, July 1, 2020 through present.

Interim Vice President for Academic Affairs, DePauw University, 2019-2020 academic year.

Associate Vice President of Student Academic Life and Dean of Academic Life, DePauw University, July 2016 through June 30, 2019.

Dean of Academic Life, DePauw University, July 2013 through June 2016.

Computer Science Faculty Member, DePauw University

- Professor July 2005 through present.
- Associate Professor July 1997 through June 2005.
- Assistant Professor July 1992 through June 1997.

Computer Science Department Chair, DePauw University, July 2006 through June 2012.

Chair of Department Chairs and Program Directors, DePauw University, elected position that facilitates meetings of Department Chairs and Program Directors, July 2011 through June 2012.

Chair of the Faculty, DePauw University, elected position that coordinates faculty governance system and facilitates monthly University-wide faculty meetings, July 2008 through June 2011.

Visiting Assistant Professor of Computer Science, Colgate University, 1991 - 1992.

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## Honors and Awards

Selected as the *Carnegie Foundation for the Advancement of Teaching Outstanding Baccalaureate Colleges United States Professor of the Year, 1997.*

Received the *Mira Techpoint Education Contribution in Technology* award, 2007.

Named the *Tenzer Family University Professor in Instructional Technology*, July 2006 – June 2011.

Held an endowed *University Professorship* at DePauw University in recognition of sustained excellence in professional accomplishment, teaching, and service. July 2001- June 2005.

Awarded the *Robert McNaughton Prize for the Outstanding Computer Science Graduate Student*, Rensselaer Polytechnic Institute, May 1991.

Awarded the *Rensselaer Computer Science Department Outstanding Teaching Fellowship*, spring 1990.

Received *General Electric Foundation Teaching Incentive Awards* in 1987, 1998, 1989, and 1990.

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## Additional Work Experience and Leadership Roles

Consultant, DyKnow LLC, developer of pen-based instructional technology software that is an outgrowth of my previous research, December 2000 through December 2014.

Advisory Board Chair, DyKnow LLC, fall 2006 through spring 2008.

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## University Courses Taught

**DePauw University:** The Science of Design: An Interdisciplinary Approach, Python Projects for Programmers, Japanese Culture, Technology and Design, Computer Science I, Computer Science II, Data Structures, Data Structures and Algorithms, Object Oriented Software Development, Computer Organization, Theory of Computation, Compilers, Operating Systems, Human-Computer Interaction, Senior Seminar, Senior Project.

**Colgate University:** Computers in the Arts and Sciences, Introduction to Computing I,

Science of Programming.

**Rensselaer Polytechnic Institute:** Computing Fundamentals, Data Structures and Algorithms, Introduction to Computability Formal Languages and Automata Theory.

## **Undergraduate Research Program Administration**

Project director for five consecutive National Science Foundation Research Experiences for Undergraduates grants that provided summer research opportunities for one hundred and twenty five undergraduates over fifteen summers. Program participation by underrepresented students was 44%. Subsequent to the program 41% of the participants went on to enroll in graduate programs or embark on research careers related to computer science (52% for the most recent nine summers of the program). Directed all aspects of this program from 1994 through 2008 with grants from the National Science Foundation totaling \$814,182.

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## **Research Interests**

Interested in Human Computer Interaction, including the design of persuasive technology, instructional technology, pen-based computing, computer supported cooperative work, and cross-cultural design including the role of *kawaii* (Japanese cuteness) in the design of robotic gadgets.

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## **Patents**

Berque, D. and Sanders, D. (May, 2007). *System for Knowledge Transfer in a Group Setting (Extended)*, United States Patent Number 7,213,211, United States Patent and Trademark Office.

Berque, D. (February, 2006). *System for Knowledge Transfer in a Group Setting*, United States Patent Number 7,003,728 B2, United States Patent and Trademark Office.

Berque, D. (1984). *Method of Stringing and Restringing Tennis Rackets*, United States Patent Number 4455021, United States Patent and Trademark Office.

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## **External Grant Support (Total of \$2,779,129)**

Project Director with Carol Smith of a Lilly Endowment, Inc. Charting the Future for Indiana's Colleges and Universities" grant entitled "Using Technology to Improve Outcomes and Outreach" in the amount of \$100,000,000. Award period September 1, 2020 through December 31, 2024.

PI with Hiroko Chiba (Co-PI) of a National Science Foundation International Research Experiences for Students (IRES) grant entitled "Involving Undergraduates in Research on Design and Cross-Cultural Perceptions of Cuteness in Robotic Gadgets," in the amount of \$286,761. Award period August 1, 2019 through July 31, 2023.

(with Carol Smith PI and Co-PIs Dave Berque, Dan Gurnon, Pascal Lafontant and Gloria Townsend) National Science Foundation grant entitled "Network Design: Network Infrastructure for Improved Student Engagement in Science Discovery and Innovation," in the amount of \$210,000. Award period August 1, 2017 through July 31, 2019.

Co-recipient (with Hiroko Chiba) of a Collegiate Exchange Travel Program grant from The Japan Foundation in amount of \$66,400 to support a Winter Term Study Trip to Japan for approximately two-dozen students. Study trip topic: "From Chopsticks to Robotics: Experiencing Japanese Culture Through the Spirit of Craftsmanship (*monozukuri*)", grant received August 2012.

Great Lakes Colleges Association New Directions Initiative Grant, "Exploring the Process of Writing a Trade Book", \$860, spring 2011.

National Institute for Technology in Liberal Education (NITLE), Co-recipient of a grant to host workshop about the pedagogy of teaching with Tablet PCs at DePauw University in the spring of 2009. Grant awarded for \$24,465 with a supplemental grant of \$5,075 for dissemination.

Hewlett-Packard (HP), Co-Principal Investigator for a \$10,625 Teaching with Technology Video Production Grant, September, 2007.

Hewlett-Packard (HP), Principal Investigator for a \$120,000 Teaching with Technology Leadership Grant, July, 2007.

Hewlett-Packard (HP), Principal Investigator for a \$69,500 Teaching with Technology grant, May, 2006.

National Science Foundation (NSF), Principal Investigator for a \$203,370 Research Experiences for Undergraduates Grant, awarded in 2005 for summers of 2006, 2007, 2008.

National Science Foundation (NSF) supplementary grant to organize and host the annual meeting for all NSF CISE REU PIs. Funded in July 2005 in the amount of \$72,291.

Midwest Instructional Technology Center (MITC) grant for “Developing and Deploying a Database to Increase the Usefulness of the ETS Major Field Test for Computer Science Department Program Assessment”, lead committee member. Grant funded in March 2004 for \$5,000.

Midwest Instructional Technology Center (MITC) grant for a GLCA/ACM Computer Science Assessment program. Funded in September of 2003, in the amount of \$3,335.

National Science Foundation (NSF), Principal Investigator for a \$177,591 Research Experiences for Undergraduates Grant, summers of 2003, 2004, and 2005.

National Science Foundation (NSF), Principal Investigator for a \$110,698 Major Research Instrumentation (MRI) grant. This grant funded the purchase of several plasma displays with touch sensitive overlays, supporting servers, and handheld computers to support research and research training activities in the area of Multiple Machine Interfaces. Funded in July, 2002.

National Science Foundation (NSF), Principal Investigator for a \$149,011 Research Experiences for Undergraduates Grant, Summers of 2000, 2001, 2002 with a \$9,487 supplement granted in January, 2002 bringing the total to \$158,498.

