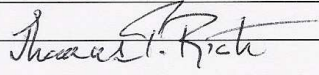
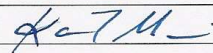


**Society for Industrial Archeology - Industrial Heritage Preservation Grant  
Grant Application Cover Sheet**

|   |               |   |  |                                     |                |                                     |    |
|---|---------------|---|--|-------------------------------------|----------------|-------------------------------------|----|
| Date of application:  | 1. 02/28/2011 | Title of Grant:   | 2. Documenting Grove's Mill - A Water Powered Gristmill - 1783 |                                     |                |                                     |    |
| 3. Professors Thomas Rich & David Del Testa   |               | 4. 570-577-3711 (Rich)  |  | 5. rich@bucknell.edu                |                |                                     |    |
| <i>Name of Principal Researcher (Send PDF of CV with this application) Phone E-mail</i>   |               |   |  |                                     |                |                                     |    |
| 6. Mechanical Engineering Dept. Bucknell Univ.  |               | 7. Lewisburg, PA 17837  |  |                                     |                |                                     |    |
| <i>Address City, State, Zip</i>   |               |   |  |                                     |                |                                     |    |
| 8. Bucknell University  |               | 9. 570-577-3705   |  | 10. ktmarosi@bucknell.edu           |                |                                     |    |
| <i>Name of Project Sponsor (Organization and contact name) Phone E-mail</i><br><i>(Send PDF of letters of sponsorship or collaboration)</i>   |               |   |  |                                     |                |                                     |    |
| 11. College of Engineering - Bucknell University  |               | 12. Lewisburg, PA 17837   |  | 13.                                 | 14. Non-Profit |                                     |    |
| <i>Address City, State, Zip Tax ID Type of Tax Status</i>   |               |   |  |                                     |                |                                     |    |
| 15. Union County Historical Society   |               | 16. 570-524-8666  |  | 17. hstoricl@ <del>net</del> net    |                |                                     |    |
| <i>Name of Project Co-Sponsor (s) Phone E-mail</i><br><i>(Send PDF of letters of sponsorship or collaboration)</i>  |               |   |  |                                     |                |                                     |    |
| 18. S. Second & St. Louis Streets   |               | 19. Lewisburg, PA 17837   |  | 20. 23-2136493                      | 21. Non-Profit |                                     |    |
| <i>Address City, State, Zip Tax ID Type of Tax Status</i>   |               |   |  |                                     |                |                                     |    |
| 22. Bucknell University   |               | 23. 570-577-3705  |  | 24. ktmarosi@bucknell.edu           |                |                                     |    |
| <i>Name of person or organization receiving the check Phone E-mail</i>  |               |   |  |                                     |                |                                     |    |
| 25. College of Engineering - Bucknell University  |               | 26. Lewisburg, PA 17837   |  |                                     |                |                                     |    |
| <i>Address City, State, Zip</i>   |               |   |  |                                     |                |                                     |    |
| 27. Brief Description of Project (Send full project summary & application narrative in PDF)   |               |   |  |                                     |                |                                     |    |
| <p>This project involves producing a full documentation of a currently operating, commercial, water powered gristmill in Union County, Pennsylvania. The objective is to work with the miller to gain access to his commercial business for the purpose of documentation of his mill. The forms that the documentation will take include videography, detailed drawings of the mill and its equipment, and an explanation of the mills operation by both the miller and the writings of the principal researchers. The results of the project will be a quality video for presentation at a SIA meeting, a paper for consideration by the IA journal, and a chapter in the upcoming Heritage Edition of the Union County Historical Society. This gristmill operates with 19th Century technology, and is one of a very few remaining such mills in North America. As such, is a rare case of an existing, commercially operating water powered gristmill, and it is critical to document its operation fully while it is still an active enterprise.</p> |               |   |  |                                     |                |                                     |    |
| 28. Project start date:   |               | 06/15/2011  | 29. Project end date:  |                                     | 05/15/2012     |                                     |    |
| 30. Is this a new proposal ?  |               |   |  | <input checked="" type="checkbox"/> | Yes            | <input type="checkbox"/>            | No |
| 31. Is this a resubmitted proposal ?  |               |   |  | <input type="checkbox"/>            | Yes            | <input checked="" type="checkbox"/> | No |
| 32. Are you a previous SIA Grant Awardee ?  |               |   |  | <input type="checkbox"/>            | Yes            | <input checked="" type="checkbox"/> | No |
| 33. Is this grant your only funding source ?  |               |   |  | <input checked="" type="checkbox"/> | Yes            | <input type="checkbox"/>            | No |
| 34. Total dollar amount requested: <i>(send PDF of full budget)</i>   |               |   | \$ 3,000.00  |                                     |                |                                     |    |
| 35. Total matching funds:   |               |   | \$ 4,500.00  |                                     |                |                                     |    |
| 36. Total project budget:   |               |   | \$ 7,500.00  |                                     |                |                                     |    |
| 37. Print Name of Principal Researcher:   |               | Thomas P. Rich  |  |                                     |                |                                     |    |
| 38. Signature (Please fax or scan/send PDF)   |               |   |  |                                     |                |                                     |    |
| 39. Print Name of Sponsoring Org. Official  |               | Karen Marosi    |  |                                     |                |                                     |    |
| 40. Signature (Please fax or scan/send PDF)   |               |   |  |                                     |                |                                     |    |

## B. Project Summary

The production of flour was one of the first and most significant industries of colonial America. The flour was refined through the use of water wheels driving large horizontal millstones. This technology evolved by the late 1800's, and turbines replaced the water wheels and roller mills replaced the millstones. This industry had a significant impact on the rural communities where the wheat, rye and corn processed by the mill were grown. It was an essential component of the economic and social development of America's agricultural areas. Union County, Pennsylvania has been just such an area since the late 1700's. Located along the Susquehanna River in Central Pennsylvania, the county was blessed with fertile valleys and numerous tributaries flowing into the river from the surrounding ridges. During the early settlement of the county, water powered gristmills were the first industries established, and over time they enabled the refinement of grains for both local consumption and export.

Two years ago, the Union County Historical Society [UCHS] identified this industry for high priority research and documentation. As a recognition of its significance, the society plans to dedicate the 2012-13 publication of its "Heritage" book series to the water powered gristmills of Union County. The principal researchers for this project are faculty members at Bucknell University: Prof. David Del Testa of the History Department and Prof. Thomas Rich of the Mechanical Engineering Department. To date, they have identified over 30 specific gristmills that were operating within the county, including a number of less well known ones. As with any such research into industrial history, piecing together the technical, economic and social aspects presents a challenge. Most of the mill structures are long gone; some have foundations or scattered millstones as sole evidence of their existence. Secondary references give bits and pieces as clues to their operation and impact.

While researching these mills, one mill was discovered still operating commercially within 15 minutes of Bucknell. It is H&C Grove's Mill. Originally built in 1783, the mill still produces fine flours and animal feeds. It is powered by two turbines that are over 100 years old, and the grains are ground in belt-driven, wooden-cased roller mills. The sifter is antique and also powered by belts from the turbines. In short, Grove's Mill is a living, working museum of gristmill technology. As a family business, the miller runs a tight ship; he is innovative and keeps his eye on the bottom line. He knows well his family's history of the mill and all the details of its operation. He is a valuable resource for documenting gristmills, and as such he provides a real window into the past.

The object of this project is to work with the miller to gain access to his commercial business for the purpose of documentation of a water powered gristmill. The forms that the documentation will take include videography, detailed drawings of the mill and its equipment, and an explanation of the mills operation by both the miller and the writings of the principal researchers. The results of the project will be a quality video for presentation at a SIA meeting, a paper for consideration by the IA journal, and a chapter in the upcoming Heritage Edition of the UCHS. This is a rare case of an existing, commercially operating water powered gristmill, and it is critical to document its operation fully while it is still an active enterprise.

## C. Application Narrative

1. **Documentation of need for the Project: What is the proposed project's significance to industrial heritage?** Explain how the project will contribute to historical industrial resources or to a broader public understanding of industrial heritage preservation.

The use of water power as a motive force is one of the oldest forms of power generation for the mass refinement of grains. Designs for water powered gristmills are documented as far back as in the works of the Roman architect/engineer Vitruvius (late 1<sup>st</sup> century BCE to c. 15 CE). Not only was the development of these gristmills essential for the transformation of civilization from the era of hunters and gatherers into stable, year-round communities with stored food, but it became the backbone of more advanced human geographical expansion and economic development. This was the basis for the colonial development of Eastern America and the emergence of an early agrarian society in our country. It was the model for the frontier activity and agricultural development of rural Pennsylvania including that of Union County, Pennsylvania.

Beginning in the second half of the 1700's, pioneers settled the fertile valleys of what is now Union County. The first major industrial structures built during these early days of settlement were water powered gristmills. In fact at the site of H&C Grove's Mill, a gristmill was erected and operated in 1783. Over two hundred years later, Grove's Mill still refines the grains of the county at the same location. In addition to Grove's Mill, many other mills sprung up along the rushing streams of the area. They became centers of political and social activity as well as agricultural industries. Colonial soldiers during both the French and Indian and the Revolutionary Wars were often housed in the mills. The mills served as early election centers after the United States was established. During the 1800's, dances were held at the mills; picnics by and skating on the old mill ponds ushered in the romantic image of these places. In many ways, the old gristmills shaped the geographical, political and social landscapes of the county. This project seeks to capture some of the daily life and operations of these past icons of rural America through a current and sole remaining window into this county history – H&C Grove's Mill.

Stepping into Grove's Mill is like stepping directly into the past. Turbines hum; belts whirl; roller mills grind; grain and flour rush through wooden ducts and into sacks. Workman move from machine to machine and conduct the operations. Customers wander in and chat with the miller and workmen while they place their order for flour, animal feed and the like. Political posters from the mid-1900's still are tacked up on the walls. There is not a computer in sight; this industry has not been automated! The proposed project seeks to document this throwback in time through the methods described below. A full documentation of Grove's Mill will provide for both the residents of Union County, and those living beyond a first hand account of the people, places and things that are integral now and were present in the past concerning the operation of this critical agricultural industry.

2. **What research methods will you employ?** Explain how research or other activities will be conducted. Cover methods, objectives, tools, and a timetable.

The documentation will be carried out during the summer of 2011. It will involve several components:

- 1.) A video/audio taped interview of the miller, Curtis Falck. He will tell the history of his family's work in the mill for three generations. His knowledge of all aspects of the mill's operation is unique. He has not studied gristmill operation; he has lived it since his

childhood. He will explain the operation of the numerous pieces of “antique” machinery. He doesn’t think of them as antiques; he thinks of them as the source of his livelihood.

The mill will have to be prepared for video filming. The mill will need to be cleaned to remove dust that masks names of equipment and hides the beauty of much of the wooden machinery. A media specialist will be contacted to advise on technical aspects such as sounds and lighting. Editing will be done to produce a coherent and interesting story of the life in the mill. The bulk of the work will be conducted by the principal researchers and their student helpers.

2.) The principal researchers will work with students to photograph and measure significant pieces of equipment. Scaled drawings will be made of the mill to indicate the location of equipment and the flow of materials through it. Explanations of the operation of the equipment will be prepared by the researchers. The researchers will spend time simply observing the daily operations in the mill and the interactions of the miller and his workers with their customers as well as those who supply materials to them as part of their business. They will write up their observations into a concrete picture of the daily life in the mill.

The time line for the writings on the mill will spill over into the autumn months. The specific products from this effort are explained below.

