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   Institute for Computing in Humanities, Arts, and Social Science
Pittsburgh Supercoming Center
San Diego Supercomputer Center
The Scholarly Community for the Globalization of the “Middle Ages” (SCGMA) Group
The Humanistic Algorithms: Semantic Networks in Multimedia Scholarship Group
The HistorySpace Project: Information Rich Virtual Environments for Historical Scholarship Group

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**Humanities High Performance Computing Collaboratory (H³C): “Coordinating High Performance Computing Institutes and the Digital Humanities”**

**Description of Project and Its Significance**

The Institute for Computing in Humanities, Arts, and Social Science (I-CHASS) at the University of Illinois at Urbana-Champaign will lead a collaboration partnering the National Center for Supercomputing Applications (NCSA), the Pittsburgh Supercomputer Center (PSC), and the San Diego Supercomputer Center (SDSC) that will foster innovation in the research and development of computational resources for humanities research groups. *Humanities High Performance Computing Collaboratory (H³C): Coordinating High Performance Computing Institutes and the Digital Humanities* will engage scholars in sustained collaboration with high performance computing specialists in order to identify, create, and adapt computational tools and methods. “Humanities High Performance Computing” signals an investment (structural, computational, and resource-based) in the extension of H³C to serve as a portal for humanities scholars with all levels of expertise—from beginner to the most advanced—to receive technical support, access to high performance computing, and products and services associated with the digital technologies. Participants will consult with each computing staff about digital technology—Simulation and Modeling, Social Networking, Grid and Distributed Computing, Data Analytics, or Visualization technologies, discuss these technologies via a virtual community, and develop long-term technological goals for their projects (Appendix II: Collaboration Diagram). H³C will facilitate nine mini-residencies (three per center) as well as a two-day conference for forty-five humanities scholars and fifteen high performance computing specialists. In addition, the grant will support the construction and maintenance of a virtual community for participants and the larger public which will function as an online collaboratory space.
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Significance:

Over the past twenty years, the interdisciplinary field of humanities computing has created a riot of research information and tools, developed by many institutions across a variety of technical formats and platforms that are often unfamiliar to humanities scholars who rely on personal computing and not high performance computing. The proposed Humanities High Performance Computing (HPC) Collaboratory project will address this gap between software, computing hardware, and humanities research by creating a collaborative structure that will serve as a consulting and development resource for advanced humanities scholars. Bridging the divide between existing technologies, supercomputing centers, and the innovative work of humanities scholars, the Institute for Computing in Humanities, Arts, and Social Science (I-CHASS) at the University of Illinois at Urbana-Champaign will lead a collaboration partnering the National Center for Supercomputing Applications (NCSA), the Pittsburgh Supercomputer Center (PSC), and the San Diego Supercomputer Center (SDSC) that will foster innovation in the research and development of the comprehensive information technology infrastructure, termed “cyberinfrastructure,” for selected humanities research groups. HPC will engage humanists in sustained dialogue with colleagues at NCSA, PSC, and SDSC, in order to identify, create, and adapt computational tools and methods that will enhance and accelerate humanities research and education. Humanities scholars will consult with three separate high performance computing staffs about different technologies, facilitate discussion about these technologies among humanities research groups via a virtual community, and develop long-term technological goals for each project and the digital humanities more generally. I-CHASS will serve as the coordination point for all HPC participants. This grant will facilitate nine mini-residencies (three per center) and a two-day conference for forty-five humanities participants from outside of each center’s region, as well as fifteen high performance computing specialists at. In addition, the grant will support the construction and maintenance of a virtual community for participants and the larger public which will function as an online collaboratory space.

This high performance computing-humanities partnership will integrate hardware for computing, data and networks, digitally-enabled sensors, observatories and experimental facilities, and an interoperable suite of software and middleware services and tools with the specialized needs of humanities research groups. This grant will help realize the power of cyberinfrastructure to create, disseminate, and preserve data, information, and knowledge across multiple centers and humanities research groups. Effective technological developments undertaken in this grant will allow humanities scholars to focus their intellectual and scholarly energies on the issues that engage them while simultaneously training them to be effective users of new media and technologies. We envision that each collaborating center’s mini-residence will evolve with new technologies and methods as time passes and that each year a different set of advanced humanities research groups will participate and take advantage of the infrastructure and results generated by this grant. Historian Edward L. Ayers conceived of such partnership in 1991 when became clear that hypermedia and high performance computing offered new possibilities for doing local studies. Ayers commented that much of the work of developing the award-winning Valley of the Shadow project was analogous to building a printing press when none existed. Seventeen years later, projects like this are becoming more common within the humanities; yet the vast majority of humanities scholars are still daunted by the humanities-computational sciences divide. They do not have the computational expertise necessary to exploit high performance computing software and hardware to support their research. HPCs’ collaboration will bring together advanced topics in humanities research with high
performance computing staffs to train and tailor each technology to the needs of individual humanities groups. It will build on the experiences and successes of seven humanities-high performance computing programs held at locations including NCSA and SDSC with members of I-CHASS and the Software Environment for the Advancement of Scholarly Research (SEASR) group at NCSA. (See Appendix VI: Previous Workshop Experience.) While the summer workshops provided a broad-based introduction to digital tools for the humanities, arts and social sciences, HP will foster intensive collaboration between humanities research groups and multiple high performance computing centers that result in specific technical and human infrastructures to support humanities research. HP will consist of a core set of presentations and hands-on sessions in computational technologies for humanities activities and will move beyond the simple introduction of available resources and expertise of each collaborating high performance computing center to map these computational resources to the needs of each humanities research group. More simply, invited groups will be paired with high performance computing experts in a particular subfield (Simulation and Modeling, Social Networking, Grid and Distributed Computing, Data Analytics, and Visualization) who will work with the group to introduce, create, and adapt existing technology for use within their project. By the close of HP, each humanities group will have a clearly delineated pathway for the inclusion of specific technologies into their work and research and will have begun to adapt these resources to meet their particular needs.

Institutional Profile:

The University of Illinois at Urbana-Champaign has long been at the forefront of science, technology, and burgeoning computer power beginning fifteen years ago when MOSAIC, the world’s first web browser, was developed at the National Center for Supercomputing Applications (NCSA). MOSAIC has revolutionized research and teaching because it democratized access to information. Now bringing the same advances to the humanities, I-CHASS charts new ground in high performance computing and the humanities, arts, and social sciences by creating both learning environments and spaces for digital discovery. Founded in 2004, I-CHASS presents path-breaking research, computational resources, collaborative tools, and educational programming to showcase the future of the humanities, arts, and social sciences by engaging visionary scholars from across the globe to demonstrate approaches that interface advanced interdisciplinary research with high-performance computing. I-CHASS provides these researchers with leadership-class computational resources, both human and technical, to enhance their knowledge discovery and exploration. I-CHASS maintains strategic partnerships with the National Center for Supercomputing Applications (NCSA), the Great Lakes Consortium for Petascale Computation (GLCPC)\(^5\), and the Illinois Informatics Institute (I3)\(^6\). These alliances uniquely position I-CHASS to offer unprecedented intellectual and technical expertise to aid humanities researchers in producing interdisciplinary research solutions that will positively affect the human condition and experience.

Organizational Structure: I-CHASS currently maintains a core staff of seven employees who work closely with humanities faculty, computing researchers, and research groups from across the globe. The Director of I-CHASS, Professor Vernon Burton, reports directly to the University of Illinois’ Provost and meets weekly with the Executive Director, Dr. Kevin Franklin. The Executive Director ensures the day-to-day running of the Institute’s operations and consults regularly with the Director, the I-CHASS Advisory Board, and NCSA leaders to discuss issues surrounding the Institute’s strategic direction. The I-CHASS staff (Appendix V: Curriculum Vitae- I-CHASS Faculty and Staff) is complemented by the considerable experience and expertise of the 250 plus researchers, technology specialists, and staff who work at NCSA and from whom I-CHASS is able to draw upon as opportunities arise.
Facilities and Resources: Founded in 2004 as the only Digital Humanities Center birthed and hosted by a national supercomputer center, I-CHASS is uniquely positioned to strengthen digital humanities scholarship. I-CHASS is housed at NCSA and its Research I institution, the University of Illinois. NCSA is invaluable by bringing massive computational resources (Appendix VII: Computational and Logistical Resources) to the humanities by enabling new and more complex projects nationwide. NCSA employs top-level experts in every field crucial to humanities computing: sophisticated search and retrieval, data management and visualization, human-computer interaction, distributed, collaborative computing, and large-scale modeling and simulation. The computing expertise and resources available at NCSA, harnessed and channeled for the humanities through I-CHASS, can create cyberenvironments for digital-humanities research and entire virtual worlds for interactive education and study in the humanities. Further, as partners in TeraGrid, an open scientific discovery infrastructure combining leadership class resources at eleven partner sites to create an integrated, persistent computational resource, NCSA, PSC, and SDSC, have resources that include more than 750 teraflops of computing capability and more than 30 petabytes of online and archival data storage, with rapid access and retrieval over high-performance networks. Researchers can also access more than 100 discipline-specific databases.

Budget: HP is requesting $XXX to fund nine mini-residencies, a two-day conference, and an online collaborative community that will serve forty-five humanities participants from outside of each center’s region. This is in addition to fifteen high performance computing center staff participants. Cumulatively, then this grant will serve sixty individuals, not including virtual members who will benefit from the online community and twenty-one participants from humanities institutions local to each center’s area (seven per center).

Curriculum Overview:

There will be nine two-day mini-residencies held by technical staffs (Appendix VII: Curriculum Vitae—High Performance Computing Center Staffs) at PSC, SDSC and NCSA. The humanities groups will each rotate through one supercomputer center per quarter—three center-driven residencies for a total of six days for this grant. The centers, working collaboratively, will each focus on training and tool building in their specific area of cyberinfrastructure excellence (Appendix IV: Curriculum Work Plan Itinerary and Appendix II: Collaboration Flowchart). The humanities research groups will receive a broad range of technical and human resource support for multiple technologies that will reinforce each other within their research agenda. The two-day culminating conference will bring together all participants to demonstrate prototypes of technology and tools that have been created/adapted, to disseminate their research experiences across the mini-residences, and to formulate a working paper “Coordinating High Performance Computing Institutes and Digital Humanities” which will chart long-term planning goals to cement these partnerships and further humanities research and computing technologies.

The Pittsburgh Supercomputing Center (PSC) is a joint effort of Carnegie Mellon University and the University of Pittsburgh together with Westinghouse Electric Company. It provides university, government, and industrial researchers with access to high-performance computing, communications and data-handling for unclassified research. PSC will provide a two day introduction to high performance computing and parallel programming to HP participants. This workshop will introduce participants to the fundamentals of high performance computing, parallel programming, common software packages, and provides practical, hands-on experience in how to write and execute parallel programs. For this audience, the goal is for participants to develop sufficient familiarity with this topic to determine how it might be of value in their research.

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The San Diego Supercomputer Center (SDSC)\textsuperscript{8} enables scientific discovery and learning through provision of high performance data-intensive computing, analysis, management, and preservation technologies and expertise. Its education programs introduce the next generation users of new computing technologies to the skills and knowledge they will need to explore and discover answers to their generation’s challenges. Hallmark programs and products focus on educator professional development (TeacherTECH)\textsuperscript{9} and a web portal for integrating data investigation tools and curricular activities into secondary level and college courses. Led by Reagan Moore, Director of the Data-Intensive Computing Environments (DICE)\textsuperscript{10} group, and Richard Marciano, Director of the Sustainable Archives and Library, the two-day SDSC \textit{Data Challenges in the Humanities} mini-residency will feature case studies in humanities that highlight data curation and preservation challenges amenable to technology solutions; and community-led technology initiatives that have addressed similar challenges. The SDSC team will introduce an innovative data grid technology that equips users to handle a full range of distributed data management needs, from extracting descriptive metadata, to managing data, to moving it efficiently, sharing data securely with collaborators, publishing it in digital libraries, and archiving data for long-term preservation. One featured technology will be the Integrated Rule-Oriented Data System (IRods), an innovative “rule engine” that lets data collection users more easily accomplish complex data management tasks including validating the trustworthiness of digital repositories and developing community-wide policies to manage data. SDSC will work with the humanities groups to customize IRod and grid technologies for their individual use during the mini-residency and via the virtual community.

Researchers in the social sciences and humanities are increasingly using computers to manage, organize and analyze non-numerical data from textual sources including images, manuscripts, and video. The NCSA two-day mini-residence on Qualitative Data Analytics and Visualization would examine technologies for imaging, image analyses, and environments based on large volumes of data. Computer technologies available to humanities scholars would include(a) integration of historical spatio-temporal data with maps and web-based interfaces (georeferencing, spatial and temporal sampling, sub-setting, tiling and stitching, web-based open layers and server), (b) automated analysis of scans of historical manuscripts (color spaces, image statistics, classification, cropping), (c) 3D imaging using high resolution 2D images of historical artifacts or 2D videos (3D imaging principles, stereopsis, calibration, spectral properties), (d) analyses of large volumes of contemporary PDF documents (PDF document structure, information extraction and cleansing, clustering, versioning) and (e) self-describing executions of analyses using advanced workflow studio (preservation, scripting & workflow, provenance, tagging, distributed data & tools & computers.) Importantly, these collaborative discussions will focus on specific software solutions to the challenges faced by these humanities groups which range from understanding computational requirements using a desktop versus a supercomputer, data presentation formats from desktop visualizations to web-based data browsing and the technological challenges associated with simple image processing applied to large volumes of images including the more complex image analyses executed in real-time. Each humanities research group will creatively analyze, infer, and visualize their data sets, then present their work to the whole group via the virtual community feature of the H\textsuperscript{P}C grant.