National Science Foundation (NSF), Principal Investigator for a \$160,325 Research Experiences for Undergraduates Grant, Summers of 1997, 1998, 1999.

National Science Foundation (NSF), Principal Investigator for a \$123,885 Research Experiences for Undergraduates Grant, Summers of 1994, 1995, and 1996.

National Security Agency (NSA), Graduate Student Research Assistantship, Spring 1991.

National Science Foundation (NSF), Graduate Student Research Assistantship, Summer 1988, Fall 1988, Spring 1989.

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## **Keynote and Banquet Talks**

Invited keynote speaker “Teaching with Technology: Yesterday, Today and a Challenge for Tomorrow” at the John Paul II High School Professional Development Conference, John Paul II High School, Plano Texas, delivered via webinar, August 10<sup>th</sup>, 2010.

Invited keynote speaker "Fostering Student Engagement in Technical Courses using DyKnow Software and Tablet PCs" at the 2009 IEEE 13th Digital Signal Processing Workshop and 5th Signal Processing Education Workshop, Marco Island, FL, January 5th, 2009.

Invited keynote speaker " DyKnow Duos: Past, Present, and Future", at the DyKnow user group meeting, DePauw University, June 2007

Invited keynote speaker "Pen Based Computing: An Emerging Technology with Pedagogical Promise" at the Laptop Institute Summer 2005 Conference, Lausanne Collegiate School, Memphis, TN, July 2005.

Invited banquet speaker at the CCSC:MW (Consortium for Computing in Small Colleges: Mid West) annual conference. September 28, 2001. Talk title: *Old Hardware: Still Useful after all these Years*. (Presentation was given jointly with Doug Harms.)

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## **Books Edited and Book Chapters Authored**

Book Editor: Reed R. and Berque D. (Editors), *The Impact of Tablet PCs and Pen-based Computing on Education: Going Mainstream*, Purdue University Press, December, 2010.

Book Editor: Berque D., Konkle L. and Reed R. (Editors), *The Impact of Tablet PCs and Pen-based Computing on Education: New Horizons*, Purdue University Press, December, 2009.

Chapter Author: Authored a chapter entitled Laptops with Pens: 1-to-1 Tablet PC Programs that Work in "1-To-1 Laptop Programs that Work" (2<sup>nd</sup> Edition), by Pamela Livingston, International Society for Technology in Education (ISTE), June 2009.

Book Editor: Reed R., Berque D. and Prey J. (Editors), *The Impact of Tablet PCs and Pen-based Computing on Education: Evidence and Outcomes*, Purdue University Press, December, 2008.

Chapter Author: Authored a chapter entitled "Tablet PCs and 1-to-1 Learning" in "Tablet PCs in K-12 Education", edited by Mike Van Mantgem, published by International Society for Technology in Education (ISTE), June, 2008.

Book Editor: Prey J., Reed R., and Berque D. (editors), *The Impact of Tablet PCs and Pen-based Computing on Education: Beyond the Tipping Point*, Purdue University Press, July 2007.

Book Editor: Berque D., Prey J., Reed R. (editors), *The Impact of Tablet PCs and Pen-based Computing on Education: Vignettes, Evaluations, and Future Directions*, Purdue University Press, July 2006.

Chapter Author: Berque D. "Teaching as a Balancing Act: Strategies for Managing Competing Objectives" in "The Art of College Teaching: 28 Takes" Edited by Marilyn Kallet and April Morgan, The University of Tennessee Press, 2005.

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## Publications in Refereed Conference Proceedings and Journals

Berque, D., Chiba, H., Wilkerson, B. (2023). Design and Cross-cultural Evaluation of a Kawaii (Cute) Roomba Vacuum. In: Rauterberg, M. (eds) Culture and Computing. HCII 2023. Lecture Notes in Computer Science, vol 14035. Springer, Cham. [https://doi.org/10.1007/978-3-031-34732-0\\_37](https://doi.org/10.1007/978-3-031-34732-0_37)

Laohakangvalvit, Tipporn & Sripian, Peeraya & Sugaya, Midori & Ohkura, Michiko & Berque, Dave & Chiba, Hiroko. (2023). Cross-Cultural Affective Evaluation of Kawaii Robots in Virtual Spaces. 10.1007/978-3-031-34732-0\_40.

Berque D., Chiba H., Laohakangvalvit T., Ohkura M., Sripian P., Sugaya M., Guinee L., Imura S., Jadram N., Martinez R., Fong S., Schwipps H., Ohtsuka S., Todd G. (2022). Cross-Cultural Design and Evaluation of Student Companion Robots with Varied Kawaii (Cute) Attributes. In: Kurosu, M. (eds) Human-Computer Interaction. Theoretical Approaches and Design Methods. HCII 2022. July 2022. Lecture Notes in Computer Science, vol 13302. Pages 391-409, Springer, Cham. [https://doi.org/10.1007/978-3-031-05311-5\\_27](https://doi.org/10.1007/978-3-031-05311-5_27)

Ohkura M., Laohakangvalvit T., Sripian P., Sugaya M., Chiba H., Berque D. (2022). Affective Evaluation of Virtual Kawaii Robotic Gadgets Using Biological Signals in a Remote Collaboration of American and Japanese Students. In: Kurosu, M. (eds) Human-Computer Interaction. Theoretical Approaches and Design Methods. HCII 2022. July, 2022. Lecture Notes in Computer Science, vol 13302. Pages 478-488, Springer, Cham. [https://doi.org/10.1007/978-3-031-05311-5\\_33](https://doi.org/10.1007/978-3-031-05311-5_33)

Ohkura M., Sugaya, M., Sripian, P., Laohakangvalvit, T., Chiba, H., Berque, Dave. (2022). Design and Implementation of Kawaii Robotic Gadgets in Virtual Spaces by Japanese and American University Students in a Remote Collaboration Project. International Journal of Affective Engineering. 10.5057/ijae.IJAE-D-21-00015.

Berque D., Chiba H., Laohakangvalvit T., Ohkura M., Sripian P., Sugaya M., Bautista K. Blakey J., Chen F., Huang W., Imura S., Murayama K., Spehlmann E., Wright, C. Cross-cultural Design and Evaluation of Robot Prototypes based on Kawaii (Cute) Attributes. Proceedings of Human-Computer Interaction International 2021, July 2021, Remote Conference, Springer, Volume 12 pages 319 -334.

Ohkura M., Sugaya, M., Sripian P., Laohakangvalvit T., Chiba H., and Berque D. Design and Implementation of Kawaii Robots by Japanese and American University Students using Remote Collaboration. Proceedings of the International Symposium on Affective Science and Engineering, January 2021.

Berque D. and Chiba H. Computer Science Intersects Humanities: Visualization Projects for Liberal Arts Undergraduate Students Through an Interdisciplinary Approach Using Software Development Skills and Japanese Cultural Knowledge. Proceedings of Human Computer Interaction International 2020, July 2020, Remote Conference, Springer. Pages 31-41

Berque D., Chiba H., Ohkura M., Sripian P., and Sugaya, M. Fostering Cross-cultural Research by Cross-cultural Student Teams: A Case Study Related to Kawaii (Cute) Robot Design, Proceedings of Human Computer Interaction International 2020, July 2020, Remote Conference, Springer.

Berque D., Chiba H., Hashizume A., and Kurosu M. A Cross-Cultural Comparison of Perceptions of Cuteness and Kawaii between American and Japanese College Students, Proceedings of HCI International 2019, July 2019, Orlando, Florida, Springer.