3. **Who is responsible for your project?** Name key personnel and describe their qualifications and project responsibilities. Attach resumes and letters as specified under “Support Material.”

There are two principal researchers for this project; one is a professional historian and the other a mechanical engineer. Both are members of the Bucknell faculty. David Del Testa is a tenured member of the History Department at Bucknell. Throughout his career, he has included a significant technological component to his historical research. His doctoral research involved the railroads of Viet Nam. Thomas Rich has been a professor in the Mechanical Engineering Department for over 25 years at Bucknell. During this span, he has developed a keen interest in the history of technology, engineering and industry. His 2000-year, electronic book CD, *Building Pennsylvania*, documents the history of four major industries in over 700 pages: Canals, Iron & Steel, Lime & Cement, and Waterworks. A few years ago, Del Testa and Rich discovered that they both had developed an interest in the water powered gristmills of Union County and their connections to the greater world beyond the county. Together they agreed to produce a volume on the county’s mills for the Union County Historical Society’s Heritage Series of books. During the spring semester of 2011, they offered a university course on Mills, Milling and Local History. Together they will coordinate the project and conduct the specific research described in the preceding section. Their resumes are attached.

4. **What tangible products do you expect to produce with this project?** Please be specific about materials you plan to create in connection with this project. Publications, photographs, videos, drawings, archival material, reports, and digital format are examples of products. Explain how such materials will be circulated, stored and distributed. Two copies of all materials must be submitted to the IHPG program. Digital products must be submitted in both hard copy and disk form. All reports must be submitted using a dry electro-static process (such as Xerox) on archival bond paper.

There will be four specific products as a result of this project:

- 1.) A quality video tape of the Grove's Mill miller's interview and the sights and sounds of the mill. It will be offered for presentation at an appropriate, future SIA meeting. It will be used in the educational programs of the Union County Historical Society and stored permanently in their archives.
- 2.) A paper to be submitted to the Industrial Archaeology journal for publication on the structure and equipment in the mill. A detailed explanation of its operation will be included along with detailed drawings.
- 3.) A chapter on the H&C Grove's Mill for inclusion in the 2012-13 edition of the Union County Historical Society's "Heritage" volume on the mills of the county. It will be available for sale to residents of the county and advertized in periodicals of related societies and associations. This chapter will focus more on the historical and societal role of the mill with less on the technologies. (Technologies will be the emphasis of the IA article.)
- 4.) A digital set of dimensioned drawings and photographs of the mill layout and the significant pieces of equipment. Some of the drawings and photographs will be reproduced in the two publications described above. The original drawings and photographs will be stored on the computer system of the UCHS. Work will be done in conjunction with the archival specifications published in *Guide for the Preparation of Photographic Documentation in Accordance with the Standards of the Historic American Buildings Survey/ Historic American Engineering Record*.

Copies of all of these materials will be submitted according to the guidelines established by the SIA.

#### D. Budget

1.) SIA Grant Allocations:

Payment for access to Grove's Mill and preparation work for videography -  
\$ 600

Dust removal equipment and cleaning supplies -  
\$ 1000

Videography equipment and supplies including editing -  
\$ 900

Publication costs for UCHS Heritage volume -  
\$ 500

TOTAL \$ 3000 (cash)

2.) Bucknell Allocation:

55 hours of student help (from Prof. Rich sabbatical funds) -  
\$ 500 (cash)

One month's summer work (each) by Profs. Rich & Del Testa -  
\$ 3000 (in-kind)  
(Based upon Bucknell's summer faculty grants program amount.)

3.) Union County Historical Society Allocation:

Part of the production costs for the Mills Heritage volume -  
\$1000 (in-kind)

(This work to be accomplished after the original grant summer work)

TOTAL Project Match \$ 4500

TOTAL Project Value \$ 7500



H&C Grove's Mill and Miller's House

Letters

February 24, 2011

Professors David Del Testa and Thomas Rich  
Bucknell University  
Lewisburg, PA 17837

Gentlemen,

I have read your proposed Project Summary, and I will participate in the effort to record the operations of H&C Grove's Mill if the Society for Industrial Archaeology provides the funding. It is important that I receive payment for granting access to my business and the expenses associated with preparing the mill for video documentation and graphic drawings. As the Mill's owner and operator, I have unique information for recording the contemporary operation of a water powered gristmill and the specific history of Grove's Mill. As one of the few remaining commercially operating gristmills in North America, Grove's Mill provides a rare opportunity to see and record this disappearing industry from America's landscape.

*Curtis Falck*

3013 ~~2019~~ Hoffa Mill Road  
Curtis Falck, Miller  
Lewisburg, Pennsylvania  
17837

February 28, 2011

To Whom It May Concern:

On behalf of the Union County Historical Society, I want to express the Society's strong support for the proposal submitted by David Del Testa and Thomas Rich for the documentation of Grove's Mill. Grove's Mill provides a unique glimpse into the important history of gristmills in Union County as well as in rural communities across Pennsylvania.

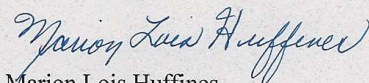
The result of the proposed work, a video and chapter in a volume of the Society's *Heritage* series, will be a major contribution to the description and historical interpretation of water-powered gristmills in Union County. The *Heritage* series is based on primary research on some aspect of historical importance in Union County; the Society publishes a volume biennially. The content of the proposed volume will be of great interest to the Society's membership.

In support of this project, the Union County Historical Society will commit \$1000 in-kind match. This match will come from release of historical photographs in the Society's collection and the staff and material resources devoted to producing the *Heritage* volume on the mills of Union County.

The primary investigators have the strong support of the Union County Historical Society and its Board of Directors. We are fully confident that Dr. Del Testa and Dr. Rich will use their expertise to help all of us better understand the processes and historical social context of gristmills in the County.

The Union County Historical Society gives the proposal its full and enthusiastic endorsement.

Sincerely,



Marion Lois Huffines  
President



**Union County Historical Society**

Union County Courthouse  
S. Second and St. Louis Streets Lewisburg, PA 17837  
570-524-8666 Fax: 570-524-8743 hstoricl@ptd.net  
www.unioncountyhistoricalsociety.org

*Preserving the Past for the Future*



## CV's

### Dr. Thomas Paul Rich

#### Home Address

1109 Wending Way  
Lewisburg, PA 17837  
Phone - (570) 523-6783

Lewisburg, PA 17837

#### Work Address

Mechanical Engineering Department  
Bucknell University

Phone - (570) 577-3715

Fax - (570) 577-1822

E-mail: rich@bucknell.edu

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#### PERSONAL

Birthday: 18 November 1943  
Wife: Mary Lou  
Children: Wendy Jean and Thomas Wesley

#### CURRENT POSITION

Professor of Mechanical Engineering

#### MAJOR MILESTONES

1968-69      Awarded NASA Fellowship towards Ph.D. at Lehigh  
1971          Wm. Spraragen Award, American Welding Society for best research paper in 1971 Welding Journal  
1974          Invited Visiting Professor in Mechanical Engineering by the University of Southampton, England  
1979-81      Director of Graduate Program in Mechanical Engineering at Texas A & M University  
1982          Listed in I.D.E.A., (International Directory of Engineering Analysts), published in the United Kingdom  
1986-97      Dean of The College of Engineering at Bucknell University  
2001          Scholar in Residence, Pennsylvania Historical and Museum Commission  
2004 -2009   Robert L. Rooke Chair in the Historical and Social Context of Engineering

## **FIELDS OF SPECIALIZATION**

Analytical/Numerical Methods in Solid Mechanics (Complex Variables, Collocation, Finite Elements)

Methods in Statistical Mechanics (Probability-Based Fracture Mechanics)

Fracture Mechanics and Structural Life Prediction

Computer-Aided Design/Computer-Aided Testing

Innovative Multimedia Pedagogies

History of Engineering

## **FORMAL EDUCATION**

*B.S. in M.E., Carnegie-Mellon University, 1965*

*M.S. in M.E., Lehigh University, 1967*

Thesis - "Plastic Enclave Sizes for Internal Cracks Emanating from Circular Cavities from Elastic Plates"

*Ph.D. in M.E., Lehigh University, 1969*

Thesis - "An Exploratory Study of Friction Welding"

## **PROFESSIONAL EXPERIENCE**

*Summer 1963*      Engineer, People's Natural Gas Company Gibsonia, Pennsylvania

*Summer 1964*      Engineer, Blaw Knox Corporation, Pittsburgh, Pennsylvania

*1970 - 1973*      Research Mechanical Engineer, Army Materials and Mechanics Research Center, Watertown, Massachusetts

*1974*              Visiting Professor, Mechanical Engineering Department University of Southampton, Southampton, England

*1975 - 1978*      Research Mechanical Engineer, Army Materials and Mechanics Research Center, Watertown, Massachusetts

*1977*              Part-Time Professor, Evening Program, Mechanical Engineering Department, Northeastern University Boston, Massachusetts

*1978 - 1981*      Associate Professor, Mechanical Engineering Department, Texas A & M University, College Station, Texas

*1981 - 1982*      Assistant Professor, Department of Mechanical Engineering, Bucknell University, Lewisburg, Pennsylvania

|             |   |
|-------------|---|
| 1982 - 1986 | Associate Professor, Department of Mechanical Engineering, Bucknell University, Lewisburg, Pennsylvania |
| 1986 - 1997 | Dean and Professor, College of Engineering, Bucknell University, Lewisburg, Pennsylvania                |
| 1997-Now    | Professor, Department of Mechanical Engineering, Bucknell University, Lewisburg, Pennsylvania           |

## UNIVERSITY ACTIVITIES

*Undergraduate Courses:*

- Basic Statics
- Computational Analysis (with MATLAB)
- Computer-Aided Design (with ProE and ANSYS)
- Dynamics
- Fluid Mechanics
- Machine Dynamics
- M.E. Laboratory
- Numerical Methods
- Physical Metallurgy (with Lab.)
- Strength of Materials/Solid Mechanics

Foundation Seminar: Designing People  
 Foundation Seminar: Pennsylvania's Technological Heritage – Ghosts of Technology  
 Foundation Seminar: The Power of Green Design

*Graduate Courses:*

- Advanced Strength of Materials
- Elasticity
- Plasticity
- Fracture Mechanics
- Seminar

Thesis Research

### *Honors Thesis Students:*

Emily Monahan, B.S. May, 2003  
 Thesis – “An Investigation of the Failure of the Austin Dam”

### *Graduate Students: (primary supervision)*

Mansoor Ghassem, Ph.D. August 1980  
 Thesis - "Fracture Diagram for Stiffened Panels and Computer Based Approach for Structural Life Prediction"

Malcolm Follows, Visiting Scholar to Texas A & M from Southampton, England - 1981  
 Research Topic - "Modified - Mapping Collocation for Fracture Analysis"

Alan R. Loesch, M.S. August 1982  
 Thesis - "A Comparison of Fines and Re grind in Thermoplastic Molding"

Mohammad N. Hossain, M.S. May 1983  
Thesis - "Elastic-Plastic Finite Element Study of Axisymmetric and Plane Problems of Work-Hardening Materials"

Susan I. Hemberger, M.S. May 1984  
Thesis - "Computer-Aided Drafting with Interface for Finite Element Mesh Generation"

McKenny W. Egerton, M.S. May 1984  
Thesis - "Computer Controlled Hydraulic Arm"

Walter E. Zimmerman, M.S. May 1985  
Thesis - "Development of an Educational Robotics Laboratory"

Charles A. Clarke, M.S. May 1985  
Thesis - "Conversion of a Manually Operated Shaper to a Numerical Control Machine"

Dwayne M. Keller, M.S. January 1986  
Thesis - "Computer-Aided Design and Cost Estimating Program for Electrical Connector Cables"

James B. McKernan, M.S. May 1986  
Thesis - "Crankshaft Torsional Vibration Characteristics of a Six-Cylinder Opposed Engine"

Richard A. Shimansky, M.S. January 1987  
Thesis - "Material Characterization of a Hot Isostatically Pressed Aluminum Alloy"

William C. Fischer, M.S. May 1988  
Thesis - "General Formulation for the Solution of 2-D Problems in Elasticity via Complex Variables and Collocation"

Richard H. Peterac, M.S. May 1988  
Thesis - "A Fatigue Crack Initiation Study of Hot Isostatically Pressed Cast Aluminum Alloys"

Bi Lin Wu, M.S. May 1988  
Thesis - "A General Complex Variable Collocation Code For 2-D Elastic Fracture Analysis"

Lei Cui, M.S. May 2002  
Thesis – "Energy Absorption Mechanisms in Structures."