\textbf{Participants:}

I-CHASS has selected three humanities research groups to be in residence for the grant. Each group will have approximately eight to twelve members from outside the region with an additional seven scholars from local institutions (museums and humanities departments) comprised of senior faculty, researchers, and graduate students in the humanities (Appendix III: List of Participants by Group and Appendix VI: Curriculum Vitae- Humanities Group Leaders).

The Scholarly Community for the Globalization of the “Middle Ages” (SCGMA) Group has been collaborating with SEASR, I-CHASS, the Center for Medieval Studies at the University of Minnesota-
Twin Cities, the Program in Medieval Studies at the University of Texas-Austin, and the Communications Department at the University of California-San Diego since May 2007 to develop a new interdisciplinary scholarly community for globalizing the study of the “Middle Ages” (~500-1500 C.E.) SCGMA has been actively working to create an online infrastructure to support the organization of, and research with, sources in multiple formats and languages available from multiple scholarly disciplines in order to organize large quantities of textual, visual, and aural resources. SCGMA is intended to become a multi-university, multi-nation, disaggregated yet well-coordinated organization spearheading numerous scholarly projects that will challenge the Euro-centrism associated with studying the “Middle Ages.” SCGMA needs to consider adapting existing technologies for its needs and plans to investigate the following: Can a coordinated online resource be developed for students at all levels, from all parts of the globe, already fascinated by aspects of this crucial period but still insufficiently informed about its diversity and range? How can existing databases in many languages and formats, sometimes reflecting different cultural practices, be brought into communication to serve the needs of the developing SCGMA and of students and other interested parties worldwide? HPC will allow SCGMA to extend its current use of high performance technologies, resulting from its previous work with ICHASS and SEASR to encompass a more elaborate technological model. The grant offers SCGMA the opportunity to add new technology to its growing infrastructure while simultaneously establishing long-term partnerships.

The University of Southern California's Institute for Multimedia Literacy (IML) has faced a material challenge for the past eight years in realizing one of its primary goals: creating a digital archive system in support of the creation of digital portfolio application. The lack of sufficient computational resources for holding large collections of multimedia resources, most notably its robust digital portfolio of media-rich student projects and faculty teaching resources, has hindered IML’s creation of a pedagogical tool for faculty and students. The Humanistic Algorithms project is a collaboration between SEASR, ICHASS, and IML to address this challenge. The project is being imagined in phases, with the first stage to serve as a prototype to be completed by early June. SEASR will use data analytics to extract information from unstructured texts (i.e., raw textual data like websites, etc.) to produce semantic information that can be used to create meta-analyses of scholarly multimedia. From these meta-analysis, Humanistic Algorithms would like to contemplate: What are the components of scholarly multimedia? What is pedagogy in a networked world? How do we collaborate, train faculty, and teach students how to read and compose scholarly multimedia? HPC will allow Humanistic Algorithms the opportunity to further their technological efforts by isolating and adapting additional high performance computing technologies that will aid in the development of the digital portfolio application. The series of mini-residencies will allow the group to experiment with new technologies and chart long-term technological planning goals that will enable the program to move forward with its multi-university project.

The HistorySpace Project brings together humanities scholars experimenting with Information Rich Virtual Environments (IRVE) that express combinations of textual, graphic, sonic and three- and four-dimensional forms of expression in order to collaborate on workflows and disciplinary conventions and protocols that will transition humanities scholars from print to virtual media production. With the emergence of XML (Extensible Markup Language), related XML-dialects Like SVG (Scalable Vector Graphics) and X3D, humanities scholars have been able to generate and distribute over the Internet unprecedented datasets and dynamic representations of objects and environments. Combining primary source data with visual imaging and scholarly analysis, IRVEs offer tremendous potential to create elaborate three and four-dimensional renderings of the past. Historians have already begun to appropriate IRVEs as a new method of scholarly communication: the Aurora Project, Virtual Jamestown, and the 3D Virtual Buildings Project have begun to experiment with two- and three-dimensional forms of representation to support analysis, expression, and education. Despite these emerging competencies and digital resources, the historical discipline is still not ready to appropriate IRVEs on a widespread basis. When historians generate print-based materials, they rely on established disciplinary criteria to narrate, document, and develop their analysis. Yet, humanities scholars can lay claim to no analogous sets of
workflows and conventions to govern content creation, expression, dissemination and peer review for IRVEs. The HistorySpace Project will conceive, construct and test IRVE workflows, conventions, and accompanying tools to support their operation and expression by humanities scholars. H^P C will allow the HistorySpace Project, which has been collaborating with the NCSA, to take the next step in its project design. As of June 2008, HistorySpace, in conjunction with participants at NCSA, will have constructed an elaborate network of storyboards and workflow charts that will serve as the iterative, scenario-based design method that will structure the IRVE. This grant will allow HistorySpace to consult with high performance computing specialists in order to refine their IRVE methodological structure, consider the integration and adaptation of additional high performance computing tools, and begin construction of its first prototype IRVE.

**Impact and Evaluation:**

Findings from this project will be disseminated in traditional and innovative ways. We will encourage and maintain collaboration among humanities and high performance computing participants by creating a web-portal that allows electronic dissemination and maintains a constant web-based presence. The primary goal of disseminating experience, breakthroughs and learned lessons will be achieved by putting the mini-residences online via webcast. The secondary goal will be facilitated by the inclusion of modules embedded in the portal that allows activities tracking (provenance data), collaboration support (including blogs, chat, and wikis), and networking support. Creating a multi-way networked activity centered on the digital humanities, the experience, breakthroughs, and lessons learned from each project will be disseminated to the wider humanities academic audience and the general public through our virtual community in addition to the more traditional online papers, journal articles and research reports. Our ambition is to achieve continual and energetic discussion and collaboration for each group and as a collaborative. H^P C involves a unique combination of assets: 1) it will further the research efforts of the selected humanities research groups; 2) it will allow for the refinement of technologies by computational scholars and humanities users; 3) it will create a collaborative infrastructure and virtual community accessible to scholars across humanities. The mini-residences and the two-day conference, which will be webcast, will culminate in an ever-evolving planning memorandum, “Coordinating High Performance Computing and the Digital Humanities.” It will outline long-range technological planning goals that can be undertaken by the partnership and each humanities group upon completion of the grant and aid participants in charting the systematic planning and developmental goals needed to integrate these new technologies within their project. Beyond group participants, these long-range planning memoranda will continually evolve as new technologies, methods, and humanities groups join the collaboration and its parallel virtual community. In serving not just invited participants but also scholars interested in the humanities and digital technologies, H^P C captures the underlying intent of the National Endowment for the Humanities grant programs: to interest people in the Humanities and aid them in their quest to more fully understand human life and experiences.

Within the confines of H^P C, our evaluation process will be conducted via evaluation tools provided by the University of Illinois’ Center for Instructional Research and Curriculum Evaluation (CIRCE) and the internal evaluation staff at NCSA. CIRCE has evaluated programs at all educational levels and will bring together humanities scholars experienced in evaluation to aid in the assessment of H^P C. They will collect data via surveys, content assessment instruments, and interviews over the course of the grant. Participants will be asked to assess the curriculum, a series evaluation to recommend strategies to improve the virtual...
workshop and community, and a final qualitative evaluation that will track the continued use of these technologies and the efforts to secure additional grant funding dollars. Program administrators at each center will also be surveyed to consider the ways in which the collaboration can be strengthened and changed over time to better serve the technological participants and their needs.

Staff, Faculty, and Consultants (Appendix V: Curriculum Vitae- I-CHASS Faculty and Staff):

Principal Investigator: Orville Vernon Burton is Director of the Institute for Computing in Humanities, Arts, and Social Science (I-CHASS) at the University of Illinois, where he is Professor of History and African American Studies and serves as a Senior Research Scientist at the National Center for Supercomputing Applications, where he is Associate Director for Humanities and Social Sciences. Burton is the author of more than a hundred articles and the author or editor of fourteen books (one of which is on cd-rom), including In My Father's House Are Many Mansions: Family and Community in Edgefield, South Carolina and The Age of Lincoln.

Co-Principal Investigator: Kevin Franklin is Executive Director of the Institute for Computing in Humanities, Arts and Social Sciences (I-CHASS) and Senior Research Scientist for the National Center for Supercomputing Applications (NCSA). He is the former Executive Director of the University of California Humanities Research Institute and Deputy Director of the University of California San Diego Supercomputer Center. Dr. Franklin serves as co-chair for the Humanities, Arts and Social Science Research Group for the Open Grid Forum and on the Advisory Board for the Worldwide University Network Grid Advisory Committee. He designed and implemented the University of California systemwide online research proposal application tool and the Humanities, Arts and Social Science Grid (HASSgrid). He is a co-founder of the Humanities, Arts, Science and Technology Advanced Collaboratory (HASTAC).

Project Manager: Simon Appleford received a Masters of Arts in Modern American History and a Masters of Literature from the University of St. Andrews, Scotland before joining NCSA in 2005. His interests in digital technologies and American history have led to several publications including articles in CTWatch Quarterly and Toward the Meeting of the Waters: Currents in the Civil Rights Movement in South Carolina (University of South Carolina Press, 2007.) Simon was the principal organizer of e-Science for Arts and Humanities Research: Early Adopters Forum (2007), Spatial Thinking in the Social Sciences and Humanities (2006), and Computing in Humanities, Arts, and Social Science (2005). He is currently completing his Doctorate of Philosophy in History at the University of Illinois while serving as Project Manager at I-CHASS. Simon Appleford will be responsible for project coordination and collaboration between the high performance computing centers and the humanities groups including the maintenance of the virtual community and the grant’s findings.

Senior Project Scientist: Peter Bajcsy received his Master of Science in Electrical Engineering from the University of Pennsylvania and his Doctorate in Electrical and Computer Engineering from the University of Illinois. Peter and the SEASR group have been investigating and developing solutions to real life problems in the application areas of remote and airborne sensing, geo-spatial information systems (GIS), target and scene modeling from multi-spectral and synthetic aperture radar (SAR) imagery, bio-informatics and health informatics, microscopy and medical image processing, automated information extraction and organization from large size image scans and PDF documents, 3D imaging and advanced sensor environments. He is currently employed in multiple positions at the University of Illinois: as the Associate Director for Data Analytics and Pattern Recognition at I-CHASS, as Adjunct Assistant Professor in the Electrical and Computer Engineering and Computer Sciences Departments, and as a Research Scientists in Image Spatial Data Analysis (ISDA) at NCSA. Peter Bajcsy will design and implement the education and training activities that will be hosted at NCSA.
**Project Scientist:** Alex Yahja earned his Ph.D. degree in computation, organizations and society from Carnegie Mellon University, Pittsburgh, PA, in 2006, and currently works on the interface between technologies and humanities, arts and social sciences at the National Center for Supercomputing Applications in Urbana, IL. The problems he has worked on include social drivers in disaster response, collaboration across disciplines, network-based recommendation, mapping of research activities, and semantics-based specification and collaboration. He received two M.Sc. degrees, one in engineering and public policy and one in robotics from Carnegie Mellon University, Pittsburgh, PA, in 2004 and 2000 respectively.

**Project Scientist:** Alan Craig has focused his career on the interface between humans and machines. He has been involved in many different capacities related to scientific visualization, virtual reality, data mining, multi-modal representation of information, and collaborative systems during his career at the National Center for Supercomputing Applications where he has worked for the past twenty years. Dr. Craig is co-author of the book “Understanding Virtual Reality”, published by Morgan Kaufmann Publishing, and author of the forthcoming book, “Using Virtual Reality”.

**Project Coordinator:** Jim Onderdonk is Associate Director for Education and Outreach with the Institute for Computing in Humanities, Arts and Social Sciences (I-CHASS). He also serves as Head, Conferences and Institutes (C&I), one of the divisions in the Office of Continuing Education at the University of Illinois at Urbana-Champaign. His undergraduate degree is from the College of William and Mary and his masters and doctorate are from Old Dominion University.
Appendix I: References

1.) The NEH has recognized the challenge associated with digital technologies and high performance computing for the humanities. In July of 2007, the NEH sponsored the “Humanities High Performance Computing” Conference which included inviting participants from High Performance Computing Centers and Digital Humanities Centers including the Institute for Computing in the Humanities, Arts, and Social Science along with representative from the San Diego Super Computing Center, The Institute for Advanced Technology and the Humanities at the University of Virginia, the Department of Energy and the National Science Foundation. That meeting served to open dialogues between these groups about the possibilities of a multi-center multi-group collaboration.

2.) We use the term “Humanities High Performance Computing” intentionally to signal an investment (structural, computational, and resource-based) in the extension of I-CHASS to serve as a portal for humanities scholars to receive technical support, access to high performance computing, and products and services associated with the digital technologies. We envision that additional centers will join this grant in later stages and I-CHASS will serve as a national entry point for humanities, arts, and social science researchers to receive high performance computational services at all levels of expertise from beginner to the most advanced humanities computing projects.

3.) The call for multi-center collaborations has been offered in the sciences as well in the humanities. “No one agency can – or should – carry all the weight of ensuring that our scientists have the computational tools they need to do their job”, spoke Dr. Raymond L. Orbach, Director of Science at the Department of Energy during his 2003 testimony before the House Committee on Science, “yet duplication of effort must be avoided.” See http://www.er.doe.gov/sub/speeches/Congressional_Testim/7_16_03_testimony.htm for his full comments.

4.) http://valley.vcdh.virginia.edu

5.) The Great Lakes Consortium for Petascale Computation is a collaboration among colleges, universities, national research laboratories, and other educational institutions that facilitates the widespread and effective use of petascale computing by developing new computing software, applications, and technologies. A “petascale” system is expected to be able to make arithmetic calculations at a sustained rate in excess of a sizzling 1,000-trillion operations per second (a “petaflop” per second) to help investigators solve some of the world’s most challenging research problems. Please consult: http://www.greatlakesconsortium.org/ for more information.