Berque D., Chiba H., Hashizume A., Kurosu M. and Showalter S. Cuteness in Japanese Design: Investigating perceptions of Kawaii among American College Students, Proceedings of the 9<sup>th</sup> International Conference on Applied Human Factors and Ergonomics, July 2018, Orlando, Florida, Springer.

Berque D. and Chiba H., Evaluating the Use of LINE Software to Support Interaction during an American Travel Course in Japan, Proceedings of HCI International 2017, July 2017, Vancouver, Canada, Springer.

Berque D. and Chiba H., Coupled Persuasive Systems: A Case Study in Learning Japanese Characters, Proceedings of HCI International 2016, July 2016, Toronto, Canada, Springer.

Berque D. and Chiba H., Exposing American Undergraduates to Monozukuri and other Key Principles in Japanese Culture, Design, Technology and Robotics, Proceedings of HCI International 2016, July 2016, Toronto, Canada, Springer.

Berque D. and Newman J., GlassClass: Exploring the Design, Implementation, and Acceptance of Google Glass in the Classroom, Proceedings of HCI International 2015, August 2015, Los Angeles, CA, Springer.

Berque D. Fast Development Tools Considered Harmful, Association for Computing Machinery Inroads, Vol. 4, No. 3, pp. 66 – 68, September 2013.

Berque D., Billingsley A., Bonebright T. L., Burgess J., Johnson S., Wethington B.

(2011). Design and Evaluation of Persuasive Technology to Encourage Healthier Typing Behaviors, *Proceedings of Persuasive 2011, The Sixth International Conference on Persuasive Technology (June 2- 5, 2011)*, Association for Computing Machinery (ACM) Press.

Berque D., Bonebright T., Gough M., and Smith C. Leveraging the Interplay Between a Grassroots Pen-Based Computing Pilot and an Institutional Laptop Initiative, in *EDUCAUSE Quarterly Magazine*, Volume 32, Number 4, 2009.

Berque D., Assessing the use of DyKnow Ink and Audio Tools: If you Record it Will They Still Come?, in "The Impact of Tablet PCs and Pen-based Computing on Education: New Horizons", Purdue University Press, December, 2009.

Berque D. A Tutorial on Stroke-based Interfaces: Unistroke Recognition Algorithms Appropriate for Compelling Projects in Introductory Courses, *Proceedings of the 40th ACM Technical Symposium on Computer Science Education*, March 4th - 7th, 2009 Chattanooga, TN.

Berque D., Byers C., Myers A. Turning the Classroom Upside Down using Tablet PCs and DyKnow Ink and Audio Tools, in "The Impact of Tablet PCs and Pen-based Computing on Education: Evidence and Outcomes", Purdue University Press, December, 2008.

Berque D., Bonebright, T., Dart, J., Koch, K., and O'Banion S. Using DyKnow Software to Support Group Work: A Mixed-method Evaluation, in "The Impact of Tablet PCs and Pen-based Computing on Education: Beyond the Tipping Point", Purdue University Press, July 2007.

Berque D. Pushing Forty (Courses per Semester): Pen-Computing and DyKnow Tools at DePauw University, completed November 2005, *The Impact of Tablet PCs and Pen-based Computing on Education: Vignettes, Evaluations, and Future Directions*, Purdue University Press, July 2006.

Berque D. An Evaluation of a Broad Deployment of DyKnow Software to Support Note Taking and Interaction using Pen-Based Computers", *Journal of Computing Sciences in Colleges*, Proceedings of CCSC:NE 2006 annual conference, Holy Cross College, April 21-22<sup>nd</sup>, 2006.

Berque D. Is the Pen Mightier Than the Mouse?, *T.H.E Journal (Technological Horizons in Education)*, November 2005.

Berque D., Bonebright T., and Whitesell M. Using Pen-based Computers Across the Computer Science Curriculum, *Proceedings of the 2004 ACM SIGCSE Technical Symposium*, ACM Press, Norfolk, VA, March 3-7, 2004.

Berque D., Brinkman B., Kinnett S., and Ohs P. (Video) The Talking Whiteboard: A

Tool to Help Blind and Low-Vision Students Follow Class Content, *Video Proceedings of ICAD 2003, the 9th Annual International Conference on Auditory Display and Workshop on Auditory Displays in Assistive Technologies*, Boston University, July 6th, 2003.

Berque D. BoardTalker: Initial Experiences and Open Problems in Prototyping a Talking Digital Whiteboard to Assist Visually Impaired Students, *Proceedings of ICAD 2003, the 9th Annual International Conference on Auditory Display*, Boston University, July, 2003.

Berque D., Brinkman B., Geringer J., and Maynor K. (2002). Changing Places: A Case Study in Adapting an Educational Pen-based Groupware System for use at a Distance. *Proceedings of Ed-Media 2002 World Conference on Educational Multimedia, Hypermedia and Telecommunications*, June 24th - 29th 2002, Denver, Colorado. Proceedings published by Association for the Advancement of Computers in Education (AACE).

Harms D., and Berque D. Smaller and faster is not always better: using old hardware to teach content and history to computer science students, *Journal of the Association for History and Computing*, Vol IV., No. 3, November, 2001. An on-line journal available at <http://mcel.pacificu.edu/JAHC/JAHCiv3/ARTICLES/harms/harms.html>

Berque D., Johnson D., and Jovanovic L. Teaching Theory of Computation Using Pen-Based Computers and an Electronic Whiteboard, *Proceedings of ITiCSE 2001, the 6th Annual Conference on Innovation and Technology in Computer Science Education*, Canterbury, England, June 25th - 27th, 2001.

Harms D. and Berque D. Using a PDP-11/10 to Teach Content and History in Computer Organization Courses, *Proceedings of the 2001 ACM SIGCSE Technical Symposium*, Charlotte, NC, February 21-25th, 2001.

Berque D., Hutcheson, A., Johnson D., Jovanovic L., Moore K., Singer C., and Slattery K. The Design of an Interface for Student Note Annotation in a Networked Electronic Classroom, *Journal of Network and Computer Applications* (Academic Press), Vol. 23, No. 2, April, 2000, pp. 77-91.

Berque D., Hutcheson, A., Johnson D., Jovanovic L., Moore K., Singer C., and Slattery K. Short Paper and Poster: Using a Variation of the WYSIWIS Shared Drawing Surface Paradigm to Support Electronic Classrooms. *Proceedings of Human Computer Interaction '99: The 8th International Conference on Human Computer Interaction*, IRB-Verlag. Munich, Germany, August 22 - 27, 1999.

Berque, D., Harrison, T. Electronic Classrooms: A Prototype Using Laser Whiteboards and Pen Based Computers, *Proceedings of the 14th International Conference on Technology and Education*, University of Oslo, Norway, August 1997.

Berque, D., Gaerte, L., Harrison, T., Heitz, M., Ritz, R., Witter, T., Yoder, J. On the

Progress of Developing Groupware to Support Notetaking, *Second Annual International Conference on the Learning Sciences*, sponsored by the Association for the Advancement of Computing in Education, Northwestern University, July 24 - 27, 1996.

Berque, D. and Townsend, G. A New Scheme for Reinforcing Concepts in CS2, *Proceedings of the 1995 ACM SIGCSE Technical Symposium*, Nashville, March 2-4 1995.