Kristof Swartzentruber, M.S. January 2005  
Thesis – "Analytical and Finite Element Modeling of Rotary Kiln Riding Rings"

Forrest Lysinger, M.S. May 2006  
Thesis - "The Design of a Bending Moment Absorber and Measurement System  
Tensile Testing Brittle Materials"

Stephen Parker, MS. May 2009  
Thesis – The Design of a Sustainable Modular House

*External Ph.D. Examiner:*

Deba Kumar Tripathy, Ph.D. 1982 Indian Institute of Technology Kharagpur, India  
Thesis - "Some Studies of Radial Extrusion"

Chand Mull Agrawal, Ph.D. 1988 Indian Institute of Technology Kharagpur, India  
Thesis - "Computer Aided Analysis of Some Axisymmetric Simple and Compound Extrusion Problems"

*Administration:*

Director of the Graduate Program in Mechanical Engineering at Texas A & M - (1979-81)

- Advise 70 M.E. Graduate Students
- Implement University Graduate Regulations
- Administer Graduate Assistantships
- Coordinate Graduate Faculty Committees
- Conduct Graduate Registration
- Direct Graduate Recruitment

*Major Committees: (1979 - 1981)*

- Chair - M.E. Graduate Program Committee
- Chair - M.E. Graduate Admissions Committee
- Chair - M.E. Graduate Recruitment Committee
- Member - Engineering College Graduate Instruction Committee
- Chair - Graduate College Recruitment Committee
- Member - Engineering College Computer Committee

*Major Committees - (1981 - 1986)*

- Member - University Library Committee
- Member - Engineering College Computer Aided Design Committee
- Chair - Engineering College Subcommittee on Introductory Course in Computer Education
- M.E. Library Representative
- M.E. Scheduling Officer
- Member - M.E. Departmental Curriculum Committee
- Faculty Advisor for Bucknell Student Section American Society of Mechanical Engineers (1982 - 85)
- Member - Committee to Study Fraternities and Sororities (1984 - 85)
- Member - Committee to Review the University Librarian (1984 - 85)

Dean of the College of Engineering at Bucknell University – (1986-1997)

- Member - Numerous University Committees as Dean (1986 - 97)
- Coordinated a series of events during the year-long celebration of Bucknell's Engineering Centennial (1993-4)

*Major Committees - (1997 –Now)*

- Chair – Engineering College Curriculum Committee (2005-2007)
- Member – University Housing Task Force (2008-2009)

*Bucknell Residential College Roles*

- Academic Co-Coordinator (2006-2009)
- Residential College Advisory Board (2006-2009)

*Society and Technology Residential College, Bucknell University - (1999-2008)*

*Environmental Residential College, Bucknell University - (2008--2009)*

- Faculty Teaching Fellow (1999-2002)

- Senior Fellow (2002-Now)

## **RESEARCH EXPERIENCE**

Dr. Rich was a research mechanical engineer with the Army Materials and Mechanics Research Center for nearly ten years. During this period he was involved in planning, coordinating, and carrying out research in mechanics as it relates to the structural life of engineering components and the basic nature of the mechanical behavior of solids. Other duties involved the review of external proposals for funding by the Army Research Office, Durham.

Technical accomplishments by Dr. Rich include the first mechanics analysis of a relatively new solid state bonding technique, friction welding. For this effort he received the 1971 William Spraragen Award from the American Welding Society for the best research paper that year in *Welding Journal*, "The Forge Phase of Friction Welding." Other technical contributions by Dr. Rich are (i) the development of an elastic-plastic finite element code, (ii) the organization of a statistical approach to the evaluation of the residual strength of impact damaged components, (iii) the development of a computer code for the computation of 2D LEFM stress intensity factors, and (iv) the conducting and publication of "A Survey on Fracture Mechanics Applications in the United States" with 235 engineers and scientists in the U.S.A. Dr. Rich has also been the co-developer of a method and code to analyze plastic crack tip yielding in stiffened structures typical of modern aircraft.

He has been the co-editor of a unique collection of "Case Studies in Fracture Mechanics." This 500 page AMMRC Monograph contains contributions from some 50 engineers and scientists from the U.S.A. and UK on their practical applications of fracture mechanics to design, maintenance and failure analysis problems. This publication has attracted great interest, and to date over 1,200 copies have been sent to requestors from around the world. A second collection, "Case Histories Involving Fatigue and Fracture Mechanics," has been published by the American Society for Testing and Materials.

During his initial years in academia Dr. Rich has continued his basic research in computer-based mechanics. Primary emphasis has been put upon software development for stress analysis of cracked components based upon a complex variable, collocation method. Along with colleagues and students his recent contributions include (i) the development of an analytical approach to analyze failure in finite sized components that may range from linear elastic, brittle cracking to elastic-plastic, ductile, net section rupture, (ii) the development of an algorithm to evaluate the J-Integral from an ANSYS finite element solution of a cracked, structural component, (iii) the development of a laboratory at Bucknell for dynamic materials characterization with full- computer controlled fatigue, fracture, impact and hardness testing capability, and (iv) the assessment of hot isostatic pressing (HIP) upon the fracture and fatigue properties of aircraft aluminum alloys.

While at Bucknell he has greatly expanded the applied side of his research through projects sponsored by the United States Small Business Administration and the State of Pennsylvania's Ben Franklin Partnership Program. With his external funding exceeding \$1.3 M, Dr. Rich has worked with a team of faculty and students to solve a variety of technical problems for a consortium of companies in Pennsylvania. While the products of the consortium companies range from aircraft engines to wire rope components to electronic recording heads, they all make critical selection and use of structural materials in their manufacturing. A number of the projects have involved modern CAD/CAM technology and centered on the Bucknell Computer-Aided Engineering and Design Laboratory, a facility with over twenty state-of-the-art Apollo (now SUN) Workstations in a local area network.

In recent years Dr. Rich has become interested in the development of new multi-media base pedagogies for the instruction of engineering. He was the champion for the development of the concept of an electronic classroom at Bucknell, and he

worked as part of the faculty team that succeeded in obtaining a \$125,000 grant from the Air Products and Chemicals, Inc. Foundation to design and build one in the Dana Engineering Building. He also wrote the proposal to the General Electric Fund, which was, approved at a \$75,000 level for the development of electronic classroom courseware for non-traditional engineering students. The Air Products Electronic Classroom and adjoining Courseware Development Studio was formally dedicated in a ceremony at Bucknell in November 1994.

Since leaving the dean's position at Bucknell, he has developed an interest in the history of engineering in Pennsylvania. He is currently working on a project to write a comprehensive, electronic book on this subject. Part 1 has been completed and replicated in CD electronic book format.

**SPONSORED RESEARCH PROPOSALS**

1. "Exploring New Roles for Hardness Testing in Structural Life Prediction," with Professor S. C. Malguarnera, submitted to the Army Research Office, Durham, North Carolina from Texas A & M University, \$69K for each of two years, January 1980.

Outcome: ARO suggested some revisions and a resubmission the next year; both Drs. Rich and Malguarnera left A & M before a resubmission was made.

2. "A Proposal for A Small Business Learning Center for Computer-Aided Design and Drafting," submitted through Bucknell's Small Business Development Center to the U.S. Small Business Administration from Bucknell University, April 1982.

Total Budget \$ 63.6 K

Outcome: Funded SBA 31.8 K

3. "A Brief Preproposal - Large Scale Ductile Failure Criteria for Structural Component Design," with Professor James Orbison, submitted to Air Force Office of Scientific Research, Washington, D.C., from Bucknell University, August 1982.

Outcome: A visit to AFOSR for discussions of potential research in structural mechanics and failure prediction, which may lead to future funding.

4. "Extension of 1982 SBDC Project: A Small Business Learning Center for Computer-Aided Design and Drafting," submitted through Bucknell's Small Business Development Center to the U.S. Small Business Administration from Bucknell University, January 1983.

Total Budget \$ 8.6 K

SBA4.3 K

Outcome: Funded

5. Dr. Rich is a Co-P.I. on the following current Bucknell research proposals:

- i) "Integration of Interactive Graphics and Computer-Aided Design Into Undergraduate Engineering Curricula," with Professors Maurice Aburdene, Mike Hanyak, Dan Hyde, and Dick McGinnis, to be submitted to a number of corporate and foundation funding sources, \$600K+.
- ii) "Same as i," for \$75K to be submitted to the National Science Foundation to purchase a DEC VAX 11/730 minicomputer.

6. "A Proposal for Expanded Activities and Facilities of the Small Business Learning Center for Computer-Aided Design and Drafting," submitted through the Bucknell Small Business Development Center to the U.S. Small Business Administration and the Pennsylvania Ben Franklin Partnership Program, Summer 1983.

Total Budget \$ 113.5 K

SBA 34 K

Ben Franklin 20 K

Outcome: Funded

7. "A Proposal for Full Implementation of a Learning Center for Computer-Aided Design, Drafting and Manufacturing," submitted through the Bucknell Small Business Development Center to the U.S. Small Business Administration and the Pennsylvania Ben Franklin Partnership Program, August 1983 for FY 1984.

|              |          |   |
|--------------|----------|---|
| Total Budget | \$ 101.5 | K |
| SBA          | 45       | K |
| Ben Franklin | 20.5     | K |

Outcome: Funded

8. "The Continuation of a Learning Center in Computer-Aided Mechanics and Materials Design and Testing," with Dr. J. G. Orbison, submitted through the Bucknell Small Business Development Center to the U.S. Small Business Administration, the Pennsylvania Ben Franklin Partnership Program, and a Consortium of ten Pennsylvania industries, August 1984 for FY 1985.

|                  |        |   |
|------------------|--------|---|
| Total Budget     | \$ 369 | K |
| SBA              | 45     | K |
| Ben Franklin     | 150    | K |
| Private Industry | 43.2   | K |

Outcome: Funded

9. "Computer-Aided Mechanics/Materials Analysis and Testing for Wire Rope Applications," submitted to Bethlehem Steel Grants in Aid for Education Program, \$19K, 1984.