6.) I3 was established in 2007 at the University of Illinois to foster multi-disciplinary collaboration, support joint academic appointments, offer courses and academic programs, and sponsor research and technology development in informatics and its applications.

7.) http://www.psc.edu

8.) http://www.sdsc.edu/

9.) http://education.sdsc.edu/teachertech/

10.) http://education.sdsc.edu/discoverdata/

11.) For examples of the types of scholarship the SCGMA group is relying upon please consult: Thomas T. Allsen, Culture and Conquest in Mongol Eurasia (Cambridge, Eng.: Cambridge University Press, 2001); Geraldine Heng, "An Experiment in Collaborative Humanities: Imagining the World, 500-1500 C.E.,” Association of Departments of Foreign Languages (ADFL) Bulletin 38 (3) and 39 (1), Spring-Fall 2007, 20-28; Peter R. Schmidt, and T. Patterson, Making Alternative Histories: The Practice of Archaeology and History in Non-Western Settings (Santa Fe: School of American Research, 1995); Susan Whitfield, and Ursula Sims-Williams, The Silk Road: Trade, Travel, War, and Faith (Chicago: Serindia Publications, 2004).

12.) http://www.iml.usc.edu/

13.) For information of digital portfolio applications and their relationship to humanities learning please

14.) http://www.virtualjamestown.org/
Appendix II: Collaboration Diagram

I-CHASS
Project leadership, grant coordination and humanities-technology understanding & assistance
PI: Vernon Burton
Co-PI: Kevin Franklin

Pittsburgh Supercomputing Center
Center Lead: Laura

San Diego Supercomputer Center
Center Lead: Diane Baxter

National Center for Supercomputing Applications
Center Lead: Peter Bajcsy

Introduction to high-performance computing
Data grid for data curation & preservation
Data analytics of texts, 2D/3D images, audio and video
Workflow & computer-assisted collaboration

Scholarly Community for the Globalization of the Middle Ages
Humanistic Algorithms
HistorySpace humanities scholars

Note: brown lines denote provision and red/green/blue lines denote priority interests
Appendix III: List of Participants By Group

High Performance Computing Centers:
National Center for Supercomputing Applications

Appleford, Simon
Project Manager, Institute for Computing in the Humanities, Arts, and Social Science; Graduate Student, Department of History, University of Illinois

Bajcsy, Peter
Associate Director for Data Analytics and Pattern Recognition, Institute for Computing in the Humanities, Arts, and Social Science.

Burton, Vernon
Director of the Institute for Computing in the Humanities, Arts, and Social Science, Professor of History, African American Studies, and Sociology; Senior Research Scientist and Associate Directory for Humanities and Social Sciences at the National Center for Supercomputing Applications (NCSA).

Craig, Alan
Associate Director for Human-Computer Interaction, Institute for Computing in the Humanities, Arts, and Social Science.

Franklin, Kevin
Executive Director of the Institute for Computing in the Humanities, Arts and Social Sciences; Senior Research Scientist at the National Center for Supercomputing Applications (NCSA).

Guiliano, Jennifer
Ph.D. Candidate, Department of History, University of Illinois; Graduate Assistant, Institute for Computing in the Humanities, Arts, and Social Science; Graduate Assistant, Department of History.

Onderdonk, James
Associate Director for Education and Outreach, Institute for Computing in the Humanities, Arts, and Social Science.

Seawell, Stephanie
Graduate Student, Department of History, University of Illinois; Graduate Assistant, Institute for Computing in the Humanities, Arts, and Social Science; Graduate Assistant, Department of History.

Yahja, Alex
Assistant Director in Modeling, Institute for Computing in the Humanities, Arts, and Social Science.

Pittsburgh Supercomputing Center:

McGinnis, Laura F.
Project Manager, Data and Information Resource Services, Pittsburgh Supercomputing Center

Brown, Shawn T.
Sr. Scientific Specialist, Scientific Applications and User Services, Pittsburgh Supercomputing Center

Maiden, Tom
User Support and Outreach Specialist, Scientific Applications and User Services, Pittsburgh Supercomputing Center

Urbanic, John
Staff Computational Science Consultant, Strategic Applications, Pittsburgh Supercomputing Center

San Diego Supercomputer Center:

Baxter, Diane
Director of Education, San Diego Supercomputer Center

Moore, Reagan
Director, Data-Intensive Computing Environments (DICE) group, San Diego Supercomputer Center

Marciano, Richard
Director, Sustainable Archives and Library, San Diego Supercomputer Center
Humanities Groups:

The Scholarly Community for the Globalization of the “Middle Ages” (SCGMA) Group:

Allsen, Thomas  Professor Emeritus, College of New Jersey
Asher, Catherine B.  Associate Professor of Art History, University of Minnesota
Aytes, Ayhan  Visual Media Researcher and Graduate Student in Communications, University of California- San Diego
Boone, Jim  Associate Professor of Anthropology, University of New Mexico
Goldberg, David Theo  Director, University of California Humanities Research Institute (UCHRI); Professor of Comparative Literature and Criminology, Law, and Society at the University of California, Irvine.
Hart, Roger  Assistant Professor of History, University of Texas at Austin.
Heng, Geraldine  Director of Medieval Studies, Associate Professor of English; Holder of the Perceval Endowment in Medieval Romance, Historiography, and Culture at the University of Texas at Austin.
Ilnitchi, Gabriela  Assistant Professor of Musicology, University of Minnesota.
Kea, Ray A.  Professor of History, University of California, Riverside
Klieman, Kairn A.  Associate Professor of History, University of Houston, Texas.
Larkin, Margaret.  Professor of Arabic Literature, Department of Near Eastern Studies, University of California, Berkeley.
Liu, Xinru  Assistant Professor of Early Indian History and World History, College of New Jersey.
Martin, Will  Graduate Student, Department of Information Science, University of Texas, Austin.
McIntosh, Susan K.  Professor of Archaeology, Rice University.
Noakes, Susan  Director, Center for Medieval Studies, Professor of French and Italian, University of Minnesota, Twin Cities.
Phillips Jr., William D.  Director, Center for Early Modern History, Professor of History, University of Minnesota
Ragnow, Marguerite  Curator, James Ford Bell Library, University of Minnesota.
Saldanha, Arun  Assistant Professor, Geography, University of Minnesota.
Schmidt, Peter R.  Professor of Anthropology, University of Florida
Spellberg, Denise  Associate Professor of History and Middle Eastern Studies, Associate Director of Medieval Studies, University of Texas.
Urbam, Tomislav  Data and Information Service Group, Texas Advanced Computing Center.
Waltner, Ann B.  Director, Institute for Advanced Study, University of Minnesota.
Widner, Mike  Graduate Student, Medieval Literature, University of Texas, Austin.
Wilcox, Rebecca  Graduate Student

The Humanistic Algorithms: Semantic Networks in Multimedia Scholarship Group:

Arroyo, Sarah J.  Assistant Professor of English, California State University at Long Beach
Ball, Cheryl  Assistant Professor, English, Illinois State University; Editor of Kairos, refereed online journal exploring the intersections of rhetoric, technology, and pedagogy
Blalock, Glenn  Assistant Professor of Composition and Rhetoric, Department of English, Baylor University; Creator of CompPile, a scholarly database of journals in rhetoric and compositions.

Callahan, Vicki  Founder of the Conceptual Studies in Media Arts Production at the Peck School of the Arts (Film Dept), University of Wisconsin, Milwaukee

Franklin, Kevin  Executive Director, Institute for Computing in the Humanities, Art, and Social Science, University of Illinois

Haswell, Rich  Professor Emeritus, Department of English, Texas A & M, Corpus Christi; Creator of CompPile, a scholarly database of journals in rhetoric and compositions.

Hawisher, Gail  Professor of English and Director of the Center for Writing Studies, University of Illinois.

Holmes-Wong, Deborah  Archivist for Digital Media, University of Southern California

Kuhn, Virginia  Associate Director, Institute for Multimedia Literacy, University of Southern California

Selfe, Cynthia L.  Humanities Distinguished Professor, Department of English, Ohio State University

Vitanza, Victor J.  Professor of English and Director of the Ph.D. Program in Rhetorics, Communication, and Information Design, Clemson University

Wright, Elijah  Adjunct Lecturer and Graduate Student, School of Library and Information Sciences, Indiana University

Wysocki, Anne F.  Associate Professor English, University of Wisconsin, Milwaukee

The HistorySpace Project: Information Rich Virtual Environments for Historical Scholarship Group:

Ayers, Edward  President, University of Richmond; Aurora Project; Valley of the Shadow Project.

Bonnett, John  Assistant Professor, Humanities Institute, Department of History, Brock University (Canada)

Denard, Hugh  Professor, Centre for Computing in the Humanities, Director, King’s Visualization, Lab King’s College London; Editor, Didaskalia; Member, The Pompey Project

Dueane, Patrick  Professor, Department of History, University of Victoria; Co-Director, Vi.History.ca (online); editor of The Homeroom, British Columbia’s online history of education website.

Dunn, Stuart  Research Associate, Centre for Computing in the Humanities, King’s College London.

Gilliland, Jason  Assistant Professor, Department of Geography; Director, Urban Development Program, University of Western Ontario.

Lutz, John  Professor, Department of History, University of Victoria; Co-Director, Great Unsolved Mysteries in Canadian History (online); Co-Director, Victoria’s Victoria (online); Co-Director, Vi.History.ca (online); Co-Director, Who Killed William Robinson? Race Justice and Settling the Land (online).

Thomas III, William G.  John and Catherine Angle Professor in the Humanities Department of History, University of Nebraska; Aurora Project
## Appendix IV: Curriculum Workplan Itinerary

### Mini-Residence

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Welcome to the Workshop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tues.</td>
<td>Welcome to the Workshop</td>
</tr>
<tr>
<td>7:00 PM</td>
<td>Welcome Dinner</td>
</tr>
<tr>
<td>Primary Collaborator- HP Center and HP Center Administration</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day 2</th>
<th>Technology and the Humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed</td>
<td>Technology and the Humanities</td>
</tr>
<tr>
<td>9:30-9:45 AM</td>
<td>Introduction to the Workshop Series</td>
</tr>
<tr>
<td>Primary Collaborator- HP Center</td>
<td></td>
</tr>
<tr>
<td>9:45-10:30 AM</td>
<td>Mini-Residence Research Goals and Objectives</td>
</tr>
<tr>
<td>Primary Collaborator- HP Center</td>
<td></td>
</tr>
<tr>
<td>10:30-11:00 AM</td>
<td>Introduction to the Research Project, their Goals, and Objectives</td>
</tr>
<tr>
<td>Humanities Research Group</td>
<td></td>
</tr>
<tr>
<td>11:00-12:15 AM</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:30-3:00 PM</td>
<td>Technology and your Research Group</td>
</tr>
<tr>
<td>HP Center technology staff</td>
<td></td>
</tr>
<tr>
<td>3:00-3:15 PM</td>
<td>Break</td>
</tr>
<tr>
<td>3:15-4:45 PM</td>
<td>Technology and your Research Group pt. 2</td>
</tr>
<tr>
<td>HP Center technology staff</td>
<td></td>
</tr>
<tr>
<td>5:30 PM</td>
<td>Dinner</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day 3</th>
<th>Adapting High Performance Computing Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurs</td>
<td>Adapting High Performance Computing Technology</td>
</tr>
<tr>
<td>8:30-10:00</td>
<td>Adapting High Performance Computing Technology</td>
</tr>
<tr>
<td>HP Center technology staff</td>
<td></td>
</tr>
<tr>
<td>10:00-10:15</td>
<td>Break</td>
</tr>
<tr>
<td>10:15-12:00</td>
<td>Adapting High Performance Computing Technology pt. 2</td>
</tr>
<tr>
<td>HP Center technology staff</td>
<td></td>
</tr>
<tr>
<td>12:00-1:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>1:00-3:30</td>
<td>Adapting High Performance Computing Technology pt. 3</td>
</tr>
<tr>
<td>HP Center technology staff</td>
<td></td>
</tr>
<tr>
<td>3:30-3:45</td>
<td>Break</td>
</tr>
<tr>
<td>3:45-5:00</td>
<td>Long-Term Technology Planning</td>
</tr>
<tr>
<td>Primary Collaborator- HP Center</td>
<td></td>
</tr>
</tbody>
</table>
### Summer Conference

<table>
<thead>
<tr>
<th>Day 1</th>
<th><strong>Conference</strong></th>
<th><strong>Humanities Research</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-8:45</td>
<td>Welcome Remarks</td>
<td>Vernon Burton, I-CHASS</td>
</tr>
<tr>
<td>8:45-10 AM</td>
<td>Humanities Research Group 1 Presentation</td>
<td><em>The Scholarly Community for the Globalization of the “Middle Ages” Group,</em> Susan Noakes, lead.</td>
</tr>
<tr>
<td>11:30-1 PM</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>1-2:15 PM</td>
<td>Humanities Research Group 3 Presentation</td>
<td><em>The Human- and Cyber-infrastructures to Study and Combat Violence Group,</em> Heidi Beirich, lead.</td>
</tr>
<tr>
<td>3:30-3:45 PM</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:45-4:30</td>
<td>Discussion: and “Issues of Technology and the Digital Humanities”</td>
<td>All participants</td>
</tr>
<tr>
<td>6:30-7:30 PM</td>
<td>Dinner</td>
<td></td>
</tr>
</tbody>
</table>

### Day 2 | The Digital Future of Humanities Research

| 9-11:30 | “Coordinating High Performance Computing and the Digital Humanities” | All participants |
| 11:30-1 PM | Lunch | |
| 1-3 PM | Open Discussion | All participants |
| 3-4 PM | Evaluation | CIRCE Staff |
| 4:00-4:15 PM | Closing Remarks | Kevin Franklin, I-CHASS |
Appendix V: Curriculum Vitae
I-CHASS Faculty, Staff, and Consultants