Berque, D., Singer, C., Townsend, G. Integrating Experimentation, Computer Literacy, and Writing into Introductory Computer Science Courses, *Proceedings of the First Annual Midwest Small College Computing Conference*, Forte Wayne, IN, September 1994.

Berque, D., Fisher, B., Harrison, T. The Role of Programming in Undergraduate Research Projects, *Proceedings of the First Annual Midwest Small College Computing Conference*, Forte Wayne, IN, September 1994.

Berque, D., Bogda, J., Fisher, B., Harrison, T., Rahn, N. The KLYDE Workbench for Studying Experimental Algorithm Analysis, *Proceedings of the 1994 ACM SIGCSE Technical Symposium*, Phoenix, March 10-12 1994.

Berque, D. Electronic Blackboards: A Vision of the Future, *Proceedings of the 10th International Conference on Technology and Education*, M.I.T., March 1993.

Berque, D., Goldberg, M., Edmonds, J. Implementing Progress Indicators for Recursive Algorithms, *Proceedings of the 1993 ACM SIGAPP Symposium on Applied Computing*, February 1993.

Goldberg, M., Spencer, T., Berque, D. A Low-exponential Algorithm for Counting Vertex Covers, *Graph Theory, Combinatorics, and Algorithms: Proceedings of the Seventh Quadrennial International Conference on the Theory and Applications of Graphs*, June 1992, John Wiley and Sons.

Berque, D., Goldberg, M. Monitoring an Algorithm's Execution, *Proceedings of the DIMACS Workshop on Computational Support for Discrete Mathematics*, Rutgers University, American Mathematical Society. March 1992.

Berque, D., Cecchini, R., Goldberg, M., Rivenburgh, R. SetPlayer: A System for Symbolic Set Computation, *The Journal of Symbolic Computation*, December 1992.

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## **Posters, Panels, Presentations, Workshops, Videos and Technical Reports**

Berque D., Bonebright T., Fulcher K. Academic Strategies for the COVID-19 Era and Beyond. Presentation at Council on Independent Colleges (CIC) 2020 Conference for Chief Academic Officers and Academic Team Members, Remote Conference,

November, 2020.

D. Gurnon, D. Berque, T. Goddard, J. Stanley, J. Voss-Andreae, and P. Fesenmeir. Physical Sculpture/Virtual App: Visualizing Molecules with Undergraduates, poster presented by D. Gurnon at VIZBI (Visualizing Biological Data), Cambridge, MA, March 20-22, 2013.

D. Gurnon, D. Berque, T. Goddard, J. Stanley, J. Voss-Andreae, and P. Fesenmeir. Physical Sculpture/Virtual App: Visualizing Molecules with Undergraduates, poster presented by D. Gurnon at Visualization in Science and Education. Smithfield, RI, July 21-26, 2013

Co-leader of a Birds of a Feather Discussion on the topic “Including HCI and User Experience (UX) Methodologies in Computing Curriculums” at the 2013 ACM SIGCSE Technical Symposium. Proposal submitted and accepted in fall 2012 for March 2013 conference.

Gave an ITAP Professional Development Series Session entitled: “Issues in Launching a Technology Start-up: A Facebook App Case Study“, September 24<sup>th</sup>, 2012.

Berque D., Bonebright T., and Smith C., *Scaling a Grassroots Tablet PC Pilot for Large-Scale Campus Integration*, abstract in *The Impact of Tablet PCs and Pen-based Technology on Education*, Edited by Reed R. and Berque D., Purdue University Press, December, 2010.

Berque D. *Introduction to DyKnow-Tablet Pedagogy*, hands-on workshop at the 2010 National Institute for Technology in the Liberal Arts annual Camp, June, 2010.

Berque D. and Smith C. *Beyond the Prototype: Scaling a Grassroots Tablet PC Pilot for Large-Scale Campus Integration*, presentation at the 2010 National Institute for Technology in the Liberal Arts annual Camp, June, 2010.

Presented three hands-on workshops entitled "The Binary System: A Mock Class Using DyKnow Software and Tablet PCs", at International Society for Technology in Education (ISTE) 2010 Annual Conference, Denver, CO, June, 2010.

Presented “Using Audio and Ink Recordings, Tablet PCs, and DyKnow to Maximize Class Time - Teaching Upside Down”, EDUCAUSE Annual Conference 2009, Denver, CO November 3<sup>rd</sup> through 6<sup>th</sup>, 2009.

Presented “Using Audio and Ink Recordings, Tablet PCs, and DyKnow to Maximize Class Time - Teaching Upside Down”, DyKnow Virtual User Group Meeting, July 30<sup>th</sup>, 2009.

Co-organized a panel entitled "Tablet PC Hindsight: Tablet PC Leaders Share Their Experiences" at NECC 2009, Washington DC, June, 2009 (with Pamela Livingston and

panelists Kim Henninger, Shabbi Luthra, and Rob Mancabelli).

Presented three hands-on workshops entitled "Tablet PCs in Action: Experience the Possibilities through Sample Lessons", at NECC 2009, Washington DC, June, 2009.

Gave a Webinar entitled "Best Practices for 1-to-1 Tablet PC Deployments in the K12 Classroom" as part of the International Society for Technology in Education (ISTE) Webinar series, April 8th, 2009.

(with C. Smith) presentation entitled "Beyond the Prototype: Scaling a Grassroots Tablet PC Pilot for Large Scale Campus Integration, concurrent presentation at Great Lakes Information Technologists for Education and Research (GLITTER), DePauw University, April 3, 2009.

Gave a Webinar entitled "Turning the Classroom Upside Down Using DyKnow Ink and Audio Tools", DyKnow University Webinar Series, March 18th and April 15th, 2009.

(with C. Smith) Beyond the Prototype: Scaling a Grassroots Tablet PC Pilot for Large Scale Campus Integration, presentation at "Teaching with Tablet PCs in Varied Disciplines Workshop", with support from the NITLE Instructional Innovations Fund, DePauw University, March 13, 2009.

A Tutorial on Stroke-based Interfaces: Unistroke Recognition Algorithms Appropriate for Compelling Projects in Introductory Courses, Presented as a Special Session at the 40th ACM Technical Symposium on Computer Science Education, March 4th - 7th, 2009 Chattanooga, TN.

(with Harms D.), Programming the PDP-11/10 (in 4 parts), shown at the video exhibition at SIGCSE 2009"

Gave two hands-on workshops entitled "Overcome Common Teaching and Learning Challenges using DyKnow Software" at the Hewlett-Packard Technology for Teaching Worldwide Higher Education Conference, La Jolla, CA, February, 2009.

Gave two hands-on workshops entitled "Innovation in Instruction Using Tablet PCs: A Hands-On Session Integrating Tablet PCs in Education", Educause ELI conference, January 20th, 2009, Orlando, FL.

(with T. Bonebright and C. Smith) Beyond the Prototype: Scaling a Grassroots Tablet PC Pilot for Large Scale Campus Integration, concurrent presentation at Educause 2008, Orlando, October 28<sup>th</sup> through 31<sup>st</sup>, 2008.

(with Faulk E., Fellegly D., Morrisettee C., Smith C.), gave a video presentation entitled "Teaching with Tablets at DePauw University: Using Pen-based Pedagogy to Enhance Teaching and Learning", Workshop on the Impact of Pen-based Technology on Education (WIPTE), Purdue University, October 15<sup>th</sup>-16<sup>th</sup>, 2008.