Outcome: Not Funded

10. "Consortium in Mech/Mat - CAD/CAT," with Drs. J. G. Orbison and D. J. Cartwright, submitted through the Bucknell Small Business Development Center to the U.S. Small Business Administration, the Pennsylvania Ben Franklin Partnership Program, and a Consortium of ten Pennsylvania industries, June 1985 for FY 1986.

|                  |        |   |
|------------------|--------|---|
| Total Budget     | \$ 352 | K |
| SBA              | 45     | K |
| Ben Franklin     | 130    | K |
| Private Industry | 40     | K |

Outcome: Funded

11. "Research into Numerical Methods for Future ANSYS Improvements," with Drs. D. J. Cartwright and J. G. Orbison, submitted to the Pennsylvania Ben Franklin Partnership Program and Swanson Analysis Systems, Inc., May 1986 for FY 1987.

|              |          |   |
|--------------|----------|---|
| Total Budget | \$ 169.4 | K |
| Ben Franklin | 44       | K |
| Swanson      | \$ 69.3  | K |

Outcome: Funded

12. "Fatigue and Fracture of Aircraft Components," with Dr. J. G. Orbison, submitted to the Pennsylvania Ben Franklin Partnership Program and AVCO Lycoming Co., May 1986 for FY 1987.

|              |        |   |
|--------------|--------|---|
| Total Budget | \$ 254 | K |
| Ben Franklin | 64.7   | K |
| AVCO         | 160    | K |

Outcome: Funded



13. "Involving Freshmen in Engineering Thought and Design," with Assoc. Dean Trudy B. Cunningham and Dr. J. G. Orbison, submitted to the Alfred P. Sloan Foundation and the National Science Foundation in April 1988 for the following three academic years.

|              |         |   |
|--------------|---------|---|
| Total Budget | \$564.5 | K |
| Sloan        | 150     | K |
| NSF          | 200     | K |

Outcome: Sloan - Funded, NSF - Not Funded

14. "The SEMINARS Project... Science, Engineering, and Mathematics Instructional Network to Assist Rural Students," with Pam Feir of the Central Susquehanna Intermediate Unit involving Bucknell, Bloomsburg, and Susquehanna Universities along with the CSIU, submitted to the Pennsylvania Department of Education in August 1988 for 1989.

|              |      |   |
|--------------|------|---|
| Total Budget | \$37 | K |
|--------------|------|---|

Outcome: Funded

15. "Learning Engineering in an Electronic Environment.... A Cross-Disciplinary Systems Approach", with six other engineering faculty, submitted to the Air Products and Chemicals Corporation in June 1990.

|              |       |   |
|--------------|-------|---|
| Total Budget | \$614 | K |
| Air Products | \$125 | K |

Outcome: Air Products Funded Capital Needs

16. "Applying Learning Style Theory to the Research and Development of Electronic Classroom Courseware, with Non-Traditional Engineering Students," with Bill Snyder, Mike Hanyak and Carol Ingald, submitted to the General Electric Fund in Fall of 1994.

|              |      |   |
|--------------|------|---|
| Total Budget | \$75 | K |
|--------------|------|---|

Outcome: Funded

17. "Society of Manufacturing Engineers Foundation Grant" (Funding for a new \$93K CNC Lathe System and a summer pre-college program in manufacturing), with Keith Buffinton, George Waltman, Dan Johnson, and Andrea Bertram, submitted to the SME Ed. Foundation in February of 1995.

|            |         |   |
|------------|---------|---|
| Total      | \$117   | K |
| SME Budget | \$43.25 | K |

Outcome: Not Funded

18. "Expanding Multimedia/Video Conferencing for Courseware Development and Remote Laboratory Data Acquisition and Control for Distance Learning to Bucknell's Sun Platforms," with Brian Hoyt, Ralph Droms, Maurice Aburdene, Ed Mastascusa, and Richard Kozick, submitted to Sun Microsystems Academic Equipment Grant Program in December of 1995.

|              |       |   |
|--------------|-------|---|
| Total Budget | \$143 | K |
|--------------|-------|---|

Outcome: Funded

19. “Fostering the Growth of Non-Traditional Engineering Students Towards Academic Careers Through the Development, Testing and Assessment of Electronic Courseware,” with Bill Snyder, Mike Hanyak, Ed Mastascusa and Carol Ingald, submitted to the GE Fund, March 1, 1997.

|              |       |   |
|--------------|-------|---|
| Total Budget | \$298 | K |
| GE Fund      | \$75  | K |

Outcome: Funded

20. “Confirming Competence ... Engineering Opportunities for Women Undergraduates,” with Trudy Cunningham and Carol Ingald, submitted to the Texaco Foundation in June, 1996 and reply given in May, 1997.

|              |        |   |
|--------------|--------|---|
| Total Budget | \$26.1 | K |
| Texaco Fund  | \$24   | K |

Outcome: Funded

21. “An Innovative Collaborative Learning Environment,” with Mike Hanyak, submitted to Air Products & Chemicals Inc. Foundation, August 30, 1999.

|              |       |   |
|--------------|-------|---|
| Total Budget | \$600 | K |
| Air Products | \$250 | K |

Outcome: Funded

22. “Proposed Field Work for an Electronic Book, Building Pennsylvania – A Technological History of the Commonwealth, Part 2,” submitted to the Pennsylvania Historical and Museum Commission – Scholars in Residence Program, January, 2001. (for access to work at three Pennsylvania Museums: 1) Pennsylvania Anthracite Museum, Scranton, PA; 2) Drake Well Museum, Titusville, PA; and 3) Pennsylvania Lumber Museum, Galeton, PA)

Outcome: Funded for summer of 2001.

23. “Construction of a Working Replica of a Gutenberg-Style Printing Press,” for The Folger Shakespeare Library, Washington, D.C. Proposal submitted in the spring of 2008.

|              |         |
|--------------|---------|
| Total Budget | \$7,344 |
| The Folger   | \$4,500 |

Outcome: Funded

## PROFESSIONAL AFFILIATIONS

### *Technical Societies:*

American Academy of Mechanics  
 American Society Engineering Education  
 American Society Mechanical Engineers  
 Sigma Xi  
 Society for the History of Technology

### *Technical Reviewer:*

American Society for Testing and Materials (ASTM)  
 Applied Mechanics Reviews  
 International Journal of Fracture  
 Journal - ASME

Journal - SESA  
Macmillan Publisher  
Prentice-Hall Publisher  
National Science Foundation

*Technical Committee:* National Research Council Washington, D.C.- National Materials Advisory Board  
Member - Committee on Materials Information Used in Computerized Structural Design and Manufacturing

## MAJOR MEETINGS ORGANIZED

*16-17 June 1977* "Forum on Case Studies in Fracture Mechanics," Massachusetts Institute of Technology, Cambridge, Massachusetts (100 attendees from around the world)

*12-16 January 1981* "A Short Course in Fracture Mechanics," Texas A & M University, College Station, Texas (30 attendees from USA and Mexico)

*9-11 April 1981* "Twelfth Southwestern Graduate Research Conference in Applied Mechanics," Texas A & M University, (attendees from major Southwestern universities and industries)

*17-21 June 1984* "Industrial Applications of Fracture Mechanics," three sessions for the 1984 ASME PVP Conference, San Antonio, Texas (world wide attendees)

*21-22 March 1985* "Symposium on Case Histories Involving Fatigue and Fracture Mechanics," ASTM E-24 Meeting, Charleston, South Carolina (world wide attendees)

*13-15 April 1985* ASME Regional Student Conference Faculty/Hosting Advisor, Bucknell University (attendees and student paper authors from 19 colleges and universities)

*4 April 1989* "Innovations in Undergraduate Engineering Education," session for the 26th Engineering Deans Institute, Hershey, Pennsylvania (U.S. engineering deans attendees)

## PRESENTATIONS

1. "Stress Intensities for Non-symmetric, Unequal Radial Cracks Emanating from a Circular Hole in a Finite Plate under Tension," 4th Canadian Congress of Applied Mechanics, May 1973, Montreal, Quebec, Canada.
2. "Introduction to Fracture Mechanics," British Society of Strain Measurement, February 1974, New Castle upon Tyne, UK.
3. "Aspects of Friction Welding," Engineering Materials Colloquim, July 1974, University of Southampton, UK.
4. "Finite Element and Computer Graphics Applications to Plastic Flow Problems," Colloquium in Engineering and Science, November 1975, Tufts University, Medford, Massachusetts.

5. "A Finite Element Approach to Axisymmetric Problems in Metal Flow," 1st Conference on Computer Simulation for Materials Applications, April 1976, National Bureau of Standards, Gaithersburg, Maryland.
6. "Finite Elements for Elastic-Plastic Analysis and its Applicability to Ductile Fracture," The 22nd Conference of Army Mathematicians, April 1976, Watervliet, New York.
7. "Probability Based Fracture Mechanics for Impact Penetration Damage," ARO Workshop on Reliability and Probabilistic Design, April 1977, Watervliet, New York.
8. "Introduction to Case Studies in Fracture Mechanics," Forum on Case Studies in Fracture Mechanics, June 1977, Massachusetts Institute of Technology, Cambridge, Mass. (Meeting in conjunction with the AMMRC Monograph book, *Case Studies in Fracture Mechanics*, organized by T. P. Rich, and D. J. Cartwright for approximately 100 attendees from USA and UK.)
9. "The Mechanics of Friction Welding," Junior ASME Seminar, December 1977. Northeastern University, Boston, Massachusetts.
10. "Plastic Strip Yielding for a Crack in a Stiffened Sheet," International Conference on Numerical Methods in Fracture Mechanics, January 1978, University College of Swansea, Swansea, Wales, UK.
11. "Fracture Case Studies," International Symposium on Fracture Mechanics, September 1978, George Washington University, Washington, D.C.
12. "Plastic Strip Yield Zones for a Crack in a Stiffened Panel," Mechanical Engineering Seminar, December 1978, University of Houston, Houston, Texas.
13. "Effects of Stiffener Damage and Plastic Yielding at Cracks in Thin Sheet Stiffened Structures," 2nd International Conference on Numerical Methods in Fracture Mechanics, July 1980, University College of Swansea, Swansea, Wales, UK.
14. "A Short Course in Fracture Mechanics" 4 three-hour lectures: (1) History and Overview, (2) Linear Elastic Fracture Mechanics, (3) Non-Linear Fracture Theory, (4) Fatigue Crack Growth Models, January 1981, Rudder Tower, Texas A & M University, College Station, Texas.
15. "A Short Course in Fracture Mechanics" (Same as #14) - January 1982.
16. "A Small Business Learning Center in Computer-Aided Design and Drafting at Bucknell University," Annual Conference of American Society for Engineering Education, Poster Session on Innovative Ideas in Practice, June 1983, Rochester Institute of Technology, Rochester, New York.
17. "A Short Course in Fracture Mechanics" (same as #14), January 1984.
18. "Short Course - Application of the Finite Element Method," (1) Introduction to Finite Elements, (2) Numerical Applications, (3) Hands-On Analysis, October 1984, Dana Engineering, Bucknell University, Lewisburg, Pennsylvania.
19. "A Short Course in Fracture Mechanics" (Same as #14), Texas A & M, January 1985, Bucknell, May 1985