ORVILLE VERNON BURTON

Professional Preparation
Furman University History B.A. 1969
Princeton University History M.A. 1971
Princeton University History Ph.D. 1976

Appointments
2004 – Present Director, Institute for Computing in Humanities, Arts, and Social Science
2003 – Present Associate Director, Humanities and Social Sciences, National Center for Supercomputing Applications (NCSA) at University of Illinois Urbana Champaign (UIUC)
2001 – Present Executive Director, Lowcountry and Atlantic World Program, College of Charleston
2000 – 2001 Mark W. Clark Visiting Distinguished Chair, The Citadel
1995 – Present Senior Research Scientist, NCSA
1993 – 2003 Head Initiative for Social Science and Humanities at NCSA
1991 – 1995 Professor, NCSA
1989 – Present Professor, History, UIUC
1989 – Present Professor, Sociology, UIUC
1988 – 1991 Adjunct Professor, NCSA
1987 – Present Faculty Affiliate, Afro-American Studies and Research Program, UIUC
1986 – 1988 Faculty Affiliate, NCSA
1986 – Present Professor Campus Honors Program, UIUC
1982 – 1989 Associate Professor, History, UIUC
1981 – Present Graduate College Statistics Faculty, UIUC
1976 – 1982 Assistant Professor, History, UIUC
1974 – 1976 Instructor, History, UIUC
1971 – 1972 Instructor, Mercer County Community College, New Jersey

Publications
(Recognized as a Choice” Outstanding Academic Book, 2003”).
"Complementary Processing: A Supercomputer/Personal Computer U.S. Census Database Project" in


synergistic activities
U.S. Professor of the Year, Outstanding Research and Doctoral Universities Professor (Council for Advancement and Support of Education and Carnegie Foundation for the Advancement of Teaching) 1999 recognized for the introduction of Information Technology into the Classroom and the study of Diversity in the Classroom; American Historical Association Eugene Asher Distinguished Teaching Award, 2003; appointed Organization of American Historians Distinguished Lecturer, 2004-07

Certificate of Excellence from the Carnegie Academy for the Scholarship of Teaching and Learning for Work that Advances the Practice and Profession of Teaching In Support of Significant Student Learning, June 28, 2001.

Named one of the first three University of Illinois at Urbana Champaign University “Distinguished Teacher/Scholar” 1999.

Organized number of meetings. (selected) 1993: organized, hosted, and chaired the annual meeting of the Conference on Computing for the Social Sciences at the National Center for Supercomputing Applications at Illinois Edited special issue of Social Science Computer Review 12:2 (Summer 1994) from papers presented at conference. 2003: organized three meetings-A Workshop on Diversity and Racism in the Classroom for university faculty, public school teachers, and the community (January as co-chair of Martin Luther King, Jr. Week at UIUC); organized a Conference on the Scholarship of Teaching and Learning for Illinois Faculty (Jan.); organized a conference on the Civil Rights Movement in South Carolina at The Citadel in Charleston, S.C. (March) As Director of Institute for Computing in Humanities, Arts, and Social Science regularly host workshops on cyber infrastructure and information technology- 2007 hosted workshops on GIS with Luc Anselin and Grid Computing with English e-science scholars. Currently preparing books and reports from each of these workshops.

collaborators and other affiliations
1. Collaborators: Simon Appleford, UIUC; Ian Binnington, Allegheny College., Richard Braatz (UIUC), Beatrice Burton, University of Georgia; Georganne B. Burton, spouse; Matthew Cheney (UIUC); Terence Finnegan, William Paterson U.; David Herr, St. Andrews College; Eric Jakobsson (UIUC), Mark Kornbluh (Michigan State U.), Winfred Moore, The Citadel; David O'Brien, UIUC; James Onderdonk, UIUC; Richard Pate (Danville Community College); Deanna Raineri (UIUC),)
KEVIN FRANKLIN

Executive Director, Institute for Computing in the Humanities, Arts and Social Sciences
Senior Research Scientist, National Center for Supercomputing Applications
University of Illinois at Urbana Champaign
1205 W. Clark Street
Urbana, IL 61801
Phone: 217-265-4044
Cell: 858-336-8285

Professional Preparation
Old Dominion University Psychology B.S 1982
Old Dominion University Education M.S. 1984
University of San Francisco Organization and Leadership Ed.D. 1993

Appointments
Executive Director, Institute for Computing in the Humanities, Arts and Social Sciences, University of Illinois, Senior Research Scientist National Center for Supercomputing Applications, Urbana Champaign, July 2007 – present
Executive Director, University of California Humanities Research Institute, UC Irvine, 2002-2007
Deputy Director, University of California Supercomputer Center, UC San Diego 2000-2001
Executive Director, Nonprofit Ventures, Inc, 1998-2000
Interim Executive Director, Summerbridge National, 1997-1998
Senior Fellow, San Francisco State University, Urban Institute, 1993-1997
Director, San Francisco State University, Urban Scholars Program, 1992-1994
Founding Executive Director, Multicultural Alliance, 1989-1997

Publications
Co-Editor, Cyberinfrastructure Technology Watch Quarterly Journal, May 2007
HASS Editor, GridToday, News and Information for Global Grid Communities, 2003-
HASS Editor, HPCWire, News and Information for High Performance Computing Communities, 2003
Network, KPIX Bay Area Channel 5

Synergistic Activities
Community-based Committees: California State Advisory Committee to the United States Commission on Civil Rights 1995-2004; Strategic Advisor, Costa Rica-United States Foundation, Costa Rica 2006- present; Director, Cyberinfrastructure Summer Institute for Humanities, Arts and Social Sciences, UCSD, 2006-2007; Chairperson, Executive Committee, Latin American Grid Alliance, CeNAT, Costa Rica 2003-present; Co-Chairperson, Humanities, Arts and Social Science Research Group, Global Grid Forum, 2003-present; Vice-Chair, UC Office of the President, Humanities, Arts, Social Sciences Technology Council, 2004-2007; Worldwide University


SIMON J. APPLEFORD

Project Manager, Institute for Computing in Humanities, Arts, and Social Science (ICHASS)
National Center for Supercomputing Applications
University of Illinois at Urbana Champaign
1205 W. Clark Street
Urbana, IL 61801
Phone: 217-265-4044
Cell: 858-336-8285

Professional Preparation

University of St Andrews Modern History M.A. 2000
University of St Andrews Modern American History M.Litt. 2001
University of Illinois at Urbana-Champaign, Ph.D. (in progress) in History, 2007-present

Appointments

Project Manager, University of Illinois Institute for Computing in the Humanities, Arts and Social Sciences, Urbana Champaign, February 2007 – present
Visiting Project Specialist, National Center for Supercomputing Applications, 2005-2007
Production Editor, Omegatype Typography, 2004-2005
Senior Technology Specialist, FedEx Kinko’s, 2003-2004
Publishing Assistant, Leckie & Leckie, 2001-2002

Publications


**Synergistic Activities**

Project Manager for RiverWeb Project (www.riverweb.uiuc.edu)
Organized several conferences and workshops for I-CHASS: e-Science for Arts and Humanities Research: Early Adopters Forum, 2007; Spatial Thinking in the Social Sciences and Humanities, 2006; Computing in Humanities, Arts, and Social Science, 2005.

**Collaborators**

(a) Collaborators: Vernon Burton, UIUC; Beatrice Burton, University of Georgia; Kevin Franklin, UIUC; Mark Kornbluh (Michigan State University); Kalev Leetaru (UIUC); David O’Brien, UIUC; James Onderdonk, UIUC; Troy Smith, UIUC

(b) Advisors: Vernon Burton, UIUC; Stephen Spackman, University of St. Andrews; Timothy Minchin, La Trobe University

**PETER BAJCSY**

**Professional Preparation.**
Slovak Technical University, Bratislava, Czechoslovakia
Major: Technical Cybernetics and Measurement Techniques
Degree & Year: Diploma Engineer, 1987
University of Pennsylvania, Philadelphia, PA
Major: Electrical Engineering
Degree & Year: Master of Science, 1994
University of Illinois, Urbana-Champaign, IL
Major: Electrical and Computer Engineering
Degree & Year: Doctor of Philosophy, 1997

**Appointments.**
2003 – Present Adjunct Assistant Professor ECE, UIUC
2002 – Present Adjunct Assistant Professor CS, UIUC
2001 – Present Research Scientist NCSA
1998 – 2001 Senior Scientist SAIC/DEMACO, Inc., Champaign, IL.
1997 - 1998, Senior Software Engineer Cognex Corporation, Acumen Products Group, Portland, OR

**Publications.** (Most Recent)


Synergistic Activities.
• Served on the NIST advisory board for the SHIELD project 2003-2004
• Served on NSF Information Technology Research (ITR) Review Panels for Division of Informative Biology and Division of Information & Intelligent Systems, 2004 (twice) and 2005 (once),
• Served as a program committee member on the IEEE Workshop on Computer Vision Methods for Bioinformatics, San Diego, June 2005 (in conjunction with IEEE CVPR 2005).
• Contributions to the science of learning; Collaborates with biologists, neuroscientists, psychologists and veterinary medicine experts on bio-computing problems.

Collaborators
Robert Folberg, Dept of Pathology, University of Illinois, Chicago, IL;
Praveen Kumar, Department of Civil and Environmental Engineering, UIUC, IL.
Barbara Minsker, Department of Civil and Environmental Engineering, UIUC, IL.
Gerald Nelson, Department of Agricultural and Consumer Economics, UIUC, IL;
Dan Kuchma, Department of Civil and Environmental Engineering, UIUC, IL.
Momo Markus, Illinois State Water Survey, Champaign, IL;
Jean-Christopher Lementec CHI Systems, Inc., Philadelphia, PA;
Wei Xie, ACNielsen, Chicago, IL;
Evan DeLucia, Dept of Plant Biology, University of Illinois, Urbana, IL;

ALAN B. CRAIG
National Center for Supercomputing Applications (NCSA)
University of Illinois at Urbana- Champaign
(217) 244-1988
acraig@ncsa.uiuc.edu

Professional Preparation
University of Illinois, Urbana, IL Secondary Education, B.S. 1983
University of Illinois, Urbana, IL Computer Science, M.S. 1985
University of Illinois, Urbana, IL Information, Science Ph.D. 2005

Appointments
University of Illinois at Urbana-Champaign:
National Center for Supercomputing Applications – UIUC 1987 - present
Visualization and Virtual Reality Group
Texas Instruments – Dallas, Texas 1985 – 1987
Defense Systems Electronics Group
Software Design Engineer – Computer Systems Training Group

Publications (selected)
Technology 90, Second International Symposium on Advanced Technology in Natural Resources Management (1990)


W. Cheng, A. Craig, I. Dilber “Impact Penetration Modeling Using DYNA3D” (Manuscript) 1991

Books:
Understanding Virtual Reality by William Sherman and Alan Craig – Morgan Kaufmann
Publishing. September, 2002
Using Virtual Reality by Alan Craig, William Sherman, and Jeff Will – Morgan Kaufmann
Publishing, in review

Book Chapter:

Articles:

Synergistic Activities
Served as PI for the University of Illinois sub-award for NSF Grant # 0311088 "Scientific Visualization for Undergraduate Education."
Organized and hosted large-scale summer institute on Scientific Visualization (NSF Funded)
Organized and hosted multiple large-scale summer institutes on high performance computing
Project leader for the NCSA VIAS information management system. The VIAS System (Visualization Information Archival System) is an automated, webcrawling facility that builds databases on topics of interest. The first database the system built was for information regarding scientific visualization.

Have served as paper reviewer and on technical program committees for various conferences and journals

Collaborators & Other Affiliations
• Collaborators and Co-Editors
Eric W. Johnson – Valparaiso University
William R. Sherman – Desert Research Institute
Douglas Tougaw – Valparaiso University
Jeffrey D. Will – Valparaiso University
• Graduate and Postdoctoral Advisors.
Graduate Advisor – Tim Wentling, University of Illinois at Urbana-Champaign

ALEX YAHJA

4038 NCSA Building, M/C 257
National Center for Supercomputing Applications
1205 West Clark St.
Urbana, IL 61801

Education:
Carnegie Mellon University, Ph.D., 2006, (Computation, Organizations and Society)

Professional Experience:

National Center for Supercomputing Applications, 2006-present
Assistant Director in Modeling, Institute for Computing in the Humanities, Arts, and Social Science

Publications (selected):

Alex Yahja, Systematic Modeling and Evaluation of Historic Processes, American Association for History and Computing, 2007, invited

Alex Yahja and Kathleen M. Carley, Simulation Validation: An Inferential Approach, Computational and Mathematical Organization Theory, 2007, accepted


Alex Yahja and Kathleen M. Carley, An Inferential Approach to Validating Agent Simulations, Agent 2007 Conference, Argonne National Lab, Chicago, IL, November 15-17, 2007


Research and Professional Record

North American Association for Computational Social and Organizational Science
International Network for Social Network Analysis
Society for Computer Simulations International

Research Interests
Human and social dynamics, computational social science, supercomputing, social networks, modeling and simulation, causal analysis, collaboration and recommender systems, computational organization theory, semantics & knowledge-based systems, and machine learning

Collaborators not mentioned in the publications

Elizabeth Casman, Douglas Fridsma, Demian Nave, Boris Kaminsky, Neal Altman, Li-Chiou Chen, Virginia Bedford
Ph.D. Advisor
Kathleen Carley, Carnegie Mellon University

JAMES C. ONDERDONK

University of Illinois at Urbana-Champaign 1808 Floral Park Drive
Office of Continuing Education Savoy, Illinois 61874
Conferences and Institutes Phone (217) 359-5377
302 East John Street, Suite 202
Champaign, IL 61820
E-mail: onderdon@uiuc.edu
Phone: (217) 333-2880; Fax: (217) 333-9561

Education
Management of Lifelong Education, Harvard University, 1997
Ph.D., Urban Services, Old Dominion University, Norfolk, Virginia, 1995
M.S. Ed., Old Dominion University, 1977

Professional Experience
Associate Director for Education and Outreach, Institute for Computing in Humanities, Arts, and Social
Science, (I-CHASS), National Center for Supercomputing Applications, University of Illinois at Urbana-Champaign, Jan. 2007 – present
Head, Division of Conferences and Institutes, Office of Continuing Education, 1999-present and Interim
Head and Associate Head, 1997-1999
In collaboration with members of the University community, Conferences and
Institutes designs, plans and presents non-credit programs including conferences,
seminars, short courses, certificate programs and annual meetings of professional
societies. As Head, I:
• Provide day-to-day leadership of programmatic, financial, personnel and
administrative functions of the division
• Represent the division to faculty, academic units and constituent communities
to develop new outreach activities
• Supervise a staff of 15
• Prepare and monitor the divisional budget ($2.9 million in FY07)
• Develop policies for appropriate expenditure of funds, cost recovery, and
reconciliation of fund balances
• Provide liaison with the Illinois Manufacturing Extension Center
• Manage the Technical Assistance Center, a technology transfer program with
the US Army’s Construction Engineering Research Laboratory
• Act as administrative agent for Levis Faculty Center, a 20,000 sq. foot campus
conference center

Adjunct Faculty, School of Education, Capella University, 2003-present
Teach online graduate courses in the history of higher education and finance of
higher education.