(with Byers C. and Myers A.) Turning the Classroom Upside Down using Tablet PCs and DyKnow Ink and Audio Tools, Workshop on the Impact of Pen-based Technology on Education (WIPTE), Purdue University, October 15<sup>th</sup>-16<sup>th</sup>, 2008.

Gave a CDW Online Webinar entitled “Change It Up: Keeping Students Engaged With a Variety of Learning Activities”, August 13<sup>th</sup>, 2008.

(with Smith C.), Gave a presentation entitled “Beyond the Prototype: Scaling a Grassroots Tablet PC Pilot for Large Scale Campus Integration”, Independent Colleges of Indiana Instructional Technologies Summit, DePauw University, August 7<sup>th</sup>, 2008.

Gave a presentation entitled “Fostering Student Engagement Using Tablet PCs and DyKnow Software”, Independent Colleges of Indiana Instructional Technologies Summit, DePauw University, August 7<sup>th</sup>, 2008.

Gave three hands-on workshops entitled “What Impact Can Pen-Based Technology Have in Your Classroom”, National Educational Computing Conference (NECC 2008), San Antonio, TX, June 30<sup>th</sup>, 2008.

(with Hamstra D. and Marsh C.) Panel presentation entitled “Effective Uses of Group Work with DyKnow”, DyKnow User Group Meeting, DePauw University, June 26 – 27, 2008.

Gave a hands-on workshop entitled “Using DyKnow Audio Capture to Support Upside-down Teaching”, DyKnow User Group Meeting, DePauw University, June 26 – 27, 2008.

Gave a workshop entitled “Fostering Student Engagement in Technical Courses Using Tablet PCs and DyKnow Software” at American Society for Engineering Education (ASEE) 2008 IN/IL Sectional Conference, Rose-Hulman Institute of Technology, April, 2008.

Gave a DELL Online Webinar entitled “Maximizing Student Engagement in the Technology-enabled Classroom”, March 5<sup>th</sup>, 2008.

Organized a Birds of a Feather Session entitled “DyKnow Dialogs: Developing Collaborations to Support Teaching with DyKnow Tools” at SIGCSE 2008, Portland, OR, March 12-15, 2008.

(with Bonebright T. and Smith C.), Gave a presentation entitled “Beyond the Prototype: Generating Campus-Wide Buy-in for a Tablet Option” at the Hewlett-Packard Technology for Teaching Worldwide Higher Education Conference, La Jolla, CA, February, 2008.

Gave two hands-on workshops entitled “Overcome Common Teaching and Learning Challenges using DyKnow” at the Hewlett-Packard Technology for Teaching Worldwide

Higher Education Conference, La Jolla, CA, February, 2008.

Concurrent session presentation entitled "A Mixed-Method Evaluation of Pen-based Computing Pedagogy and DyKnow Interaction Software," at Educause 2007, Seattle, WA, October 2007.

Gave a hands-on Workshop at invitation of Hewlett Packard, October 24<sup>th</sup>, 2007, with Carol Smith, "Transforming Teaching and Learning at DePauw University using HP Tablet PCs and DyKnow Software", Educause 2007, Seattle, WA, October, 2007.

Presentation on DyKnow and Pen-based Technologies at Ohio Catholic Education Association Conference, Cincinnati, OH, October 12<sup>th</sup>, 2007.

Presentation on DyKnow and Pen-based Technologies for a Workshop on Reforming First-year Engineering Courses, Notre Dame University, July 31<sup>st</sup>, 2007.

Using DyKnow Software to Support Group Work: A Mixed-method Evaluation, Workshop on the Impact of Pen-based Technology on Education, June 11<sup>th</sup> and 12<sup>th</sup>, 2007.

Evaluation Fishbowl, Workshop on the Impact of Pen-based Technology on Education, June 11<sup>th</sup> and 12<sup>th</sup>, 2007.

Gave a series of hands-on DyKnow demonstrations at Intel's "Classroom of Distinction Interactive Forum" in Denver, CO, May 2nd, 2007.

Gave a hands-on workshop entitled "Fostering Student Engagement in Technical Courses Using Tablet PCs and DyKnow Software" ASEE (American Society for Engineering Education) Southeastern Section Conference, April 1, 2007, University of Louisville.

(With T. Bonebright and students J. Dart, Z. Koch, and S. O'Banion) Gave a poster presentation entitled "A Mixed-method Evaluation of the Impact of Tablet PCs and DyKnow Software on Student Learning", ACM SIGCSE (Special Interest Group on Computer Science Education) Conference, Covington, KY, Conference March, 2007.

(With R. Anderson and B. Simon) Organized a birds of a feather session entitled "Pedagogy for Electronically Supported Classroom Interaction", ACM SIGCSE (Special Interest Group on Computer Science Education) Conference, Covington, KY, Conference March, 2007.

Gave an invited presentation entitled "Supporting Collaborative Problem Solving with Tablet PCs and DyKnow Software: An Implementation and Mixed-method Evaluation," Hewlett-Packard Technology for Teaching Worldwide Higher Education Conference, Monterey, CA, February, 2007.

Gave a hands-on workshop entitled "DyKnow-supported Pedagogy" at the Hewlett-

Packard Technology for Teaching Worldwide Higher Education Conference, Monterey, CA, February, 2007.

(With S. Thede) Gave a hands-on tutorial presentation entitled "Promoting Classroom Interactivity in Computer Science Courses using Laptops, Pen-based Computers, Tablet PCs, and DyKnow Software" at Consortium for Computer Science in Colleges: Midwest (CCSC: MW), DePauw University, September, 2006.

Gave a talk entitled "Undergraduate Research Projects with Commercial Involvement: Balancing Competing Demands" at the CUR (Council for Undergraduate Research) Annual Conference, DePauw University, June 24 – 27, 2006.

Gave a hands-on best-practice presentation at the 2006 DyKnow User group meeting, DePauw University, June, 2006.

Gave three hands-on DyKnow workshops at Pace University Tablet PC event, April 26-27, 2006

Participated on a panel discussion entitled "Enhancing Student Learning with Tablet PCs: Experiences from Five Universities," at Educause Education Learning Initiatives (ELI) Conference, January 29-31, 2006.

Gave a presentation at CIT (Conference on Information Technology), Oct 23-25, 2005, Dallas, TX (with Rich McNeil).

Gave a presentation entitled "Fostering Student Engagement using DyKnow Software and PCs, Laptops or Tablet PCs, at Educause, Oct. 18-21, 2005.

Gave a tutorial presentation entitled "Promoting Classroom Interactivity in Computer Science Courses using Laptops, Pen-based Computers, Tablet PCs, and DyKnow Software" at CCSC:Eastern, Iona College, October 14<sup>th</sup> – 15<sup>th</sup>, 2005.

Gave a presentation entitled: "Fostering Student Engagement using DyKnow Software and PCs, Laptops or Tablet PCs" at OCEA, Columbus, OH, October 13<sup>th</sup>, 2005.

Gave a workshop entitled "Promoting Classroom Interactivity in Computer Science Courses using Laptops, Pen-based Computer, Tablet PCs, and DyKnow Software" at CCSC:MW, Millikin University, Sept. 23-24 2005 (with Scott Thede).

Organized a panel presentation entitled: "Customization of the ETS Major Field Test for Assessment in Small College Computer Science Departments", CCSC: MW, 2005, Millikin College, September 2005.

Gave a hands-on best-practice presentation at the 2005 DyKnow User group meeting, DePauw University, July, 2005.