20. "Computer-Aided Design as Related to Stamping Dies," presented to The American Metal Stamping Association, Philadelphia District Meeting, October, 1985, Lionville, Pennsylvania.
21. "An Introduction to Computer-Aided Design," A Ben Franklin Seminar, presented to university and secondary school educators, November, 1985, Columbia-Montour Area Vocational Technical School, Bloomsburg, Pennsylvania.
22. "A Short Course in Fracture Mechanics" 3 three-hour lectures: (1) History and Overview, (2) Linear Elastic Fracture Mechanics, (3) Non-Linear Fracture Theory, January 1986, Rudder Tower, Texas A & M University, College Station, Texas.
23. "Fracture Diagrams for Elastic-Plastic Failure Prediction," Engineering Science and Mechanics Seminar, April 1986, The Pennsylvania State University, State College, Pennsylvania.
24. "A Short Course in Fracture Mechanics," (same as #22), October, 1986.
25. "Fundamentals of CAD," The Society of Automotive Engineers Meeting, January 1987, Williamsport, Pennsylvania.
26. "Fallen Comets and Mathematical Singularities, Preventing Structural Failures," The Bucknell Faculty Colloquium, April 1988, Lewisburg, Pennsylvania.
27. "Integrating Computers into an Undergraduate Engineering Curriculum," 1988 ASME Pressure Vessels and Piping Conference, June 1988, Pittsburgh Hilton and Towers, Pittsburgh, Pennsylvania.
28. "An Experiment in Undergraduate Engineering Pedagogy at Bucknell," World Conference on Engineering Education for Advancing Technology, February 1989, The University of Sydney, Sydney, Australia.
29. "Seeking 21st Century Inventors," presented twice. (1) National Engineers Week, February 1990, NSPE, Williamsport, Pennsylvania. (2) National Engineers Week, February 1991, NSPE, Scranton, Pennsylvania.
30. "The Bucknell Plan for Engineering Education," presented to Bucknell faculty, alumni and trustee groups on several occasions during the 1992-94 period.
31. "Electronic Texts for Engineering Education and Technical Training: Issues and Progress," Panel Presentation for the Dartmouth Institute for Advanced Graduate Studies, Theme: Electronic Publishing and the Information Superhighway, May 1995, Boston Park Plaza Hotel, Boston, Massachusetts.
32. "Bucknell's Electronic Classroom ... A Platform for Innovation in Engineering Teaching and Learning," a multimedia presentation at the *World Conference on Engineering Education*, October 1995, Radisson Hotel, Saint Paul, Minnesota, (with B.S. Hoyt).
33. "Factors That Influence an Engineering Career Choice," a presentation to high school students and members of the Society of American Military Engineers, Blue Ridge Division, February 1996, Winchester, Virginia.
34. "Learning with 18<sup>th</sup> Century Engineers," Regular presentation at a session of the 2001 Annual Conference and Exposition, American Society for Engineering Education, June 24-27, 2001, Albuquerque, New Mexico.
35. "A Modern Look at the Austin Dam Failure," presented to The Potter County Historical Association, October 2002, Coudersport, Pennsylvania.

36. "Demonstration of E-Book, *Building Pennsylvania – Part 1*," 2002 Technology Education Association of Pennsylvania Conference, November 2002, Camp Hill, Pennsylvania.
37. "Building Pennsylvania – An Electronic Book on the History of Technology in the Commonwealth," presented to The Berwick Historical Society, May, 2003, Berwick, Pennsylvania.
38. "Learning Pennsylvania's Technological History with an Electronic Book," 2004 Technology Education Association of Pennsylvania Conference, November 2004, Camp Hill, Pennsylvania.
39. "A Trip with Charles Dickens on Pennsylvania's 19th Century Canals," (with Mary Lou Rich), presented to the Union County Historical Society, March, 2006, Lewisburg, Pennsylvania.
40. "Thinking 'Outside the Box' about Ductile Crack Initiation and Extension," 23<sup>rd</sup> Southeastern Conference on Theoretical and Applied Mechanics, May 23, 2006, Mayaguez, Puerto Rico.
41. "Into the Crucible, the Story of Iron Making in Union County," Union County Historical Society Program, Lewisburg, PA, August 17, 2006.
42. "The Story Behind the Austin Dam Failure," Union County Historical Society Program, Laurelton, PA, October 9, 2008.

## PUBLICATIONS

*Papers (\* = Principal Author)*

1. "Stress Intensity Fractors for Plate Bending," *Journal of Applied Mechanics*, Sept. 1967, pp. 777-779, (with R. Roberts).
2. \* "Plastic Enclave Sizes for Internal Cracks Emanating from Circular Cavities within Elastic Plates," *Engineering Fracture Mechanics*, June 1968, pp. 167-173, (with R. Roberts).
3. \* "The Forge Phase of Friction Welding," *Welding Journal*, March 1971, 137s-145s, Award winning paper by the American Welding Society--Best Research Paper in 1971 \* *Welding Journal*, (with R. Roberts).
4. \* "Thermal Analysis for Basic Friction Welding," *Metal Construction and British Welding Journal*, March 1971, pp. 93-98, (with R. Roberts).
5. \* "Three Approaches for the Estimation of Residual Strength of Ballistically Damaged Materials," *Proceedings of Army Symposium on Solid Mechanics*, October 1972, Ocean City, Maryland, pp. 483-492.
6. \* "A Survey of Fracture Mechanics Applications in the United States," *Engineering Fracture Mechanics*, Vol. 9, No. 2, 1977, pp. 341-360, (with P. G. Tracy and D. J. Cartwright), (also *AMMRC MS 76-1*, February 1976, Watertown, Massachusetts).
7. \* "A Finite Element Approach to Axisymmetric Problems in Metal Flow," *Proceedings of the 1st Conference on Computer Simulation for Materials Applications*, April 1976, National Bureau of Standards, Gaithersburg, Maryland, pp. 721-739, (with P. G. Tracy).
8. \* "Closed Form Elastic-Plastic Stiffness Matrix for Axisymmetric Finite Elements," *International Journal for Numerical Methods in Engineering*, Vol. 12, No. 1, 1978, pp. 59-65.

9. \* "Probability Based Fracture Mechanics for Impact Penetration Damage," *International Journal of Fracture*, August 1977, pp. 409-430, (with six other authors).
10. \* "Plastic Strip Yielding for a Crack in a Stiffened Sheet," *Proceedings of the International Conference on Numerical Methods in Fracture Mechanics*, January 1978, University College of Swansea, Swansea, United Kingdom, pp. 550-568, (with D. J. Cartwright).
11. \* "Fracture Case Studies," *Proceedings of the International Symposium on Fracture Mechanics*, September 1978, George Washington University, Washington, D.C., pp. 43-67, (with A. R. Rosenfield).
12. \* "Effect of Attachment and Stiffener Damage on Plastic Strip Yielding for a Crack in a Stiffened Sheet," *Proceedings of Second International Conference on Numerical Methods in Fracture Mechanics*, July 1980, University College of Swansea, Swansea, United Kingdom, pp. 385-400, (with D. J. Cartwright).
13. "On the Statistical Nature of Fracture," *International Journal of Fracture*, Vol. 18, No. 4, April 1982, pp. 253-277, (with P. G. Tracy, R. Bowser, and L. R. Tramontozzi).
14. "The Fracture Diagram: A New Design Tool for Stiffened Panels," *AIAA Journal*, Vol. 21, No. 9, September 1983, pp. 1294-1300, (with M. M. Ghassem).
15. "A University-Industry-Governmental Consortium Providing Computer-Aided Engineering and Design Technology Transfer," *Proceedings of the International Congress on Technology and Technology Exchange*, October, 1984, Pittsburgh, Pennsylvania, pp. 73-78, (with R. G. McGinnis).
16. \* "Fracture Diagrams for Cracked Stiffened Panels," *Engineering Fracture Mechanics*, Vol. 21, No. 5, 1985, pp. 1005-1017, (with M. M. Ghassem and D. J. Cartwright).
17. "A University-Industry-Government Consortium in Computer-Aided Mechanics and Materials," *Proceedings of the Third National Conference on University Programs in Computer-Aided Engineering, Design and Manufacturing*, Purdue University, July 8-10, 1985, West Lafayette, Indiana, pp. 93-97, (with J. G. Orbison).
18. \* "Analysis of Two Metal-Forming Die Failures," Case Histories Involving Fatigue and Fracture Mechanics, *ASTM Special Technical Publication 918*, 1986, Philadelphia, Pennsylvania, pp. 311-335, (with J. G. Orbison).
19. "ANSYS Applications in a Consortium for Computer-Aided Mechanics and Materials Design and Testing," *Proceedings of the ANSYS 1987 Conference on Integrating Design and Analysis*, March 31-April 3, 1987, Newport Beach, California, pp. 4.19-4.36, (with J. G. Orbison).
20. \* "Integrating Computers into an Undergraduate Engineering Curriculum," *Proceedings of the 1988 ASME Pressure Vessel and Piping Conference*, June 19-23, 1988, Pittsburgh, Pennsylvania, American Society of Mechanical Engineers, New York, New York, 10 pages.
21. \* "An Experiment in Undergraduate Engineering Pedagogy at Bucknell," *Preprints of Papers for the World Conference on Engineering Education for Advancing Technology*, Volume 3, The University of Sydney, February 13-17, 1989, Sydney, Australia, pp. 816-820, (with T. B. Cunningham).

22. "Development of a Fatigue Crack Initiation Test Specimen," *Proceedings of the ANSYS 1989 Conference on Engineering Design Options: from PCs to Parallels*, May 1-5, 1989, Pittsburgh, Pennsylvania, pp. 15.34-15.48, (with J.G. Orbison, R.H. Peterec, and J.A. Carhart).
23. "Changing Majors at Bucknell," *1991 ASEE Annual Conference Proceedings*, pp. 865-868, (with T.B. Cunningham and B.S. Hoyt).
24. "Stress Intensity Factors for Cracks Emanating from Pressurized Semi-Circular Cylindrical Cavities," *Engineering Fracture Mechanics*, Vol. 44, No.3, 1993, pp. 383-402, (with B.Wu).
25. "Bucknell's Electronic Classroom ... A Platform for Innovation in Engineering Teaching and Learning," *Proceedings of the World Conference on Engineering Education*, Vol.4, 15-20 October 1995, Minneapolis - Saint Paul, Mn., pp. 34-39, (with M.E. Hanyak, B.S. Hoyt, and W.J. Snyder).
26. \* "The Effect of Hot Isostatic Pressing on Crack Initiation, Fatigue, and Mechanical Properties of Two Cast Aluminum Alloys," *Journal of Materials Engineering and Performance*, American Society of Metals International, Vol. 8, No.3, June 1999, pp. 315-342, (with J.G. Orbison, R.S. Duncan, P.G. Olivero, and R.H. Peterec).
27. \* "Learning with 18<sup>th</sup> Century Engineers," *Proceedings of the 2001 Annual Conference and Exposition, American Society for Engineering Education*, June 24-27, 2001, Albuquerque, New Mexico, 10 pages.
28. "Design as a Liberal Art," *Proceedings of the 2001 Annual Conference and Exposition, American Society for Engineering Education*, June 24-27, 2001, Albuquerque, New Mexico, 8 pages, (with J. Baish).
29. \* "Thinking 'Outside the Box' about Ductile Crack Initiation and Extension," *Proceedings of the 23<sup>rd</sup> Southeastern Conference on Theoretical and Applied Mechanics*, May 21-23, 2006, Mayaguez, Puerto Rico, 17 pages, (with L. Cui).
30. \* "Lessons in Social Responsibility from the Austin Dam Failure," *The International Journal of Engineering Education*, Vol. 22, No. 6, 2006, pp. 1287-1296, Rossmore, Durrus, County Cork, Ireland.