Education Services Specialist, Federal Civil Service, Naval Medical Center, Portsmouth, Virginia. 1993-
1997
• Managed all voluntary educational programs for personnel assigned to the
Naval Medical Center, the largest center on the East Coast. Also responsible
for programs at four other sites in southeastern Virginia.
• Planned and scheduled courses and degree completion programs -- remedial,
vocational, undergraduate and graduate (78 courses with 1106 enrollments in
FY 96

• Provided academic and vocational counseling and student services.
• Completed Contracting Officer’s Technical Representative (COTR) training for contracts at Naval Education and Training Support Center, Atlantic.

Education Services Officer, Department of the Navy. 1982-1993

• Progressively more responsible assignments for Naval Education and Training Commands both in Norfolk, Virginia, and in the United Kingdom (1985-1989; managed seven different sites in Scotland, England and Wales)
• Supervised professional and support staff at the Navy’s largest single education office in Norfolk, Virginia; secret security clearance.

Assistant P.A.C.E. Coordinator, Florida Junior College at Jacksonville, Norfolk, Virginia, Office. 1980-1982

• Coordinated the Program for Afloat College Education, a non-traditional higher education program providing educational opportunities for shipboard personnel.

Project Coordinator, Center for Educational Research, Old Dominion University. 1979-1980

Assistant Instructor (Old Dominion University) and Adjunct Instructor (Christopher Newport College, Office of Continuing Education). 1975-1977


Publications


Presented

Papers presented at the 2007 Outreach Scholarship Conference, Madison, WI.

San Diego, California
Appendix VI: Curriculum Vitae- Humanities Group Leaders

CHERYL E. BALL

Department of English
Campus Box 4240
Illinois State University
Normal, IL 61790-4240
Office: 309. 438. 3152
cball@ilstu.edu

ACADEMIC APPOINTMENTS

Assistant Professor, English Department, Illinois State University. 2007–present.
Visiting Scholar, English Department, The Ohio State University. June 2007.
Assistant Professor, English Department, Utah State University. 2004–2007.
PhD in Rhetoric & Technical Communication, Michigan Technological University, 2005; Dissertation: A New Media Reading Strategy. Committee: Anne Wysocki (chair), Cynthia Selfe, Diana George
BA in English/Creative Writing, Old Dominion University, 1996. Magna Cum Laude


Kuhn, Virginia, & Ball, Cheryl E. (in revision). Embrace and ambivalence: The academy’s love-hate relationship with the digital. College Composition and Communication.

Moeller, Ryan; Cargile Cook, Kelli; & Ball, Cheryl E. (accepted for collection). Political economy and sustaining the unstable: New faculty and research in English studies. In Danielle DeVoss, Heidi McKee, & Richard Selfe (Eds.) Technological ecologies & sustainability. [Collection under review.]


SERVICE

(2008–09). Chair. CCCC Committee for Computers in Composition & Communication (7Cs). [appointed]


(2006–07). Chair. CCCC Writing Program Certificate of Excellence Selection Committee. [appointed]

(2006–08). Co-Chair. CCCC Committee for Computers in Composition & Communication (7Cs). [appointed]

(2005–08). Member. NCTE Committee on Technical & Scientific Communication. [appointed]

(2003–06). Member. CCCC Committee for Computers in Composition & Communication. [appointed]
JOHN BONNETT

1 Chantler Road
Welland, ON
L3C-4M6
Citizenship: Canadian/American

(905) 735-8316
Fax: (905) 984-4849
Email: jbonnett@brocku.ca

Education:
- Doctor of Philosophy, Department of History, University of Ottawa, 2002.
  Thesis: "Communication, Complexity and Empire: The Systemic Thought of Harold Adams Innis." Supervised by: Chad Gaffield
- Master of Arts Degree, Department of History, University of Ottawa, 1992.
- Bachelor of Arts, Western Washington University, Cum Laude, 1989.

Professional Experience:
- Tier II Canada Research Chair in Digital Humanities, Department of History, Brock University, July 1, 2005 to present
- Research Officer, National Research Council of Canada, Institute for Information Technology, March 2002 to June 30, 2005
- Adjunct Professor, Department of History, University of New Brunswick, October 2002 to Present
- Visiting Researcher, National Research Council of Canada, Institute for Information Technology, January 1998 to December 2001

Grants, Scholarships, and Academic Honors:
- NCSA Visiting Researcher Fellowship, National Center for Supercomputing Applications, University of Illinois, Urbana-Champaign, June to August 2007
- Canada Foundation for Innovation Conference Grant – 2005
- Brock Humanities Research Institute – 2005
- Canada Foundation for Innovation Infrastructure Grant -- 2005
- Tier II Canada Research Chair – 2005.
Publications (selected):


“High-Performance Computing: An Agenda for the Social Sciences and the Humanities in Canada.” (Article commissioned by the Social Sciences and Humanities Research Council of Canada) Available on-line at:
Digital Arts and Humanities Network Website. (Hosted by King’s College, London)
http://www.arts-humanities.net/blog/ian_anderson/393
SSHRC Website: Social Sciences and Humanities Research Council.
http://www.sshrc.ca/web/about/publications/computing_final_e.pdf [January 2007]

Scholarly Activities and Service:

Member, Jury, Interactive Media Section, Digital Humanities Quarterly, February 2006 to present
Member, Editorial Board, Journal of Canadian Studies, August 2005 to present
Chair, Canadian Committee on History and Computing, Canadian Historical Association

HUGH DENARD

Formal Education

<table>
<thead>
<tr>
<th>Year</th>
<th>Degree</th>
<th>Institution</th>
<th>Supervisor</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993-97</td>
<td>Ph.D. in Drama - ‘Modern Versions of Greek Tragedies from Ireland’</td>
<td>University of Exeter</td>
<td>Leslie Read, Department of Drama, University of Exeter</td>
<td>British Academy Studentship.</td>
</tr>
<tr>
<td>1992-93</td>
<td>M.A. in Ancient Drama and Society</td>
<td>University of Exeter</td>
<td>John Wilkins, Department of Classics, Exeter</td>
<td></td>
</tr>
<tr>
<td>1988-92</td>
<td>B.A. in Drama &amp; Classical Civilizations</td>
<td>Trinity College Dublin</td>
<td>Steve Wilmer, Samuel Beckett Centre, TCD</td>
<td></td>
</tr>
</tbody>
</table>

Academic Posts

<table>
<thead>
<tr>
<th>Year</th>
<th>Position</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-</td>
<td>Lecturer, Centre for Computing the Humanities</td>
<td>King's College, London (KCL)</td>
</tr>
<tr>
<td>2000-05</td>
<td>Lecturer, School of Theatre Studies</td>
<td>Warwick</td>
</tr>
<tr>
<td>1998-00</td>
<td>Teaching &amp; Research Fellow</td>
<td>School of Theatre Studies, Warwick</td>
</tr>
<tr>
<td>1998-98</td>
<td>Part-time Lecturer, School of English</td>
<td>Trinity College Dublin</td>
</tr>
<tr>
<td>1994-97</td>
<td>Part-time Lecturer</td>
<td>Department of Drama, Trinity College Dublin</td>
</tr>
</tbody>
</table>

Major Roles (Current)

- Associate Director, King's Visualisation Lab, KCL
- Associate Director & Manager, Eduserv “THEATRON 3” Project
- Co-Director, Leverhulme “Roman Villa of Oplontis” Project
- Co-Director, AHRC “The Body and Mask in Ancient Theatre Space” Project
- Co-Director, AHRC “Making Space” Project
- Director & Manager, JISC 3D Visualisation in the Arts Network
- Editor & Joint Coordinator, The London Charter
Programme Organiser, MA in Digital Culture and Technology, KCL

Selected Publications

- Editor-in-Chief, 2001-07; Editor (Resources), 2008-, Didaskalia (www.didaskalia.net): peer-reviewed e-journal, research and teaching resources dedicated to ancient drama in performance. Collaborations with King's College, London; American Philological Association; JISC-funded ARCHES Project. Three development grants.
- Living Theatre: Roman Theatricalism and the Domestic Sphere Co-author: Richard Beacham (Yale University Press: forthcoming)
- Curator, “The Centre for Computing in the Humanities, King’s College London: A Second Life Exhibition.”
- “Lost Theatre and Performance Traditions in Greece and Italy” Cambridge Companion to Greek and Roman Theatre Eds. J. Michael Walton and Marianne McDonald (Cambridge University Press, 2007), 139-160.
- “Transforming Online Learning Paradigms” Interactions Vol.7 No.2 (2003)
- "'At the foot of Pompey's Statue': Reconceiving Rome’s Theatrum Lapideum" in Alan Bowman and Michael Brady Eds. Images and Artefacts of the Ancient World (Oxford University Press, 2005) 69-76.
- “Research Recreates Ancient Roman Virtual Reality with 21st-century 3-D Technology” co-authored with Richard Beacham for University of Warwick Humanities Research Centre Bulletin (June 2003)
- "Virtual Archaeology: Reconceiving Rome’s Theatre of Pompey" British Academy Review (July-December 2001) 22-23.

Teaching

• Programme Organiser and Personal Tutor, MA in Digital Culture and Technology
• Module Organiser and Tutor, Digital Culture and Technology (MA Core Module)
• Module Organiser and Tutor, 3D Visualisation in the Arts, Humanities and Cultural Heritage
• Current MA and PhD supervision topics: Historical Visualisation; Greek and Roman Drama and its Reception.
• Early adopter / innovator in IT-augmented curriculum design, research- and resource-based learning, and theatre-historical teaching methods.

Selected Papers and Presentations 2005-8

• “Recent Developments in Humanities Visualisation” (Paper) and “Grand Challenges in Arts and Humanities Visualisation” (Workshop Chair) VizNET 2008: The 2nd Interdisciplinary Conference on Intersections of Visualization Practices and Techniques, Loughborough, May 2008.
• “Digital Humanities Island” Colloquium on Shared Virtual Environments, University of Pisa, Feb. 2008.
• “Parallel universes, shared worlds: visualisation in the arts and humanities” Long Room Hub, TCD, Feb. 2008.

PATRICK DUNAE

e-mail: dunae@mala.ca
telephone: (250) 380-1633

Present position

Professor
Department of History
Malaspina University-College
900 Fifth Street
Nanaimo, British Columbia
V9R 5S5

Adjunct Associate Professor
Department of History
University of Victoria
3800 Finnerty Road
Victoria, British Columbia
V8W 3P4

Degree

Ph. D. History, University of Manchester, 1976.

Recent publications and presentations:

Published online at:
http://tree.mala.bc.ca/nanaimo1891gis/

“Reconstructing a harbour city in the Pacific Northwest with GIS: Nanaimo in the 1890s,”
presented to the Social Science History Association, Chicago, Illinois, 16 November 2007
http://web.mala.ca/dunae/hgis/index.htm

“GIS and History,” presented to the international Pacific Region ESRI Users’ Conference,
Victoria, B.C., 2 October 2007 [invited paper].

“An historical HGIS in the Pacific Northwest: Directions from Victoria, B.C., 1871-1901,”
presented to the Social Science History Association, Portland, Oregon, 3 November 2005.

“Visualizing Victorian Cities with HGIS [Historical Geographical Information Systems],
presented to the international Association for Computers and the Humanities conference,

“Virtual Victoria: Presenting the Past with New Technologies,” (with John Lutz, University of
Victoria), presented to a joint session of the Canadian Historical Association and the Canadian
Association of Geographers, University of Western Ontario, London, Ontario, 1 June 2005.

Web sites

(2006) viHistory.ca Launched at Malaspina University-College in 2003 and re-developed with
the Humanities Media and Computing Centre at the University of Victoria, this web site provides
a searchable, digital archive of census data, directories, tax assessment rolls, and maps of
Vancouver Island, c. 1861- 1911. The data set contains over 200,000 records and is used
extensively by scholars, students and the general public.
http://vihistory.ca
(2005) Virtual Victoria: View from the steeple, 1891. This interactive web site demonstrates how archival material and electronic media can provide a compelling perspective on the past. http://cdhi.mala.bc.ca/steeple/

STUART DUNN

EMPLOYMENT
- 2006 – present: Arts and Humanities e-Science Support Centre, King’s College London:
  o Research Associate
- 2003 – 2006: AHRC ICT in Arts and Humanities Research Programme, University of Reading:
  o Programme Administrator (June 2005 – January 2006)
  o Research Assistant (November 2003 – June 2005)
- 2002 – 2003: Fenwick of Newcastle Ltd:
  o Various roles including analyst, training officer and section head
- 1999 – 2001
  o College Tutor, Trevelyan College, University of Durham (1999 – 2001)

EDUCATION
- 2002: Phd (Durham) in Aegean Bronze Age archaeology (Thesis: The chronology of the Aegean Late Bronze Age with special reference to the ‘Minoan’ eruption of Thera)
- 1998: BA (II, First Division Joint Honours) in Ancient History and Archaeology, University of Durham

RESEARCH AWARDS
2007:
- AHRC ICT Methods Network grant to convene ‘Space and Time: methods in geospatial computing for mapping the past’ (£4949.28).