Gave a hands-on DyKnow demonstration at The Laptop Institute, June 17<sup>th</sup> – 19<sup>th</sup>, 2005 (with Diane Hamstra and Ryan Ritz).

Gave a presentation with entitled "Alternative Approaches to Deploying Pen-based Instructional Technology Fixed Seat Collaboratories versus 1:1 Tablet PC Initiatives", May 19, 2005, CEFPI Conference, Columbus, OH (with Ken Collura).

Gave a presentation entitled "Fostering Student Engagement using DyKnow Software and PCs, Laptops or Tablet PCs" at the IHETS Annual Conference, April 15<sup>th</sup>, 2005, University of Indianapolis.

Invited by Microsoft Research to give a hands-on workshop entitled: "Fostering Student Engagement Using DyKnow Software and Tablet PCs." 2005 ACM SIGCSE Technical Symposium, St. Louis, February, 2005.

Gave a presentation entitled, "Fostering Classroom Engagement with Electronic Whiteboards, Tablet PCs and DyKnow Vision", at the annual EDUCAUSE conference, October, 2004.

Gave a workshop entitled "Promoting Classroom Interactivity in Computer Science Courses using Electronic Whiteboards, Tablet PC's, and *DyKnow Vision* Software" at the 2004 Consortium for Computer Sciences in Colleges Midwest annual Conference (CCSC:MW), October, 2004, Kalamazoo College.

Berque D., Serlin I., Vlahov A. A Brief Water Excursion: Introducing Computer Organization Students to a Water Driven 1-Bit Half-Adder, *Inroads* a publication of the Association for Computing Machinery Special Interest Group on Computer Science Education, Volume 36, Number 2, June 2004.

Prepared a 45 minute DVD Video entitled "Pen Enabled Pedagogy: Fostering Student Engagement with DyKnow Vision, Summer 2004 (with Pete Ohs).

Prepared a 10 minute DVD Video entitled "Pen Based Hardware Demonstrations and Sample Collaboratory Configurations", Summer 2004 (with Pete Ohs).

Gave a Hands on Demonstration entitled "Fostering Student Engagement using Electronic Whiteboards, Pen-Based Computers, Tablet PCs and DyKnow Vision Software" at the Independent Colleges of Indiana 2004 Instructional Technology Summit, DePauw University, August 12<sup>th</sup>, 2004.

Gave a presentation entitled "New directions in K-12 educational technology: Handheld computing and Tablet PCs in the K-12 classroom" at TechPoint Tech Tuesday, Indianapolis, July 13<sup>th</sup>, 2004.

Contributed an abstract entitled "Fostering Classroom Engagement with Electronic Whiteboards, Tablet PCs and DyKnow Vision" to the EDUCAUSE effective practices

database, spring 2004.

Gave a presentation entitled "Promoting Classroom Interactivity with Electronic Whiteboards, Tablet PC's, and DyKnow" at Teaching and Learning with Technology 2004, Purdue University, April 15th, 2004.

Gave a presentation entitled "Promoting Classroom Interactivity with Electronic Whiteboards, Tablet PC's, and DyKnow" at TechEd 2004, Ontario, CA March 22<sup>nd</sup> – 24<sup>th</sup>, 2004.

Invited to give a presentation entitled, Pen-Based Computers and Electronic Whiteboards in the College Classroom, at Indiana University's IST (Instructional Systems Technology) Colloquium Series, November 14, 2003.

Demonstration of the DEBBIE/DyKnow system at a symposium entitled "Digital Imaging: Pedagogy, Technology, and Practice," August 5<sup>th</sup>, 2003, DePauw University.

Gave a presentation entitled Experiences Using Pen-Based Computers and Electronic Whiteboards in the College Classroom, at the Academic Technology Summit of the Independent Colleges of Indiana August 8<sup>th</sup>, 2003.

Published abstract entitled "A Case Study in the Design of Software that Uses Auditory Cues to Help Low Vision Students View Notes on a Blackboard", Abstract in Proceedings of ICAD 2003, the 9th Annual International Conference on Auditory Display, Boston University, July, 2003 (with Bonebright T., Kinnett S., Nichols N., and Peters A.)

Gave a presentation/demonstration entitled "Using Pen-based Computers and Electronic Whiteboards in Science Classes" at the Innovative Science Teaching: Enhancing Learning with Technology Symposium, DePauw University, May 31 – June 1, 2003.

Gave a presentation entitled "Teaching in Technology Classrooms" at the Innovative Science Teaching: Enhancing Learning with Technology Symposium, DePauw University, May 31 – June 1, 2003.

Wrote an article entitled "Pen Computing in the Classroom at DePauw University", which appeared in Pen Computing Magazine, October, 2002 issue.

An abstract entitled "Usability Testing of Auditory Cues to Locate a Region on a Video Tablet" was presented by Terri Bonebright at "APCAM 2002 (Auditory Perception Cognition and Action Meeting), Thursday November 21<sup>st</sup>, 2002, Kansas City, MO (with Terri Bonebright, Seth Kinnett, Nate Nichols, and Adam Peters.)

Wrote an article entitled "From REU to MRI: Acquisition of Touch Sensitive Plasma Displays and Supporting Equipment for Research and Research Training in Multiple Machine Interfaces" for the December, 2002 issue of the *CUR Quarterly*, a publication of

the Council on Undergraduate Research.

A video tape entitled *Programming the PDP-11/10*, produced jointly with Doug Harms has been made available to the public through the textbook web site for the text "Computer Systems" by Stan Warford and published by Jones and Bartlett. The URL for the video is <http://computersystems.jbpub.com/video.cfm> (as of April, 2002.)

Gave two presentations for student attendees of the ACM Special Interest Group on Computer Science Education: *Faculty Careers at Predominately Undergraduate Institutions* (with Alyce Brady and Chris Nevison), and *The Nuts and Bolts of Applying to Graduate School in Computer Science* (with Linda Null). February - March, 2002, Covington, KY.

Using Electronic Whiteboards and Pen-based Computers to Enhance the Way Teachers and Students Share Written Information During Class. Presented at the *University of Maryland* in September 1999, and at *Elon College* and *Georgia Tech* during October 1999.

The Y2K Problem: An Overview. Presented at the request of the Greencastle chapter of the *Kiwinis*, February 18th, 1999.

The Y2K Problem: An Overview. Presented at the request of the *Greencastle Chamber of Commerce*, July 14th, 1998.

Prototyping Groupware to Support Student Notetaking Using Electronic Whiteboards and Pen-based Computers. *Haverford College*, January 29th, 1998.

Prototyping Groupware to Support Student Notetaking Using Electronic Whiteboards and Pen-based Computers. *The Rensselaer Polytechnic Institute Computer Science Department Colloquium Series*, January 30th, 1997.

Faculty Positions at Undergraduate Institutions: Professional Suicide or an Attractive Option. *The Rensselaer Polytechnic Institute Computer Science Department Graduate Student Seminar Series*, January 29th, 1997.

Prototyping Groupware to Support Student Notetaking Using Electronic Whiteboards and Pen-based Computers. *The Siena College Computer Science Department Colloquium Series*, January 29th, 1997.

Finding and Developing Research Experiences for Undergraduates in the Small College Setting, panel presentation at the *Third Annual Midwest Small College Computing Conference*, DePauw University, September 27 - 28, 1996 (with Bard, G., Dershem, H.).

The *SetPlayer* System for Implicit Set Manipulation. *University of Scranton Computer Science Department Colloquium Series*, December 5th, 1991.