#### *Books*

1. Masters Thesis, Lehigh University, 1967, "Plastic Enclave Sizes for Internal Cracks Emanating from Circular Cavities within Elastic Plates," Bethlehem, Pa., 89 pages.
2. Ph.D. Thesis, Lehigh University, 1969, "An Exploratory Study of Friction Welding," Bethlehem, Pa., 326 pages.
3. "Case Studies in Fracture Mechanics," *Army Materials and Mechanics Research Center Monograph--AMMRC MS 77-5*, June 1977, Watertown, Massachusetts, (edited with D. J. Cartwright).
4. "Case Histories Involving Fatigue and Fracture Mechanics," *American Society for Testing and Materials Special Technical Publication 918*, 1986, Philadelphia, Pa., 427 pages, (edited with C. M. Hudson).
5. "*Building Pennsylvania ... A Technological History of the Commonwealth*," Part 1, (Topics: Canals, Iron and Steel, Lime and Cement, Waterworks), Electronic Book, copyright 1998-2000, replicated 2003, ~770 pages.



*Report*

1. "Gutenberg-Style Press Built for The Folger Shakespeare Library," Report in conjunction with the delivery and operation of the replica printing press, August, 2008, 15 pages.

*Under Preparation*

1. "*Building Pennsylvania ... A Technological History of the Commonwealth*," Part 2, (Topics: Coal, Electric Power, Lumber, Oil), Electronic Book.

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**EDUCATION:**

- Ph.D. in History, University of California, Davis, March 2001  
Dissertation Title: “‘Paint the Trains Red’: Labor, Nationalism, and the Railroads in French Colonial Indochina, 1898-1954”  
Dissertation Advisor: Catherine, J. Kudlick, Ph.D.  
Major Field: Modern Europe  
Minor Field: Modern East Asia  
Research Field: Modern European Empires
- M.A. in History, University of California, Davis, December 1992  
B.A. double major in Modern European Studies as well as French Language and Literature, University of California at Davis, June 1991

**EMPLOYMENT:**

- Assistant Professor of History (tenure-track), Bucknell University, Lewisburg, Pennsylvania: July 2004 – present 2004-present
- Assistant Professor of History (tenure-track), California Lutheran University, Thousand Oaks, California: July 2001 – June 2004 2001-2004

**PUBLICATIONS:**

**Books**

- *‘Paint the Trains Red’: Labor, Nationalism, and Vietnamese Railroad Workers in French Colonial Indochina, 1898 – 1945* (under review with the University of Nebraska Press) 2010

**Refereed Publications, In Press or In Print**

- S’adapter pour ne pas être expulsé: les manifestations paysannes de Vinh en 1905” [Conformity over Eviction: Peasant Protest in Vinh in 1905] in Gilles De Gantès and Nguyen Phong Ngoc, eds., *Vietnam: Le mouvement moderniste, 1905 – 1909*. Series: “Le Temps et l’Histoire.” Aix-en-Provence/Marseilles: Éditions de l’Université de Provence, 2008. (Invited) 2008
- “The World War II Poster Project: Information Literacy & Technology Fluency as a Collaborative Effort” with Abby Clobridge, in Tom Mackey and Trudi Jacobson, eds., *Using Technology to Teach Information Literacy*. New York: Neal-Schuman Publishers, 2008. 2008
- “Vinh, the Seed that Would Grow Red: The Making of a Revolutionary City in French Indochina” *Historical Reflections/Réflexions historiques*, 2007

- vol. 33, no. 2, summer 2007 (special issue on colonial urbanism), pp. 305-325. **(Invited)**
- “Automobiles and Anomie in French Colonial Indochina” in Jennifer Yee, ed. *France and 'Indochina': Cultural Representations*. Series: “After the Empire: The Francophone World and Postcolonial France.” Lanham: Lexington, 2005, pp. 63-77. 2005
  - “Workers, Culture, and the Railroads in French Colonial Indochina, 1905-1936” in *French Colonial History*. Vol. 2, East Lansing: Michigan State University Press, 2002, pp. 181-198 2002
  - "Some preliminary findings on the relationship of the relation of railroads to the economies of Tonkin and Annam Protectorates, French Indochina, 1919-1936" in *Working Papers* of the Asian Historical Statistics Project, Hitotsubashi University, Tokyo, Japan, 2000, pp. 237-268. **(Invited)** 2000
  - “‘Imperial Corridor’: Association, Transportation, and Power in French Colonial Indochina” *Science, Technology, Society* (Delhi), vol. 4, no. 2, December 1999 (special issue), pp. 319-354. **(Invited)** 1999
- Forthcoming**
- “On the Intimate Edge of Empire: Challenging Representations of Colonial Vietnam’s Métis Community” for an edited volume *Race and the French Empire*, ed. Jyoti Mohan and Michael Vann, series “France Overseas: Studies in Empire and Decolonization.” Lincoln: University of Nebraska Press. Expected November 2011
  - “The Nghe-Tinh Soviets and Vietnamese Railroad Workers at the Truong Thi Railroad Workshops” in a special issue of *South-East Asia Research*. Expected September 2011
  - “Reflections on Research in Vietnam” in Lise-Hélène Trouilloud, Anjana Narayan, eds. *Conducting Research Abroad: Positionality, Methodology and Practice*. Lanham, MD: Rowman & Littlefield/Lexington Press, 2010. (in press, expected November, 2010) Expected April 2011
- Non-Refereed Publications**
- “Foreword” to Abby Clobridge, *Building a Digital Repository Program with Limited Resources*. New York: Chandos/Oxford, 2010. September 2010
  - “Comment l’internaute devient historien: une pédagogie hybride pour croiser l’analyse documentaire et la création de ressources numériques au sein d’un cours d’histoire [From Internet User to Historian: A Hybrid Pedagogy to Blend Object Analysis and Digitization in the Heart of a History Course], with Abby Clobridge in *Les Actes du Colloque de Lille* (October 2008). Lyon: Presses de l’ENSSIB, 2009, pp. 131-134. 2009
  - “Adieu Saigon, Au Revoir Hanoi: The 1943 Vacation Dairy of Claudie Beaucarnot” at <http://www.bucknell.edu/Beaucarnot/>. With the support of an AsiaNetwork Freeman Foundation Faculty-Student Research Grant and Bucknell University’s Information Services and resources, this on-line source presents a new primary source for French colonial Indochina while illustrating undergraduate research stemming from it. 2005
  - As Editor and contributing Writer, with Florence Lemoine and John Strickland. *Global History: Cultural Encounters from Antiquity to the* 2003

- *Present*, 4 vols. Armonk, New York: M.E. Sharpe, 2003.
- As Editor and contributing Writer, *Government Leaders, Military Rulers, and Political Activists: An Encyclopedia of People Who Changed the World*. Series "Lives and Legacies." Phoenix, Arizona: Oryx Press, 2001.

### Book Reviews

- Book Review for H-France of Mathieu Guérin's *Paysans de la forêt à l'époque coloniale: La pacification des aborigènes des hautes terres du Cambodge (1863-1940)*. Paris: École française d'Extrême Orient, 2008. (Invited) December 2010
- Book Review for the *Journal of Vietnamese Studies*, vol. 4, no. 3, Fall 2009 of Nguyen Van Marshall, *In Search of Moral Authority: the Discourse on Poverty, Poor Relief and Charity in French Colonial Vietnam*. New York: Peter Lang, 2008. (Invited) Summer 2009
- Book Review for H-France, Spring 2007 of Mark Atwood Lawrence, *Assuming the Burden: Europe and the American Commitment to the War in Vietnam*. Berkeley: University of California Press, 2005. (Invited) Spring 2007
- Book Review for the *Journal of Asian Studies*, vol. 64, no. 1, Spring 2005 of Emmanuel Poisson, *Mandarins et subalterns au nord du Viêt Nam: Une Bureaucratie à l'épreuve (1820-1918)*. Paris: Maisonneuve & Larose, 2004. (Invited) Spring 2005

### Panels Organized

- Organizer of the panel "Nationality, Hybridity, and Métissage in the French colonial Empires" at the annual meeting of the American Historical Association in Philadelphia, PA, 5 – 8 January 2006. 2006
- Co-organizer of multi-panel series of papers entitled "75 Years On: Reinvestigating Vietnam's Revolutionary High Tide of 1930/1" for the Fourth EUROSEAS in Paris, 1 – 4 September 2004. 2004
- Organizer of panel "In-Between in Indochine: *Métissage* at the Interstices of Lived and Imagined Experience" at the 30<sup>th</sup> Anniversary Meetings of the French Colonial Historical Society in Washington, D.C., 6 – 9 May 2004. 2004

### Abstracts and Presentations

- "From Conductor to Cadre: Political Trajectories of Colonial-Era Vietnamese Railroad Workers" at the annual meeting of the Western Society for French History, in Lafayette, LA, 20-22 October 2010 2010
- Co-Presenter with Abby Clobridge on Librarian-Faculty Collaboration in the Classroom, "Information Literacy Workshop," Michigan Technological University, Houghton, MI 27-29 September 2010 (invited) 2010
- "Visualizing Geography using Digital Interfaces for the Humanities" for a Reading Group in Comparative Humanities, Bucknell University, Lewisburg, PA, 10 August 2010 (invited) 2010
- "Applying for Grants in the Arts and Humanities: Not Just for Scientists," sponsored by College of Arts and Sciences, Bucknell University, Lewisburg, PA, 5 November, 2009. (invited) 2009
- Discussant for the panel "Perverse Politics: Sex and Race in French 2009

- Far-Right Discourse, 1930-2004” at the annual meeting of the Western Society for French History, 22-24 October, 2009.
- David Del Testa, Nancy Frazier, and Jenna Tesauro, “Making History: Supporting Classroom Scholarship Through Innovative Campus Connections,” a poster presentation for the Patriot League Academic Conference “Exploring Alternative Pedagogies: What Patriot League Teachers Do,” Bucknell University, Lewisburg, PA, 30-31 October, 2009. 2009
  - Co-Presenter with Abby Clobridge on Librarian-Faculty Collaboration in the Classroom, “Information Literacy Workshop,” Trinity University, San Antonio, TX, 19-20 May 2009 **(invited)** 2009
  - “History Lessons from an Indochinese Diary,” a University Scholars Presentation on the ethics of research method in history, given at the Bertrand Library, Bucknell University, 22 April 2009. 2009
  - "Boxcar Schoolhouse: Worker Housing and Revolutionary Activity among Railroad Workers in Colonial Indochina,” Faculty Scholarship Series, Department of History, Bucknell University, 22 April, 2009. 2009
  - “From Internet Users to Digital Historians: A Student Project Praxis Developed between an Historian and a Librarian-Technologist” at the ERTÉ Conference “L’éducation à la culture informationnelle,” Université Charles De Gaulle, Lille, France, 16 – 18 October, 2008. 2008
  - “The World War II Poster Project: A Librarian/Technologist/Faculty Collaborative Course Module” at the Mid-Atlantic Digital Library Conference, Bucknell University, Lewisburg, PA, 8 – 9 July 2008. 2008
  - “Information Literacy: Reinforcing Student Skills Through the Creation of Two Digital Archives” at NERCOMP Annual Meeting. Providence, RI. March 11, 2008. Co-authored with Claudia Perry, Associate Professor, Graduate School of Library and Information Science, Queens College; and Abby Clobridge, Digital Initiatives Group Leader, Bucknell University. 2008
  - “S’adapter pour ne pas être s’expluser” at the 3-5 May 2007 Conference “Vietnam, le moment moderniste,” University of Provence in Aix-en-Provence, France. **(Invited)** 2007
  - "Forgotten Stories of Deviance: Vietnam’s Colonial-era Railroad Workers and the Construction of a Revolutionary Heritage" at the Conference “Beyond Teleologies: Alternative Voices and Histories in Colonial Viet Nam,” Jackson School of International Studies, University of Washington – Seattle, 1-2 March 2007. **(Invited)** 2007
  - Discussant for the panel “‘Shady’ and ‘Dubious’: the Laborious Act of Being, Becoming and Acting French in Indochine and AOF,” at the annual meeting of the Western Society for French History in Long Beach, CA, 19-21 October 2006. 2006
  - “From Concubinage to Indochinoise: Reading the Beaucarnot Diary for New Creole Identities in French Indochina,” at the annual meeting of the American Historical Association in Philadelphia, PA, 5-8 January 2006. 2006
  - Discussant for the panel “France and the Maghrib” at the annual meeting of the Western Society for French History in Colorado Springs, CO, 27-30 October 2005. 2005
  - “The Nghe-Tinh Soviets and Vietnamese Railroad Workers at the Truong Thi Railroad Workshops,” at the Fourth EUROSEAS in Paris, 1-4 September 2004. 2004