PROFESSIONAL ACTIVITIES
2007:
- Chair, EVA conference programme committee (London)
- Member, Location and the Web programme committee (Beijing)
- Workpackage Programme Manager, ‘Enabling e-Uptake of e-Infrastructure Services’.
2006:
- Evaluator, JISC Digitization Programme
- Visiting Research Fellow, School of Human and Environmental Sciences (Archaeology Department), University of Reading, UK (until 2009).
- UK e-Science All Hands Conference Programme Committee
- Member, Pleiades Project Technical Oversight Board, Ancient World Mapping Center, University of North Carolina Chapel Hill (invited member; ongoing).
2005 - 2006:
- DigitalClassicist project advisory group (invited member; ongoing)
- JISC Geospatial Data Workgroup (invited member; ongoing)
2004-present:
- Silchester Roman Town: A Virtual Research Environment for Archaeology, University of Reading (archaeological consultant and invited steering committee member; ongoing)

SELECTED CONFERENCE PRESENTATIONS

2007:
- ‘The Anthropology of knowledge: from basic to complex communities in the Arts and Humanities’. Digital Humanities 2007, Urbana-Champaign, Illinois
- ‘Space as an artefact: understanding past perceptions and uses of space with and without computers’. Digital Classicist Seminar Series, KCL, August 2007.
- ‘A new way of working: the UK’s Arts and Humanities e-Science Initiative’. Acume2 project seminar, Warsaw, Poland.
- ‘A point in space, a moment in time: towards an integrated view of the Santorini eruption’. Minoan Chronology Workshop, Sonderborg, Denmark.

SELECTED PUBLICATIONS

2008:
- (with T. Blanke): Next Steps for E-Science, the Textual Humanities and VREs
- Trustworthy Characters: common issues for archaeology, classical studies and VREs. Proceedings of First International Workshop on VREs, Edinburgh, March 2007

2006:

2005:
- (with Lorna Hughes and Sheila Anderson): Virtual Research Environments in the Arts and Humanities. Proceedings of the e-Science All Hands Meeting 2005,
- From Juktas to Thera: people and their environment in Middle and Late Minoan Crete. In A. Dakouri-Hild and S. Sherratt (eds.) Autochthon: Papers presented to Oliver Dickinson on the occasion of his retirement. BAR International Series, Oxford

2004:
- GIS and databases in Aegean prehistory: current practice, future strategy Archaeological Computing Newsletter, 61, December 2004
JASON GILLILAND  
Department of Geography, Social Science Centre  
The University of Western Ontario, London, ON Canada N6A 5C2  
Tel: (519) 661-2111x81239, spatialists@gmail.com  

Academic Positions  
2007-present  
Associate Professor, (tenured), Geography, University of Western Ontario  
2006-present  
Director, Urban Development Program, University of Western Ontario  
2006-present  
Associate Scientist, Children’s Health Research Institute  
2003-2007  
Assistant Professor (tenure track), Geography, University of Western Ontario  
2001-2003  
Postdoctoral Fellow (SSHRC), Geography & Planning, U of Toronto

Education  
2001  
PhD, Geography, McGill University, Montreal, Canada  
1996  
M.Architecture, Architecture, McGill University, Montreal, Canada  
1994  
M.A., Geography, McGill University, Montreal, Canada  
1991  
B.A.(Hon), Geography, McMaster University, Hamilton, Canada

Current Research Grants  
<table>
<thead>
<tr>
<th>Start-End Date</th>
<th>Position</th>
<th>Granting Agency</th>
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<tr>
<td>2007-08</td>
<td>principal investigator</td>
<td>CHRI</td>
<td>Geographical analysis of paediatric trauma in Southwestern Ontario</td>
<td>$7,500</td>
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<tr>
<td>2007</td>
<td>principal investigator</td>
<td>Heart &amp; Stroke Fdn</td>
<td>Development grant for project on Obesity &amp; Built Environment</td>
<td>$3,200</td>
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<tr>
<td>2007-08</td>
<td>principal investigator</td>
<td>LHSC – pediatrics</td>
<td>Geographic analyses of paediatric trauma</td>
<td>$5,000</td>
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<tr>
<td>2007-08</td>
<td>principal investigator</td>
<td>LHSC – trauma</td>
<td>Geographic studies of paediatric trauma incidences in SW Ontario</td>
<td>$5,000</td>
</tr>
<tr>
<td>2006-09</td>
<td>principal investigator</td>
<td>SSHRC</td>
<td>Social mobility in Canadian cities, 1880-1914</td>
<td>$178,000</td>
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<tr>
<td>2006-09</td>
<td>co-investigator (p.i. J. Baxter)</td>
<td>SSHRC</td>
<td>Environmental inequity in Canada: patterns and experiences</td>
<td>$112,100</td>
</tr>
<tr>
<td>2006-09</td>
<td>collaborator (p.i. J. Parr)</td>
<td>SSHRC</td>
<td>Lostscapes: New Media Reconstructions of Disrupted Environments</td>
<td>$120,000</td>
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<td>2005-08</td>
<td>principal investigator</td>
<td>CIHR</td>
<td>Environmental influences on obesity-related behaviours in youth</td>
<td>$169,141</td>
</tr>
</tbody>
</table>

Selected Publications  


**GAIL E. HAWISHER**

Department of English
Illinois
608 South Wright Street
Urbana, IL 61801
(217) 333-3251
Fax 217-333-4321

603 West Church Street University of Illinois
Savoy, Illinois 61874
Telephone (217) 352-8031
hawisher@uiuc.edu

EDUCATION

The Ohio State University: Graduate work in Rhetoric, Literature, and Linguistics. 1977-1982.

EXPERIENCE (selected)

Professor of English and Director of the Center for Writing Studies. University of Illinois, Urbana, Illinois. July 1990-present. (promoted from Associate Professor in 1996)
Assistant Professor of English: Purdue University, West Lafayette, Indiana. 1989-1990.

PUBLICATIONS (selected)

Books
Critical Perspectives on Computers and Composition Instruction. (edited with Cynthia Selfe)
New York: Columbia University's Teachers College Press, 1989. (231 pages)

Articles


“Collaborative Configurations: Researching the Literacies of Technology.” (with Cynthia Selfe). Kairos. 7.3 (Fall 2002):


“Constructing Identities through Online Images.” JAAL. (March, 2000).
http://www.readingonline.org/electronic/jaal/3-00_Column.html


Rpt. in A Guide to Online course Development: The Theory and Practice of Online

GRANTS, FELLOWSHIPS, AWARDS (selected)
Outstanding Technology Innovator Award presented by the Conference on College Composition and Communication, May 2000.
Distinguished Book Award for Passions, Pedagogies, and 21st Century Technologies (with Cynthia Selfe) presented at the 2000 Computers and Writing Conference. Texas Women’s University. Fort Worth, Texas.
“Technological Literacy in America: Tracing the Paths of the Technology-Linkage.” (with Cynthia Selfe). National Council of Teachers of English Research Foundation Grant. Urbana, IL. 2000. $12,400.00. (funded)

GERALDINE HENG
Director, Medieval Studies
University of Texas at Austin

Department of English
1301 Concordia Avenue
EDUCATION

Cornell University
PhD in English, 1990
MA in English, 1986

National University of Singapore
MA in English, 1980

University of Singapore
BA (Honors, English and Philosophy), 1979

PUBLICATIONS (selected publications only)


Selected presentations and Workshops:


Co-organizer, first planning workshop of the Global Middle Ages Project (G-MAP) and the Mappamundi online digital initiative, University of Minnesota, November 8-11, 2007.


SERVICE
Professional Service: National
Founder and Co-Director, The Global Middle Ages Project (G-MAP) and the Mappamundi Digital Online Initiative: multi-campus, interdisciplinary projects in the Humanities (in collaboration with several institutional partners), 2007-
Executive Committee, Comparative Medieval Literature Division, Modern Language Association (MLA), 2008-12
Chair, Executive Committee, Middle English Division, Modern Language Association (MLA), 2003-4
Secretary, Executive Committee, Middle English Division, Modern Language Association (MLA), 2002-3
Executive Committee, Middle English Division, Modern Language Association (MLA), 2000-2005
Steering committee on international feminism, National Women's Studies Association, 1999
Elected Delegate, Delegate Assembly, Modern Language Association (MLA), 1993-1995
Editorial Advisor, Cursor Mundi: Viator Studies of the Medieval and Early Modern World, UCLA Center for Medieval and Renaissance Studies

College & University Service
Director, Medieval Studies Program (development of new interdisciplinary, collaborative graduate seminars under the rubric, “The Global Middle Ages” and “Medieval Cultural Studies;” the graduate Papers-in-Progress series; the Distinguished Visiting Lecturers series; interdisciplinary graduate symposia and professionalization workshops; lectures, presentations and public events at Explore UT, annual university open house; public outreach and community directives), 2002-5
Chair, Graduate Studies Committee, and Advisor, Medieval Studies Program, 2002-5
Associate Director and Co-founder, The Humanities Institute (conceptualized and initiated the Humanities Institute: the multi-college, interdisciplinary Humanities Seminar, and the Distinguished Lecturers in the Humanities Series), College of Liberal Arts, 2001-2

Virginia Kuhn, PhD
2100 Griffith Park Blvd. #6 Los Angeles, CA 90039
213.924.7315    email: vkuhn@cinema.usc.edu

Employment:
2007- present University of Southern California (USC), Associate Director
    Director of Honors in Multimedia Scholarship Program, Institute for Multimedia Literacy (IML)
    Research Assistant Professor, School of Cinematic Arts, USC
2006-7 Project Specialist, IML, USC
2005-6 Postdoctoral Research Associate, IML, USC.
PhD: English, Rhetoric & Composition University of Wisconsin, Milwaukee August 2005
MA: English, Rhetoric & Composition UWM 1999
Publications:
“From Gallery to Webtext: A Multimodal Anthology.” Kairos, Spring 08.
Forthcoming edited anthology.
Networked Knowledge Technologies and the Humanities and Interpretative Social Sciences.
Forthcoming edited anthology.

Invited Speaking Engagements:
UCLA Digital Humanities Center, November 7, 2007.
The Academy’s Love-Hate Affair: Resistance to Digital Scholarship, City University of New York’s 
Graduate Program. October 2006.
New Digital Tools: Sophie. Faculty training & Course lecture. Conceptual Studies in Media Arts 
Production and Cultures & Communities, University of Wisconsin, Milwaukee. October 2006.
The Digital Portfolio Project: Cyberinfrastructure Institute, San Diego Supercomputing Center, July 2006.
Transformation Through Use: The Pedagogy of Digital Writing Institute of Multimedia Literacy, 
University of Southern California, September 2005.
Theory/Practice Colloquia: Conceptual Studies in Media Arts Production, Department of Film, University 
of Wisconsin, Milwaukee, September, 2005.

Academic Presentations:
Designing Our Web 3.0 Lives: The Virtual is the Real. Society for Cinema and Media Studies 
New Media Scholarship Stakeholders: Departmental, Authorial and Editorial Issues. Computers & 
Writing Conference, 2008.
“IIs the Personal Still the Political? Visual Identity in the Multicultural Classroom.” International Visual 
Literacy Association Conference. 2006.
"Reluctant Collaborators: The Challenges of the Student-Centered Classroom. AILA July, 2005
Vistas for Rhetorical Inquiry: From the Ancients to the Internet," Conference of the Rhetoric Society of 
“You're So Paranoid I Bet You Think This Panel's About You: Rooting out Paranoia in the Profession," 
CCCC 2004.
"How Do We Teach the Teachers?" New Teacher Preparation Forum, Computers and Writing 
“Reworking Identities in Writing Program Administration: Working Within the Gaps of Administrator, 
Faculty & Student.” Watson Conference on Rhetoric and Composition 2002.
“Online Dramatic Interchange” Those Who Can Teach. Sixth Annual Conference on First Year Composition, 1999.

Grants & Awards:
Data Allocation on Tera-Grid for the Digital Portfolio Project. San Diego Supercomputing Center. 2007-08.
Recipient of the UWM Chancellor’s Scholars’ Award for Digital Scholarship. 2004-05
Writing Program Administration Team: Preparing Future Faculty competitive grant, UWM, 2001-02.
Fellowship, Illinois State University. Fall 1999 term.