The SetPlayer System for Symbolic Set Manipulation: A Discussion and Demonstration, *Northeast Symposium on Graph Theory and Combinatorics*, Skidmore College, October 26th-27th, 1990.

Goldberg, M., Spencer, T., Berque, D (1991). Counting the Number of Vertex Covers, *Technical Report 91-21*, Computer Science Department, Rensselaer Polytechnic Institute.

Berque, D., Cecchini, R., Goldberg, M., Rivenburgh, R. (1990). The SetPlayer System: An Overview and a User Manual, *Technical Report 90-25*, Computer Science Department, Rensselaer Polytechnic Institute.

Goldberg, M., Berque, D., McCloskey, R. (1988). SetPlayer: An Interactive Software System for Set Manipulation, *Technical Report 88-26*, Computer Science Department, Rensselaer Polytechnic Institute.

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## Articles in the Popular Press Related to My Research

Short articles about a pen-based computing instructional technology system I developed have appeared in: *The New York Times*, *The Wall Street Journal*, *Popular Science*, *The Chicago Tribune*, *The London Daily Telegraph*, *Focus* (a German news magazine), *The Indianapolis Star*, *U.S.A. Today*, *The Chronicle of Higher Education*, *Campus Technology*, and *University Business*. Additionally broadcasts about the system have appeared on the *CNN* show *Science and Technology: Future Watch* and on the *BBC*.

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## Abstracts, Posters, and Papers Written by Students under my Guidance

Newman, J. (with faculty advisor Berque D.) GlassClass: Exploring the Design, Implementation, and Acceptance of Google Glass in the Classroom, poster presentation given by James Newman at the 2014 Consortium Computing Sciences in Colleges: Midwest conference, Olivet Nazarene University, September 19<sup>th</sup> and 20<sup>th</sup>, 2014, where James received second place in the undergraduate poster competition.

Connor, R., Hoover, J.D., Johnson, A., Meyer, J., Singhanian, V. (with faculty advisors Berque D. and Bonebright T.) FocUs: Discouraging Electronic Distraction Using Persuasive Technology. Presented by Allana Johnson at the 2012 Indiana Celebration of Women in Computing Conference (February, 2012) where Allana was awarded best undergraduate poster.

Connor, R., Hoover, J.D., Johnson, A., Meyer, J., Singhanian, V. (with faculty advisors Berque D. and Bonebright T.) FocUs: Discouraging Electronic Distraction Using Persuasive Technology. Abstract presented at the 2012 Argonne National Laboratory Annual Symposium for Undergraduates in Science, Engineering, and Mathematics, Argonne National Laboratory, November 2011.

Byers, C., Myers, A. (with faculty advisor Dave Berque) "Loose Audio Synchronization and Pen-based Technology", abstract accepted for an undergraduate presentation at the Eighteenth Annual Symposium for Undergraduates in Science, Engineering and Mathematics, Argonne National Laboratory in November, 2007. Also presented at NCUR 2008.

Dart, J., Koch, Z., O'Banion S., (with faculty advisors Berque D., and Bonebright T.) "Promoting Collaborative Learning Using a Shared Drawing Surface on Tablet PCs" accepted for an undergraduate poster competition at the Consortium for Computer Science in Colleges: Midwest Conference, DePauw University, September 29<sup>th</sup> – 30<sup>th</sup>, 2006.

Dart J., Koch Z., O'Banion S., (with faculty advisors Berque D., and Bonebright T.) "Promoting Collaborative Learning Using a Shared Drawing Surface on Tablet PCs", accepted for an undergraduate presentation at the Seventeenth Annual Symposium for Undergraduates in Science, Engineering and Mathematics, Argonne National Laboratory on November 3 and November 4, 2006.

Kuh L., Orabone T., and Toumey A. (also sponsored by Dr. Terri Bonebright), Encouraging Interaction with a Groupware System through the Implementation of Persuasive Technology, Argonne National Laboratory Undergraduate Research Symposium, November, 2005.

Oren M., and Schafer L. Enhancing a Pen-based Groupware System through Image Caching and Gesture Recognition. Extended abstract and poster presented at the 2005 Association for Computing Machinery Student Research Competition, St. Louis, February, 2005.

Oren M., and Schafer L. Enhancing a Pen-based Groupware System through Image Caching and Gesture Recognition. Abstract presented at the *Argonne National Laboratory Undergraduate Research Symposium*, November 2004.

Cooper B., and Karpinski T. Designing Multi-machine Interfaces for an Electronic Classroom. Extended abstract and poster presented at the 2004 Association for Computing Machinery Student Research Competition. Norfolk, VA, March, 2004.

Kinnett S., Nichols N., Peters A. The Design and Evaluation of Software that Uses Auditory Cues to Help Low Vision Students View Electronic Blackboard Notes, *Argonne National Laboratory Undergraduate Research Symposium*, November 2003.

Betz, Ben. (2002) Prototyping the Development of Groupware to Help Low-Vision Students View an Instructor's Blackboard Notes. Accepted for publication in *Proceedings of Ed-Media 2002 World Conference on Educational Multimedia, Hypermedia and Telecommunications*, June 24th - 29th 2002, Denver, Colorado. Proceedings published by Association for the Advancement of Computers in Education

(AACE).

Betz, Ben. (2002) v-VIS: New Methods of Passive Information Grouping in a Classroom Tool for Low Vision Students. Extended abstract and poster accepted for presentation at the 2002 Association for Computing Machinery Student Research Competition. Cincinnati, Ohio, February, 2002. This research won first prize in the 2002 Association for Computing Machinery International Undergraduate Research Competition.

Stinebrickner-Kauffman, Taren. Variations on the Greedy Algorithm for Finding Maximum Independent Sets. *DePauw University Journal of Undergraduate Research*, Vol 1., May 2000. pp. 27-35.

Lopez K., Moore N. The Design and Evaluation of Alternative Menu Systems for Electronic Whiteboards. *Eleventh Annual Argonne Symposium for Undergraduate Research*, Argonne National Laboratory, Argonne, IL, November 2000. (co-sponsored by Terri Bonebright).

Roberts M., Stanford J. Grouping and Selection Methods for Heterogenous Objects. *Tenth Annual Argonne Symposium for Undergraduate Research*, Argonne National Laboratory, Argonne, IL, November 1999.

Jovanovic L., Moore K., Slattery K. A New Paradigm for Shared Drawing Surfaces *Ninth Annual Argonne Symposium for Undergraduate Research*, Argonne National Laboratory, Argonne, IL, November 1998.

Hutcheson A., Johnson D. Design of a Filesystem for Continuously Scrolling Surfaces *Ninth Annual Argonne Symposium for Undergraduate Research*, Argonne National Laboratory, Argonne, IL, November 1998. (co-sponsored by Carl Singer)

Bell M., Brandt C., Ruel M. Electronic Classrooms: A Prototype Using Laser Whiteboards and Pen Computers *Eighth Annual Argonne Symposium for Undergraduate Research*, Argonne National Laboratory, Argonne, IL, November 1997.

Ball G., Bolton S., Davis A., Huffstutter W., Menzies R. A Software Suite to Support Student Notetaking, *Seventh Annual Argonne Symposium for Undergraduate Research*, Argonne National Laboratory, Argonne, IL, November 1996.

Gaerte L., Heitz M., Ritz R., Witter T., Yoder J. DEBBIE: A Groupware System to Support Student Notetaking, *Sixth Annual Argonne Symposium for Undergraduate Research*, Argonne National Laboratory, Argonne, IL, November, 1995.