- “Claudie Beaucarnot and the Struggle for *Métissage* Identity in late colonial Vietnam,” at the 30<sup>th</sup> Anniversary Meetings of the French Colonial Historical Society in Washington, D.C., 6-9 May 2004. 2004
- "Automobiles and Anomie in French Indochina" at the University of Newcastle (United Kingdom) conference "Inde-Indochine," 4-7 September 2003. 2003
- “In-Between in *Indochine: Métissage* as Seen Through the Vacation Diary of Claudie Beaucarnot” at the UCLA Southeast Asia Lecture Series, 21 May 2003. 2003
- “Sharing ‘The Light of the Capital’: New Urban Histories for French Indochina” for the panel “Colonial Cities in French Africa and Indochina: New Avenues to Colonial History” at the annual meeting of the Western Society for French History, Baltimore, MD, 2-5 October 2002. 2002
- “Captain Bilotey’s Railroad Mapping Mission and the ‘Profound’ Conquest of French Indochina, 1895-1910” for the panel "Science, Technology, and Social Engineering in the Colonized World" at the annual meeting of the American Historical Association, Chicago, IL, 4-6 January 2000. 2000
- “Boxcar Schoolhouse: Railroads, Republicans, and Aspects of Social Transformation in French Colonial Indochina, 1905-1936” at the annual meeting of the World History Association meetings, Victoria, British Columbia, Canada, 25-27 June 1999. 1999
- "Railroad Development and Market Contraction in French Colonial Indochina, 1898-1954" at a special Working Papers conference, Hitotsubashi University, Tokyo, Japan, 17-18 June 1999. **(Invited)** 1999
- "The 1937 Strike and the Truong Thi Railroad Workshops: Fusing Nationalism and Communism, Peasant and Proletarian, in French Colonial Indochina" at the UCLA Southeast Asia Lecture Series, 15 February 1999. 1999
- “Imperial Corridor: Railroads and the Aesthetics of Power in Colonial Indochina” at the Materializing Cultures Conference, Stanford University, 1-2 May 1998. 1998
- “Conflicting Nationalisms and the Colonial State: The Example of the Truong Thi Railroad Repair Shops and the Labor Conflicts of 1937 in French Colonial Vietnam” at the annual meeting of the French Colonial Historical Society in Poitiers, France, 5-6 June 1996. 1996

**GRANTS in PREPARATION:**

- ACLS Collaborative Research Fellowship to support post-tenure sabbatical leave for a project entitled “A Quantitative Reevaluation of the Nghe-Tinh Soviets of 1930-1931 using a Historical GIS” (with Dr. Tobias Rettig, Singapore Management University) (in preparation). 2010
- ACLS Digital Innovation Fellowship to support post-tenure sabbatical leave for a project entitled “A Quantitative Reevaluation of the Nghe-Tinh Soviets of 1930-1931 using a Historical GIS” (with Dr. Tobias Rettig, Singapore Management University) (in preparation). 2010
- ACLS Fellowship to support post-tenure sabbatical leave for a project entitled “A Quantitative Reevaluation of the Nghe-Tinh Soviets of 1930-1931 using a Historical GIS” (in preparation). 2010

- ACLS Ryskamp Fellowship to support post-tenure sabbatical leave for a project entitled “A Quantitative Reevaluation of the Nghe-Tinh Soviets of 1930-1931 using a Historical GIS” (in preparation). 2010
- NEH Collaborative Research Fellowship to support post-tenure sabbatical leave for a project entitled “A Quantitative Reevaluation of the Nghe-Tinh Soviets of 1930-1931 using a Historical GIS” (with Dr. Tobias Rettig, Singapore Management University) (in preparation). 2010
- Gerda Henkel Foundation Research Grant to support post-tenure sabbatical leave for a project entitled “A Quantitative Reevaluation of the Nghe-Tinh Soviets of 1930-1931 using a Historical GIS” (with Dr. Tobias Rettig, Singapore Management University) (in preparation). 2010

### **GRANTS and AWARDS:**

#### External

- University recognition for promoting undergraduate research, Board of Trustees Meeting, 30 April 2010. 2010
- National Endowment for the Humanities (NEH) Teaching Development Grant (five months of support), for project entitled “Four Roads to Vietnamese History: A Re-Visioning of a History of Vietnam Course” using GoogleEarth and Drupal as interface for a web-enhanced version of a history of Vietnam course, Spring 2010. 2010
- Consortium on High Achievement and Success Faculty Grant Program (CHAS), “Promoting Inclusiveness and Student Success through a Humanities Laboratory,” with Librarian Nancy Frazier, October, 2009 (not funded) 2009
- American Library Association/American Council of Research Libraries Lexis-Nexis Instruction Section Innovation Award, with Abby Clobridge, for the “History 100 Poster Project Module,” July 2009. 2009
- Kluge Center Fellow, Library of Congress, July 2006, Fall 2007. 2006-2007
- Council on American Overseas Research Centers Multi-Country Research Fellowship Program, for research in Cambodia and Vietnam, 2007 (declined). 2007
- Fulbright Faculty Scholar, Southeast Asia Regional Fellowship Program, Fall 2006 and Spring 2007 (declined). 2006-2007
- Residential Fellow at the Helen Riaboff Whiteley Scholars’ Center, University of Washington Friday Harbor Laboratories, July-August 2005. 2005
- Freeman Foundation funding for a Faculty-Student Field Research Expedition to Vietnam, summer 2004, permitted three California Lutheran University students to accompany me to Vietnam to pursue individual thematic projects related to the Claudie Beaucarnot Diaries to the Claudie Beaucarnot diaries (see ‘Research Projects’ section below). 2004
- Blakemore Foundation grant and private funding to have Tran Long, a Vietnamese lacquer artist from Hanoi, teach and lecture at California Lutheran University and Loyola Marymount University, for Spring 2003. 2003
- University of California at Los Angeles OID (Office Instructional Development) grant to convert a private collection of 1,000 slides concerning Vietnam to a digital format and mount them on a web site for public use (on-going). Ongoing

- University of California Pacific Rim Program Award, 1999-2002. 1999-2002  
 Authored grant proposal and received funds to support a collaborative research and publication project entitled, “Colonial Modernities in French Indochina”. Project brings together three UC researchers and three researchers from Vietnam and Cambodia to facilitate and produce focused research projects in Vietnam and Cambodia, a roundtable conference, and an edited volume of articles.
- University of California at Berkeley, Center for German and European Studies, Dissertation Presentation award, for travel to France to present a paper, November 1999. 1999
- J. William Fulbright Doctoral Dissertation Research Grant from the Institute of International Education for research in France, 1995-1996. 1995-1996
- FLAS (Foreign Language and Area Studies) fellowship for 1994 Southeast Asian Summer Studies Institute to study Intermediate Vietnamese. 1994

Internal

Bucknell University

- Henry Luce Foundation grant with Professor Thomas Rich in Mechanical Engineering through the Bucknell University Environmental Center to support summer research related to mills and milling in Union County, Pennsylvania; grant supports an undergraduate student researcher as well as curriculum development related to History 275: Mills, Milling and Local History. Summer 2010. 2010
- Special curriculum development grant for a new Environmental Connections core curriculum course entitled History 275 “Mills, Milling and Local History.” Shared with Professor Thomas Rich in Mechanical Engineering. Summer 2010. 2010
- Alumni Association grant to bring Mr. Jon Gawne, an expert on World War II, to speak with the students of History 100. Fall 2009. 2009
- International Research Travel Grant. Received funding to conduct oral histories in France. Summer 2007. 2007
- Center for the Study of Race, Ethnicity, and Gender small grant to conduct oral histories in France. Summer 2007. 2007
- Bucknell University Pre-Tenure Faculty Leave Program. Spring 2007. 2007
- Summer Research Grant. Received funding to complete a scholarly article. Summer 2006. 2006
- Common Learning Agenda Summer Grant to develop a university capstone course entitled “Pacific Dreams: Contexts and Contacts around and across the Pacific Rim, “ summer 2005. 2005
- International Research Travel Grant for travel to France to continue interviews of Claudie Beaucarnot (see Beaucarnot Diary Project, above), summer 2005. 2005
- Summer Research Grant. Received funding to complete a scholarly article, summer 2004. 2004

California Lutheran University

- California Lutheran University Hewlett Program grants to conduct research in France, Fall 2001, 2002. 2001-2002



## **RESEARCH PROJECTS:**

- Historical GIS Analysis of the 1930-1931 Nghe-Tinh Soviets (in progress, June 2011-). The research completed as part of this project will form the basis of a second book-length project, and will develop and utilize a GIS (Geographical Information System) to seek out previously hidden but potentially important correlations between human geography, economic activity, and political revolt in the context of this rebellion, which temporarily usurped French authority in Nghe An, Ha Tinh, and Quang Ngai provinces. 2011-
- Beaucarnot Diary Project (January 2002 – present). With funds provided by the Faculty Development Program at Bucknell University and, previously, at California Lutheran University, traveled to France to interview Ms. Claudie Beaucarnot, a Franco-Vietnamese woman who authored a diary during her adolescence in French Indochina, and worked with students to prepare a translation of the Diary for public use. The Freeman Student-Faculty Research Program also facilitated fieldwork in Vietnam in support of student projects and the annotation of the Diary. See [www.bucknell.edu/Beaucarnot/](http://www.bucknell.edu/Beaucarnot/). 2002-present
- Post-Doctoral Resident Associate, Bryn Mawr College (July 2003 - June 2004, July 2007 - present). Position provides support for book manuscript preparation and grant writing. 2007-present, 2003-2004
- Pacific Rim Research Project (July 2000 – June 2002). With funds provided by the University of California Pacific Rim Program, in collaboration with a Vietnamese colleague, conducted research on the social, cultural, and economic impact of transportation development in Indochina during the French colonial period at archives and libraries in Vietnam. 2000-2002
- Dissertation Research (July 1995, October 1996 – April 1997 and October 1997 – December 1998). With funds provided by the UC Davis Department of History and the University of California, and with the sponsorship of Professor Nguyễn Văn Hoàn of the Institute of Literature of Vietnam, conducted research and interviews related to my dissertation in Hanoi and Vinh, Vietnam. 1997-1998, 1996-1997, 1995
- Dissertation Research (October 1995 – June 1996). Under the auspices of the Fulbright Doctoral Dissertation Research Fellowship, conducted research for my dissertation project in Aix-en-Provence, Paris, and Marseilles, France. 1995-1996

## **TEACHING EXPERIENCE:**

### **Bucknell University, July 2004 – present, five courses per year teaching load**

- Seminar in European History, “The French Revolution.” The purpose of the seminar is to introduce students in the broadest possible fashion to the history of the French Revolution, which for this course concerns mainly the period from 1789 until 1802. Spring 2011
- Mills & Milling in Local History. This course uses local water-powered mills, the history surrounding them, and their larger social, economic, and cultural impact to explore questions of consequence of human interaction with the environment. Satisfies the environmental connections requirement of the common learning agenda. Spring 2011