SUSAN J. NOAKES

Department of French and Italian
260 Folwell Hall
University of Minnesota
Minneapolis, MN 55455
(612) 624-0076

Center for Medieval Studies
301 Nolte Center
University of Minnesota
Minneapolis, MN 55455
(612) 625-3034

436 Ashland Avenue
St. Paul MN 55102
(651) 229-0295

EDUCATION (selected):
University of Chicago, A.B. with honors, 1967
Cornell University, Comparative Literature, 1969
Yale University, Comparative Literature, M. Phil., 1972, Ph.D., 1975

ACADEMIC APPOINTMENTS:
Yale University: Acting Instructor, 1973
University of Chicago: Asst. Prof. of Comparative Literature, Romance Languages, and General Studies in the Humanities, 1974-81; Associated Faculty Member, Graduate Library School, 1975-81; Instructor, "Basic Program" (Liberal Arts for Adults), 1980-81
University of Kansas: Asst. Prof. of French and Italian, 1981-83; Assoc. Prof. of French and Italian, 1983-88; Director, Women's Studies Program, 1986-88
University of Minnesota: Prof. of French and Italian, 1988--; Interim Director, Center for Advanced Feminist Studies, 1991; Associate Dean for Faculty, College of Liberal Arts, 1991-94; Director, Center for Medieval Studies, 2002-
University of North Carolina, Chapel Hill: Visiting Professor of Women's Studies, Fall, 1995, 1996

PROFESSIONAL SERVICE:
Editorial Positions:
Dante Studies, Journal of the Dante Society of America (Associate Editor) 1993-.
Speculum, Journal of the Medieval Academy of America,
Book Review Editor, Italian studies, 2005-2006
Signs (Associate Editor), 1990-91
Consultant Reader

- Presses
  - Univ. of Chicago Press; Summa Publications; Univ. of Pennsylvania Press;
  - Cornell Univ. Press; Cambridge Univ. Press; Univ. of Texas Press; Stanford
  - Univ. Press; Duke Univ. Press; Univ. of Minnesota Press.

- Journals
  - Studies in Romanticism; Tulsa Studies in Women’s Literature; Philological
  - Quarterly; Speculum; PMLA; International Journal of the Classical
  - Tradition; Modern Language Quarterly; Journal of Medieval and Early Modern
  - Studies

International, National Offices and Committees:

- International Dante Seminar: Board of Directors, 1994-2003; Secretary, 1997-
  2003.
- Modern Language Assoc.: Advisory Committee on the MLA International
  Bibliography, 1992-95 (Chair, 1993-95); Executive Committee, Division on Medieval and
  Renaissance Italian Literature, 1993-98; Executive Council, 1994-98; Committee on Academic
  Freedom, Professional Rights, and Professional Responsibilities, 2000-2003 (Chair, 2002-03)
- Dante Society of America: Council, 1990-93; Nominating Committee (Chair), 1994-
  96.
- Council of Colleges of Arts and Sciences: Committee on the National Agenda,
  1993.
- National Grant Review:
  - National Endowment for the Humanities: Romance Languages Panel, Translation

OTHER PROFESSIONAL ACTIVITIES:

- University of Minnesota: Center for Medieval Studies, Organizer of Conference,
- North Central Association of Schools and Colleges: Consultant-Evaluator on
- Invited Lectures and Conference Papers: about 60 in all parts of North America,
  Italy, and France.

PUBLICATIONS (selected):

* The Comparative Perspective on Literature: Essays in Theory and Practice*(in collaboration with Clayton

  xv + 249 pp.

- Tommaso Schifaldo, *Libellus de indagationibus grammaticis*, in collaboration with Robert Kaster,

- “Dante e lo sviluppo delle istituzioni bancarie a Firenze: ‘i subiti guadagni’” in Michelangelo Picone,
  ed., *Dante: Da Firenze all’aldilà, Atti del terzo Seminario Dantesco Internazionale*, Firenze, 2000,


In preparation
Dante’s Divine Economies: Lineage, Wealth, and Prophecy in the “Paradiso.”
Book ms.
Petrarch’s Babylon: Cultural Intercourse in Papal Avignon, Book ms. of essays collected and edited by S.N., with introduction by S.N.

WILLIAM G. THOMAS III
University of Nebraska-Lincoln
615 Oldfather Hall
Department of History
Lincoln, NE 68588
wgt@unl.edu

Employment
University of Nebraska-Lincoln
John and Catherine Angle Chair in the Humanities and Professor of History
University of Virginia
Director, Virginia Center for Digital History, 1998-2005
Associate Professor, Corcoran Department of History, 2004-2005
Assistant Professor, Corcoran Department of History, 2001-2004
Research Assistant Professor, 1997-2001
Project Manager, Institute for Advanced Technology in the Humanities, 1996-1997

Education
Ph.D.--University of Virginia, History, 1995
M.A.--University of Virginia, History, 1991
B.A.--Trinity College (Connecticut), History, 1986 with honors in History

Selected Publications
"The Countryside Transformed: The Eastern Shore of Virginia, the Pennsylvania Railroad, and the Making of a Modern Landscape," with Brooks Barnes and Tom Szuba, Southern


Honors
OAH Distinguished Lecturer, 2007-present
Mead Honored Faculty, University of Virginia, 2004-2005
The James Harvey Robinson Prize, 2003, American Historical Association, with Edward L. Ayers and Anne S. Rubin, for Valley of the Shadow: Two Communities in the American Civil War
The Lincoln Prize, 2001, Gettysburg College, Lincoln and Soldiers Institute, with Edward L. Ayers and Anne S. Rubin, for Valley of the Shadow: Two Communities in the American Civil War.


Board Service
Board of Editors, University of Nebraska Press, 2007-present
Board of Editors, Southern Spaces, Emory University, 2003-present
Institutional Review Board, University of Nebraska, 2006-present
Research Advisory Board, University of Nebraska, 2006-present
Board of Directors, Center for Liberal Arts, University of Virginia, 1999-2005

Recent Lectures and Conference Papers


"Time, Space, and History" with Edward L. Ayers, EDUCAUSE, Dallas, October 2006.

Electronic Archives and Publications (Director or Co-Director)
"Railroads and the Making of Modern America"
http://railroads.unl.edu

"Digital History"
http://digitalhistory.unl.edu

"The Valley of the Shadow: Two Communities in the American Civil War"
http://valley.vcdh.virginia.edu

"The Eastern Shore of Virginia and the Railroad, 1870-1930"
http://www.vcdh.virginia.edu/eshore

"Television News in the Civil Rights Era, 1950-1970"
http://www.vcdh.virginia.edu/civilrightstv

"The Geography of Slavery in Virginia"
http://www.vcdh.virginia.edu/gos

"Race and Place: An African American Community in the Jim Crow South, 1870-1920"
http://www.vcdh.virginia.edu/afam/raceandplace/

Current Grants and Fellowships
American Council of Learned Societies, Digital Innovation Fellowship, 2007-2008
Newberry Library, Short-term Fellowship, 2007-2008

Current Research Area
Jupiter's Bow: Railroads, The Civil War, and the Roots of Modern America--This book project (Yale University Press) examines the relationship between the railroad culture of the 1850s and 60s and the coming, fighting, and aftermath of the American Civil War. The book research will draw on and from the digital project on Railroads and the Making of Modern America (http://railroads.unl.edu).
Appendix VII: Curriculum Vitae
High Performance Computing Center Staffs

DIANE A. BAXTER

EDUCATION
1975 BA - Biology, University of California, Los Angeles, CA
1983 Ph.D. - Zoology (Botany minor), Duke University, Durham, NC, John Sutherland, Advisor.
Dissertation Research: Population ecology of Littorina irrorata in a N.C. salt marsh

APPOINTMENTS
2/05 – Education Director, San Diego Supercomputer Center, UCSD, La Jolla, CA
9/02-1/05 Development Director, Quail Botanical Gardens, Encinitas, CA
9/00-9/02 Resource Development Specialist, Quail Botanical Gardens, Encinitas, CA
4/99-9/00 Development Director, Pfleger Institute of Environmental Research, Oceanside, CA.
8/98- 4/99 Education Partnerships Coordinator; Birch Aquarium at Scripps; Scripps Institution of Oceanography, University of California, San Diego
2/84- 8/98 Curator of Education, Birch Aquarium, Scripps Institution of Oceanography (SIO), UCSD.
1983 Coordinator, Public Understanding of Science Program, North Carolina Aquarium at Pine Knoll Shores, Atlantic Beach, N.C.
1977- 83 Teaching Assistant, Duke University Zoology Dept. & Duke Marine Laboratory, N. C.
1976 Research Associate, Botany Department, UCLA; Park S. Nobel, Supervisor

RELEVANT PUBLICATIONS AND PRESENTATIONS
Baxter, D.; TeraGrid: Advancing Scientific Discovery and Learning; EDUCAUSE Annual Conference; October, 2007; Seattle, WA
Baxter, D., Partnerships and Pathways to the Internet to the Hogan and Diné Grid; Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Annual Conference, October 2007, Kansas City, MO
Mason, A. and Baxter, D., Evolution of TeacherTECH; TeraGrid 07; June, 2007; Madison, WI
Baxter, D; Power of Imagination: Next Generation Education; Supercomputing 2006; Nov. 2006; Tampa, FL
Baxter, D.; McGinnis, L; Wizziecki, E.; Internships and Mentoring to Broaden Participation in Computing; TeraGrid 2006; June, 2006; Indianapolis, IN
Baxter, D.; Education for a Changing World; Supercomputing 2005; Nov. 2005; Seattle, WA

SYNERGISTIC PROFESSIONAL ACTIVITIES
2008 Education Program Co-Chair, TeraGrid ’08 Annual Conference
Collaborations & Other Affiliations

Current Projects:

**SCI: TeraGrid Resources Partners (HPCOPS):** Mark Sheddon, P.I.

**TeraGrid (GIG) - Education, Outreach, and Training**
Dane Skow, P.I., University of Chicago – Argonne National Laboratory; Scott Lathrop, Director, Education, Outreach, and Training; and External Relations

**CI-TEAM: Minority-Serving Institutions Cyberinfrastructure Empowerment Coalition**
Richard Alo, Principal Investigator; Geoffrey Fox, Co-PI; Alex Ramirez, Co-PI; Al Kuslikis, Co-PI; Selena Singletary, Co-PI; Diane Baxter, Co-PI

**IT-EESET: Information Technology – Engineering and Environmental Science Education Tools, 2007-2009**
Jeanne Ferrante, P.I.

**BPC-D Worlds for Information Technology and Science (SDSC Dissemination Site Lead)**
David Gries, P.I.; Margaret Corbit, Co-PI; Cornell University

**UC-Village Links, UCSD Faculty Research Project and Sixth College Practicum; 2007-2008; Michael Cole, P.I.; Laboratory of Comparative Human Cognition and Sixth College**

Prior Projects (past 48 months):

**Delivering Cyberinfrastructure: From Vision to Reality; Fran Berman, P.I.**

**CIP-EOT: CyberInfrastructure Partnership - Education, Outreach, and Training**
Fran Berman, P.I.; Thom Dunning, Co-PI;

**CI-TEAM: Minority-Serving Institutions Cyberinfrastructure Institute [MSI C(I)2]: Bringing Minority Serving Institution Faculty into the Cyberinfrastructure and e-Science Communities**
Geoffrey Fox gcf@indiana.edu (Principal Investigator); Richard Alo (Co-P.I.); Carrie Billy (Co-P.I.); Alexander Ramirez (Co-P.I.); Karl Barnes (Co-P.I.)

**EPIC; Expanding Participation in Computing**
Moses, Greg; University of Wisconsin, Madison (P.I.); Giles, Roscoe; Boston University (co-PI)

**SHAWN T. BROWN**

Phone: (412) 268-4635  
E-mail: stbrown@psc.edu
Web: http://www.psc.edu
PROFESSIONAL PREPARATION
Bethany College Chemistry B.S. 1993-1997
University of Georgia Chemistry Ph.D. 1997-2001

APPOINTMENTS

PUBLICATIONS (selected)
- “A Combined Density Functional Theory and Molecular Mechanics (QM/MM) Study of FeCO

SYNERGISTIC ACTIVITIES
- collaborates with Troy Wymore at National Resource for Biomedical Supercomputing (NRBSC) and Martin Field from the Institut de Biologie Structurale in Grenoble, France to enhance the QM/MM, parallel and grid-enabled capabilities of the DYNAMO molecular dynamics library.
- co-organizer and instructor for a workshop held by the NRBSC on QM/MM calculations held at the PSC in Sept, 2007.
- actively worked with research groups all over the world to bring research and computer codes to modern computer architectures in fields such as chemistry, biology, epidemiology, geology, and mathematics.
- involved in furthering the organization’s role in computer science through involvement in Extreme Scaling and HPC University working groups for the TeraGrid.
serves as a scientific contact and consultant for the Computational Chemistry and Materials (CCM) functional area under the User Productivity Enhancement and Technology Transfer (PET) component of the DoD's High Performance Modernization Program (HPCMP). See http://www.hpcm.hpc.mil/Htdocs/PET/.

- collaboration with researchers from Virginia Tech's Bioinformatics institute (VBI, Stephen Eubank and Madhav Marathe) and RTI International (Doug Roberts and Diglio Simoni) to provide develop a large scale epidemiological computation capability to the TeraGrid.