Alcott C., Sedore S., Soster F. Exploring the Use of Genetic Algorithms in a Sediment Mixing Model, *Sixth Annual Argonne Symposium for Undergraduate Research*, Argonne National Laboratory, Argonne, IL, November, 1995.

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## Conference and Workshop Organization

Conference Committee Co-Chair and Program Committee Co-Chair for the First, Second, Third, and Fourth Annual Workshop on the Impact of Pen-based Technology on Education (WIPTe) April 2006 (Purdue), June 2007 (Purdue), October 2008 (Purdue), October 2009 (Virginia Tech).

Conference Committee Member for the Fifth Annual Workshop on the Impact of Pen-based Technology on Education (WIPTe) October 2010 (Virginia Tech).

Conference Organizing Committee, for a conference to explore pedagogy for teaching with Tablet PCs in the Liberal Arts, March 2009, DePauw University.

Association for Computing Machinery Special Interest Group on Computer Science Education 2009 Symposium Program Committee Member (Evaluations Chair), May 2007 – present.

Assisted the NSF REU (Research Experiences for Undergraduates) program by working on a committee to plan an annual NSF REU PI meeting, August, 2003 through February 2004. Later assumed chairship of this committee and was primary organizer of annual CISE NSF REU PI Meeting held in fall 2005.

Served as *Local Arrangements Co-Chair and Acting Conference Chair* for the *Third Annual Midwestern Small College Computing Conference*. Greencastle, IN, September 1996.

Served as the *Conference Committee Chairperson* for the *Second Annual Midwestern Small College Computing Conference*. Fort Wayne, IN, September 1995.

Served as the *Papers Chairperson* and as a *Conference Committee Member* for the *First Annual Midwestern Small College Computing Conference*. Fort Wayne, IN, September 1994.

*Member of the Steering Committee* for the Midwestern branch of the *Consortium for Computing in Small Colleges*, Spring 1993 - Fall 1996.

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## Additional Professional Experience

Editorial Advisory Board Member, Association of Computing Machinery (ACM) Special Interest Group on Computer Science Education (SIGCSE) Inroads Magazine, March 2010 – Present.

Have given numerous presentations about applications of Tablet PCs and pen-based

computing to education with sponsorship from companies including: DyKnow, Microsoft Research, Intel, Gateway, and Hewlett-Packard.

Assistant Editor for Courseware Strategies, Inroads, a publication of the ACM, Fall 2008 through Fall 2011.

Reviewer for proposals submitted to the Educause Annual Conference Emerging Technologies Track, Spring 2009.

Consultant on a University of Richmond National Science Foundation Grant related to deploying pen-based computing in their educational environment (fall 2005 through spring 2007).

Invited Participant, Microsoft Research Workshop on Tablet PC Software Development, University of Washington, Seattle, summers 2004 and 2005.

Served as a *proposal reviewer* for several divisions of the *National Science Foundation CISE (Computer and Information Science and Engineering) Directorate* including the Division of Computer and Computation Research (January 1993), the Division of Experimental and Integrative Activities (June 1999, February 2002, June 2002, September 2003), and the Division of Knowledge and Distributed Intelligence (June 1999).

Served as a *paper reviewer* for a variety of journals and conference proceedings including *Computers and Education*, *Proceedings of the ACM Special Interest Group on Computer Science Education Technical Symposium*, *Proceedings of the Midwest Small College Computing Annual Conference*, *Proceedings of the ACM SIGAPP Symposium on Applied Computing*, and the *Proceedings of the ACM Conference on Supporting Group Work*.

Served as a *text-book reviewer* for West Publishers and for Irwin Publishers.

*Satellite Course Instructor for Introduction to Computability, Formal Languages, and Automata*, In addition to being attended by on-campus students at Rensselaer Polytechnic Institute during the Fall 1990 semester, my lectures were broadcast to students at six industrial sites (including I.B.M. and G.E.) via live satellite transmission.

*Teaching Assistant for "Computing Fundamentals for Engineers"*, Rensselaer Polytechnic Institute, Fall 1986.

*Software Assistant*, Designed and taught non-credit classes, consulted with users, designed and implemented utility programs. Haverford College Academic Computer Center, 1985-1986 academic year.

*Teaching Assistant for "Algorithms and Data Structures" and "Introduction to Computer Problem Solving"*, Haverford College, Fall 1995 through Spring 1986.

*Instructor for Project Explore Computer Science Course for High School Students, Haverford College, Summers 1986 through 1989.*

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## **Selected University Service**

Dean of Academic Life, July 2013 – Present.

DePauw's National Campaign Committee Member (Faculty Representative), October 2011 – Present.

Serve as DePauw University Chair of Department Chairs and Program Directors, 2011-2012 academic year.

Elected as DePauw University Chair of the Faculty, Fall 2008 through Spring 2011.

Computer Science Department Chair, July 2006 – June 2012. During this time the department hired a new faculty member; completed the process of securing laboratory credit for our introductory course; went through an internal self-study and an external review; developed a new strategic plan; and implemented a significant redesign of our major and minor requirements.

Serve as a Faculty Instructional Technology Support (FITS) Advisor for DyKnow, currently supporting approximately twenty instructors who are using DyKnow software and/or Tablet PCs in class, Spring 2004 – present.

Member of the 361 Initiatives Assessment Steering Committee, Fall 2004 – Spring 2005.

Member of the Management of Academic Operations (MAO) Faculty Committee, Spring 2004 and fall 2013 – spring 2015.

Convener of the Extended Studies Implementation Team, Spring 2014 – present.

Member of the Athletic Board, Fall 2014 – present.

Served on the *Academic Technology Advisory Committee* (ATAC), Fall 2002 – May 2005. Chair during the 2004-2005 academic year.

Member of the Laptop Initiative Task Force, fall 2004 – spring 2005.

Member of the *Orientation Committee*, Summer 2001 – January, 2003.

*First Year Seminar Committee*, Member, Spring 2000 through January 2003. Chair Spring 2001 through fall 2002.

*Academic Advisory Committee of the McDermond Center for Management and Entrepreneurship, Member, fall 2000 - May 2005 and fall 2006 - spring 2008.*

Chair of the *Advising Committee*, Fall 1996 through January 1999.

Chair of the *President's Task Force to Review University Judicial Procedures*, Fall 1996 through Spring 1997.

Member of the *Student Achievement Committee (SAC)*, Fall 1992 - Spring 1998.

Serve as *faculty advisor to the Interfraternity Council*, Spring 1994 – Spring 2002.

Additionally, I have served on the *Electronic Registration Committee*; the *Science Scholarship Committee*; as the *Interim Appeals Board Chair*; and as the faculty representative to the *Student Conduct Board*, the *Academic Integrity Board*, and the *Judicial Advisory Team*.

Department service includes: (a) UNIX system administrator and laboratory manager for the Computer Science Department's network of SUN workstations, summer 1994 - summer 2000, (b) coordinator of computer supported cooperative work collaboratory, fall 1999 through present, (c) Department information kiosk project co-leader, summer 2003 – present, (d) ETS Major Field Test assessment coordinator summer 2003 – present, and (e) Lilly equipment infrastructure grant co-organizer, fall 2003-present.

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## **Professional Associations**

Member of the *Association for Computing Machinery*, the *American Association of University Professors*, and the *Council on Undergraduate Research*.

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