COLLABORATORS

Wesley Allen, Univ. of Georgia
Jean Blaudeau, HPTi
Eric Bohm, UIUC
T. Daniel Crawford, Virginia Tech
Stephen Eubanks, Virginia Tech.
Martin Field, Institut de Biologie Structurale
Marek Freindorf, Univ. of NY at Buffalo
Thomas Furlani, Univ. of NY at Buffalo
Laszlo Fusti-Molnar, Univ. of Florida
Peter Gill, Australian National University
Mark Gordon, Iowa State University
Martin Head-Gordon, Univ. of Calif.,
John Hemple, Univ. of Pittsburgh
Curtis Jenssen, Sandia National Labs
L. V. Kale, UIUC
Nicholas Karonis, N. Illinois University
Gary Kedzora, HPTi
Joseph P. Kenny, Sandia National Laboratory
Jing Kong, Q-Chem, Inc.
Anna Krylov, Univ. of Southern California
Jerzy Leszczynski, Jackson State University
Madhav Marathe, Virginia Tech.
Shirley Moore, University of Tennessee, Knoxville
Hugh Nicholas, PSC
Nicholas Nystrom, PSC
Andrew Rappe, University of Pennsylvania
Doug Roberts, RTI
Tony Rollett, Carnegie Mellon University
Yihan Shao, Q-Chem, Inc.
Berkeley David Sherrill, Georgia Tech.
Diglio Simoni, RTI
Joel Stiles, PSC
Edward Valeev, Virginia Tech.
Deborah Weisser, Cray, Inc.
Troy Wymore, PSC
Anthony Yau, HPTi

GRADUATE AND POST DOCTORAL ADVISORS
Henry F. Schaefer III, graduate advisor, University of Georgia, Athens, GA

LAURA F. MCGINNIS

Pittsburgh Supercomputing Center
Carnegie Mellon University
300 South Craig St, #313
Pittsburgh, PA 15213
412-268-5642
LFM@psc.edu

a. Professional Preparation
University of Pittsburgh Computer Science B.Sc., 1982
Carnegie Mellon University Industrial Administration M.Sc., 1999
b. Appointments
2006-present Project Manager, Systems & Operations, PSC
1999-2006 Project Coordinator, Data & Information Resource Services, PSC
1996-1999 Senior Database Administrator, Management Information Systems, PSC
1989 Consultant, Computer Specialists, Inc., Pittsburgh PA
1987-1989 Manager, Technical Services: Strategic Financial Group
1984-1986 Programmer/Analyst, Support Consultant, Telesis Computer Corporation, Pittsburgh, PA
1982-1984 Database Programmer/Analyst, University of Pittsburgh Medical Center, Pittsburgh, PA
1982-1984 Part-time Instructor, Department of Computer Science, University of Pittsburgh

c. Publications

d. Synergistic Activities
TeraGrid
• HPC University Requirements Analysis Team – Chairperson
• HPC University Working Group – Member
• Education, Outreach, and Training Working Group – Training Coordinator
• TG06, TG07 National Conferences – Birds-of-a-Feather Chairperson, committee member
• TG08 National Conference – Poster Session Chairperson
• Core Service 2.0 Project – Component Coordinator Open Grid Forum
• Usage Record Working Group: Chairperson; editor of the Usage Record Schema specification, v.1.
• Production Grid Services Research Group: Co-Chairperson Supercomputing Science Consortium
• Grids and Clusters Working Group chairperson

e. Collaborators and Other Affiliations
*Collaborators and Co-Editors*
Catlett, Charlie Argonne National Laboratories
Hart, Dave San Diego Supercomputer Center
Milfeld, Kent Texas Advanced Computing Center
Quinn, Steve National Center for Supercomputing Applications
Skow, Dane University of Chicago/Argonne National Lab
Towns, John National Center for Supercomputing Applications

JOHN URBANIC

(a) Professional Preparation
Carnegie Mellon University Physics B.S. 1989
Pennsylvania State University Physics M.S. 1991

(b) Appointments
1998-2007 Staff Computational Science Consultant, Pittsburgh Supercomputing Center
1993-1998 Sr. Computation Science Consultant, Pittsburgh Supercomputing Center
1991-1993 Computational Science Consultant, Pittsburgh Supercomputing Center

(c) Publications (selected)


(d) Synergistic Activities
Teach multiple workshops and seminars on massively parallel computing each year. This training specifically targets scientists, not programmers, and very large platforms. Developed with Carnegie Mellon Robotics Institute Eyevision™ system used by CBS in 2001 Superbowl and succeeding broadcasts. Responsible for real-time camera robot control.

(e) Collaborators & Other Affiliations (2003-2007)
• Collaborators and Co-Editors.
  o Volkan Akcelik Carnegie Mellon University
  o Kathy Benninger Pittsburgh Supercomputing Center
  o Jacobo Bielak Carnegie Mellon University
  o George Biros University of Pennsylvania
  o Costas Daniilidis University of Pennsylvania
  o Kemal Ebcioglu International Business Machines
  o Ioannis Epanomeritakis Carnegie Mellon University
  o Antonio Fernandez Carnegie Mellon University

58
o Henry Fuchs UNC Chapel Hill
o Omar Ghattas University of Texas, Austin
o Tarek El-Ghazaw George Washington University
o Gwendolyn Huntoon Pittsburgh Supercomputing Center
o Nikhil Kelshikar University of Pennsylvania
o Eui Joong Kim Carnegie Mellon University
o Scott Larsen UNC Chapel Hill
o Julio C. Lopez Carnegie Mellon University
o Kwan-Liu Ma University of California, Davis
o Ketan Mayer-Patel UNC Chapel Hill
o Jane Mulligan University of Colorado at Boulder
o Nystrom, N.A Pittsburgh Supercomputing Center
o David R. O'Hallaron Carnegie Mellon University
o D. C. O'Neal Pittsburgh Supercomputing Center
o Leo Ramirez-Guzman Carnegie Mellon University
o Raghurama Reddy Pittsburgh Supercomputing Center
o Vivek Sarkar International Business Machines
o Vivek Sawant University of Pennsylvania
o Savinell, C. Pittsburgh Supercomputing Center
o Sudipta Sinha UNC Chapel Hill
o Travis Sparks UNC Chapel Hill
o Nathan Stone Pittsburgh Supercomputing Center
o Ricardo Taborda-Rios Carnegie Mellon University
o Herman Towles Herman Towles
o Tiankai Tu Carnegie Mellon University
o Deborah Weisser Pittsburgh Supercomputing Center
o Xenophon Zabulis University of Pennsylvania
# Appendix VIII: Previous Workshop Experiences

<table>
<thead>
<tr>
<th>Date</th>
<th>Workshop</th>
<th>Location</th>
<th>Participants</th>
<th>Sponsoring Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-05</td>
<td>Introduction to Digital Humanities</td>
<td>NCSA</td>
<td>100</td>
<td>I-CHASS</td>
</tr>
<tr>
<td>February</td>
<td>Text Encoding Initiative</td>
<td>NCSA</td>
<td>20 per year</td>
<td>I-CHASS and GSLIS</td>
</tr>
<tr>
<td>2006 (repeated 2007 2008)</td>
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<td></td>
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</tr>
<tr>
<td>Mar-06</td>
<td>Using iLife 06 in Teaching and Research</td>
<td>NCSA</td>
<td>50</td>
<td>Apple, Inc.</td>
</tr>
<tr>
<td>Summer 2006</td>
<td>Cyberinfrastructure in the Humanities, Arts, and Social Sciences</td>
<td>SDSC</td>
<td>60</td>
<td>National Science Foundation/EPIC</td>
</tr>
<tr>
<td>Sep-06</td>
<td>Katrina: After the Storm – Civic Engagement Through Arts, Humanities and Technology</td>
<td>NCSA</td>
<td>150</td>
<td>I-CHASS/NCSA/University of Illinois</td>
</tr>
<tr>
<td>Dec-06</td>
<td>Spatial Thinking in the Social Sciences and Humanities</td>
<td>NCSA</td>
<td>80</td>
<td>I-CHASS/EPIC</td>
</tr>
<tr>
<td>Jun-07</td>
<td>e-Science for Arts and Humanities Research: an Early Adopters Forum</td>
<td>NCSA</td>
<td>25</td>
<td>I-CHASS/King’s College, London</td>
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<tr>
<td>Jun-07</td>
<td>Digital Humanities07</td>
<td>NCSA</td>
<td>400</td>
<td>GSLIS/I-CHASS/NCSA/University of Illinois</td>
</tr>
<tr>
<td>Summer 2007</td>
<td>Computational Methods in Humanities, Arts, and Social Science</td>
<td>SDSC</td>
<td>35</td>
<td>Supercomputing 07 Education Committee/TeraGrid</td>
</tr>
<tr>
<td>Apr-08</td>
<td>SEASR Mini-Residencies</td>
<td>NCSA</td>
<td>25</td>
<td>Mellon Foundation/SEASR/NCSA/Illinois Informatics Initiative (I3)</td>
</tr>
<tr>
<td>Apr-08</td>
<td>Supercomputing 08 Planning Workshop</td>
<td>NCSA</td>
<td>20</td>
<td>Supercomputing 08 Education Committee</td>
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<tr>
<td>July 27-August 3, 2008</td>
<td>High Performance Computing</td>
<td>NCSA</td>
<td>~35</td>
<td>Supercomputing 08 Education Committee</td>
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<tr>
<td>Sep-08</td>
<td>Data-Mining in the Humanities</td>
<td>NCSA</td>
<td>~45</td>
<td>Mellon Foundation/SEASR/NCSA/Illinois Informatics Initiative (I3)</td>
</tr>
</tbody>
</table>
Appendix IX: Computational and Logistical Resources

Facilities, Equipment and Other Resources

NCSA continues to support user communities by offering the resources that are the foundations of advanced cyberinfrastructure. The total computational resources exceed 145 TF supported by over 1.3 PB of disk storage as part of the infrastructure. The systems are on an internal multi-10GigE network. Below is a summary of those resources.

NCSA Compute Resources

Abe
Clovertown 2.38Ghz Blades from Dell
Interconnect: InfiniBand
1200 blades, 2400 processors (quad core)
8GB of memory per blade (1 GB/core), 9.6TB total
Peak performance: 89.5TF
170 TB Lustre filesystem

Mercury, Phase 1 (Hg 1)
Itanium 2 1.3 GHz IBM Linux cluster
Interconnect: Myrinet 2000
256 nodes, 512 processors
4 GB and 12 GB memory/node, 2.0 TB total
Peak performance: 2.6 TF
100 TB GPFS filesystem, NFS, Lustre WAN, GPFS WAN

Mercury, Phase 2 (Hg 2)
Itanium 2 1.5 GHz IBM Linux cluster
Interconnect: Myrinet 2000
667 nodes, 1334 processors
4 GB memory/node, 2.5 TB total
Peak performance: 8 TF
100 TB GPFS filesystem, NFS, Lustre WAN, GPFS WAN

Cobalt (Co)
SGI Altix systems, 2x512 processors Itanium 2 1.6 GHz systems, Linux
Interconnect: SGI, Numalink
1,024 processors
4 TB total memory
Peak performance: 6.6 TF
250 TB SAN storage with SGI CxFS filesystem
8 x 8p SGI Prism visualization systems with Infiniband interconnects to the 512p SMPs

Tungsten
Intel Xeon 3.2 GHz Dell Linux cluster
Interconnect: Myrinet 2000
1280 nodes, 2560 processors
3 GB memory/node, 3.8 TB total
Peak performance: 16.4 TF
122 TB Lustre filesystem

T3
Woodcrest 2.66 Ghz Blades from Dell
Interconnect: InfiniBand
520 Blades, 1,040 processors (dual core)
8GB of memory per blade (2 GB/core), 4.1 TB total
Peak performance: 22.1 TF
20 TB Lustre filesystem
Primarily used by NCSA Private Sector Program Partners

Mass Storage
The environment currently consists of 3 SGI Origin 3900 servers running EMC/Legato DiskExtender (UniTree) with 180TB of SAN disk cache, 38 LTO2 tape drives, 14 IBM LTO3 tape drives, and 1 ADIC library. The total archival storage capacity of this environment is 5 PB.

Infrastructure SAN
384 TB of SAN connected storage for infrastructure and special projects. This utilizes a high availability SAN configuration allowing for multiple paths to the storage depending on applications needs to access data. Backups and other configuration parameters can be added depending on applications needs.

High Performance Network
All computing platforms are interconnected to a multi-10gigabit network core. NCSA’s high performance computing environment has access to Abilene via a 10-gigabit-per-second connection. NCSA also is one of the leading sites for I-WIRE, an optical networking project funded by the state of Illinois. I-WIRE provides lambda services for several projects, including NCSA’s 30-gigabit-per-second connection to the TeraGrid network.

Display Systems
Tiled Display Wall: This environment consists of 40 NEC VT540 projectors, arranged in a matrix 5 high and 8 across. The output of the NEC VT540s is rear-projected towards a single screen, creating a large-format, high-resolution image space that is 8192 x 3840 pixels. A 40-node PC Linux cluster is used to drive the display wall. The machines are dual-processor Intel Xeons, running at 2.4 GHz, with Nvidia FX 5800 Ultra graphics accelerator cards, and communicating over Myrinet.

High Definition Passive Stereo Theater: The NCSA High Definition Passive Stereo Theater is a 1920x1080 display on an 6’ x 3’ x 5’ screen. The projectors used are JVCD-1LA. The display is driven by a dual AMD Opteron 242 processor running at 1.6 GHZ. Graphics hardware consists of a Nvidia Quadro FX3000.

Applications Software
NCSA offers a variety of third-party applications and community codes that are installed on the High-performance systems at NCSA. These applications cover a wide range of science and engineering domains, data analytics and visualization, mathematics and statistics. Complete information on the packages available and detailed descriptions of them are available at: http://hpcsoftware.ncsa.uiuc.edu/Software/user/index.php?view=NCSA.
Conferences & Institutes
A division of the University of Illinois’ Office of Continuing Education, Conferences & Institutes will offer program development assistance; coordination of logistics; coordination of registration services, including the creation and management of an online registration database and on-site management; coordination of all marketing and promotional materials and services; establishment and management of a University account to collect registration income and pay conference expenses; and an itemized financial report after the institute.
Appendix X: Letters of Commitment and Support

Note: The Letters of Support were signed and collected by I-CHASS prior to the withdrawal of the Texas Advanced Computing Center (TACC) from this HPC grant. A research center at the University of Texas at Austin, TACC provides advanced computing resources and services to enable computationally-intensive research via the development, operation, and support of advanced computing technologies. TACC’s curriculum outlined a program of study in its “scientific visualization” technology, EnVision. EnVision dramatically simplifies the process of turning large amounts of numerical data into an intuitive, immersive, and interactive visual display. In its notification of withdrawal, TACC determined that they were unable to participate at this time because the technology had not been adequately adapted to humanities research. Group Leader Brad Armoskey related that TACC would like I-CHASS to consult on the adaptation of this resource for humanities users and would join in the next stage of this grant. The Support offered by the enclosed individuals remains consistent despite this change.