- Seminar in Non-Western History, “Vietnamese Perspectives on War, 1946–81” The purpose of this course is to examine from the perspective of the Vietnamese the thirty-year conflict mostly known in the United States and Europe as, separately, the Indochinese War (1946 – 1954) and the Vietnam War (1961 – 1975). Fall 2010
- History and Historians. This course provides an intensive review of historiography and methods for history majors and other interested students. Uses short readings by a variety of historians and requires a significant, cooperative research project on a local water-powered gristmill. Spring 2008, 2009
- Introduction to Modern Europe. In this introductory course, using primary sources, students review the main themes of European history. Spring 2008.
- Thinking About History. Pioneered an introductory-level course for incoming first-year students that used a particular historical theme to build good historical methodology; research, writing, and interviewing skills; historiographic reflection; and contextual analysis. In the first iteration, the theme was World War II, and students document and analyze era posters from the Bucknell University archives and conduct and analyze oral histories of local World War II veterans and other participants. See <http://www.bucknell.edu/x36100.xml>. In the second iteration (Fall 2009), students conduct and analyze oral histories of Bucknell alumni with connections to World War II. Fall 2006, 2008, 2009, 2010
- Introduction to the History and Culture of Southeast Asia. This introductory course focuses on Southeast Asia in the 20<sup>th</sup> Century and analyzes the development of national states, internal conflicts, and regional associations. Fall 2006
- University Capstone: Pacific Dreams, Pacific Empires. Through a series of interrelated thematic learning modules, this course examines the Pacific Ocean as a site of historical and contemporary imagination and a region of important and developing cross-cultural encounters. Spring 2006, Fall 2006
- Vietnam: History, Society, and Culture.. This upper-division seminar, uses brief lectures and focused discussions to introduce students to the history of Vietnam since the period of Chinese occupation. Spring 2005, 2008, 2010, Fall 2009
- Topics in Non-Western History: History of Mixed: Race, Desire, and Machines. This course presents examples of “multi-racial” individuals and asks students to explore sites of multiple identity and the consequences of that multiplicity in history through their own reflexive, critical, and research-based writing. Fall 2005, 2008
- Seminar in European History: Comparative Fascism. This course explores the intellectual and political origins of fascism in late 19<sup>th</sup> C Europe and follow fascism’s intellectual genealogy through its political, economic, social, and cultural expressions in Italy, Germany, and France. Fall 2005, 2009
- Twentieth Century Europe. Using the notion of the ‘short 20<sup>th</sup> century,’ this course examines the challenges and transformation of the European state system during and after World War I. Spring 2005, 2006, 2009
- Topics in Non-Western History: The Vietnam Wars. This course examines a series of events (the Franco-Thai War of 1941, the Sainteny Accords, Dien Bien Phu, Hué 1968, etc.) from a multiplicity of perspectives and attempts to analyze the consequences of shared or Spring 2005

- opposing perspectives in order to develop a fuller understanding of the conflicts in Indochina.
- Seminar in European History: France, History and Culture, 1894 – 1944. Spring  
This course examines the rifts and conjunctions of French society after 2005, 2009  
World War I and their fundamental reevaluation during and after World War II.
  - Topics in European History: Workers and Revolution. Using several Fall 2004  
revolutions as examples (French, 1830, 1848, Paris Commune, Russian, 'National'/Nazi, 1968), this course explores the relationship between the reality and mythology of workers in the European Revolutions since 1750.
  - Nineteenth Century Europe. Using the notion of the 'long 19<sup>th</sup> century,' Fall 2004,  
this course examines the democratization, modernization, 2005,  
industrialization, and polarization of Europe and Europeans between 1789 Spring 2010  
and 1914. Students learn the chronological history of European history and explore thematic elements of that history through in-depth analysis.

#### **Honors Theses and Presidential Fellows Directed at Bucknell University**

- Greg Jones, "Surviving the Holocaust: A Life History Study." Received 2009-2010  
Honors in History
- Brett Reilly, "The Military and Political Role of Republic of Korea Troops 2009-2010  
in South Vietnam." Received Honors in History
- Tim Kahn, "The Memorialization of the Siamese Nation: 1890-1945." 2009-2010  
Received Honors in History
- Mairead Walsh Smith, Presidential Fellow, "Enhancing the Beaucarnot 2008-2011  
Diary Website"
- Carolyn Bredan, Presidential Fellow, "The Union County Mills Study 2008-2009  
Project," with Professor Tom Rich of Mechanical Engineering.
- Ariel Farrar-Wellman, "A Three-Way Misunderstanding: A 2007-2008  
Contextualized History of the Post-1948 Relationship of the United States, Great Britain and Iran." Received Honors in History
- Meghan Jean Ball, "Making Identity in the Context of Empire: Food and 2005-2006  
Cultural Fusion in French Indochina." Received Honors in History

#### **California Lutheran University, July 2001 – July 2004, six courses per year teaching load**

- World History since 1500. In this team-taught course, used primary source Spring  
materials as well as visual aids and lectures to introduce the major 2002, 2003  
civilizations of the world and their contact and mutual exchange 1500 - present.
- Vietnam: History, Society, and Culture. This year-long, upper-division Fall/Spring  
seminar uses brief lectures and focused discussions to introduce students to 2002  
the history of Vietnam since the period of Chinese occupation. First semester focuses on historical introduction, second semester on an independent, guided research project.
- History of France since 1643. This upper-division course leads students Spring 2002  
through a careful presentation and analysis of the development of modern France, emphasizing the formation of one France out of many nations and the development of democratic political culture.
- Colonialism and Its Legacies since 1450. This upper-division seminar Spring 2002  
examines the primary motivations behind and ideology of colonialism since 1450, beginning with Venetian colonization of the Mediterranean,

- continuing with comparative examples of “Old Colonialism” (Mission-era California and Russian California) and “New Colonialism” (Meiji/Taisho/Showa Japan and French Indochina) and concluding with discussions of neo-colonialism and post-colonial theory.
- World History to 1500. In team- and individually-taught formats, uses primary source materials as well as visual aids in lectures and discussions to introduce the major civilizations of the world and their contact with one another from the Paleolithic Era to 1500. Fall 2001, 2002
  - Europe since 1789. In this upper-division course, led students through a careful presentation and analysis of the development of Europe after the French Revolution and the place and presence of Europe in the world. Emphasized primary source materials and discussions centered on those materials. Fall 2001, Spring 2003
  - History and Historians. A capstone course for history majors, “History and Historians” presents the development of historical thought in a Western and in a comparative context and introduced students to historical research methods useful for their future careers as investigators of any kind. Fall 2001, 2002

**University of Pennsylvania, Lecturer, Department of History**

- Contemporary Conflicts in Southeast Asia. This course explored the nature and origin of contemporary conflict in Southeast Asia. Although it examined the region as a whole, it focused on events in Indonesia (Aceh, East Timor), Cambodia (reconciliation, international tourism), and Vietnam (globalizing economy, upland vs. lowland development) to speak to larger concerns. Spring 2004

**University of California – Los Angeles, Visiting Professor, Department of History**

- Sophomore Seminar in Southeast Asian Studies: Colonization to (Re)Globalization in Southeast Asia. This lower-division course prepares students in UCLA’s Southeast Asian Studies major for upper-division coursework. By examining the transition from colonialism to independence, it introduces them to the essential themes of modern Southeast Asian Studies and good historical methodology. Spring 2003
- The Indochina Conflicts, 1940 – 1981. In this upper-division course, addressed interdependent and historical conflicts in Indochina in which the United States was one, albeit an important, actor. Used a variety of primary and secondary source materials as well as guest lecturers and visual materials to address the topic. Spring 2001

**Université de Paris VII – Jussieu, Lecturer, *Institut d’Anglais Charles V***

- English Language and Phonetics. Prepared lectures and laboratories for first and second year university students of English; helped prepare round table discussions on pertinent current events for students 1992-1993

**ADMINISTRATIVE EXPERIENCE:**

- Assistant Director (Acting), Center for Southeast Asian Studies, University of California at Los Angeles. Managed two permanent and four student staff. Assisted on with the daily operation, programmatic activities, and outreach activities of the Center. Spring 2001

- Resident-Director, University of California's Education Abroad Program in Hanoi. In a position normally reserved for tenured faculty, managed, with the part-time assistance of two local secretaries, the operation and finances of the UC EAP-Hanoi Study Center. Responsible for the overall well being of fourteen UC students during this semester-long program, including their housing, medical care, and education. Managed two Vietnamese staff. April - December 2000

## **SERVICE:**

### **Service to the Profession**

- Treasurer, Western Society for French History. Manage in excess of \$250,000 in endowment and current funds. 2010 – present
- Web Master, French Colonial Historical Society. 2008 –2010
- Anonymous journal article review for *French Historical Studies*. June 2010
- Anonymous journal article review for the *Annual Proceedings of the French Colonial Historical Society*. June 2010
- Anonymous journal article review for *French Historical Studies*. January 2010
- Anonymous journal article review for the *Annual Proceedings of the French Colonial Historical Society*. January 2010
- Anonymous journal article review for *French Historical Studies*. June 2009
- Anonymous journal article review for *Southeast Review of Asian Studies*. May 2009
- Anonymous journal article review for *French and Francophone Studies*. April 2009
- Anonymous journal article review for *French Historical Studies*. June 2008
- Manuscript Review for the Nordic Institute of Scandinavia (NIAS) Press of Martin Grossheim's *Breaking the Bamboo Hedge: State-Village Relations in Colonial and Post-Colonial Vietnam*. March 2008
- Organizing Committee, 2007 Annual Meeting, French Colonial Historical Society. 2006 – 2007
- Editorial Board, Member, French Colonial Historical Society. 2005 – 2006
- Board of Directors, Member, Western Society for French History. 2005 – 2007
- Procured \$15,000 from the Ford Foundation and the Asia-Europe Foundation to help six Vietnamese scholars travel to the Fourth EUROSEAS conference in Paris. September 2004
- Facilitator, UCLA-sponsored Southern California Network for Southeast Asian Studies. The Network brings together scholars interested in Southeast Asian Studies from twenty centers of higher and secondary education in the four-county (Ventura, Los Angeles, Orange, San Bernardino) Los Angeles Area. Helped organize the semi-annual Network Colloquia and monthly meetings of interested participants. 2001-2003
- Presenter, Summer Institute for Teachers, co-sponsored by the Centers for East Asian Studies and Southeast Asian Studies at the University of California, Los Angeles. Using a PowerPoint format and handouts presented a three-hour discussion of the history, culture, and society of traditional and contemporary Vietnam to 25 K-12 teachers. August 2001, 2002
- Anonymous journal article review for the *American Historical Review*. September 1997

- Helped my Vietnamese sponsor, Professor Nguyen Van Hoàn, to travel to the United States to deliver two papers at UC Davis and attend a conference at University of California at Los Angeles, 1-11 October 1997; with the help of the Departments of History and French, and the Humanities Institute, at UC Davis, and the Department of Italian at UCLA, found money to fund his entire trip, and organized and advertised the talks he gave. 1997

**University Service**

- Chair, Search Committee, Visiting Assistant Professor of History (Modern European History). Spring 2011
- Member, Search Committee, Assistant Professor of History (Historian of China for the East Asian Studies Program) Spring 2010
- Member, Search Committee, Visiting Assistant Professor of History (Modern European Intellectual History). Spring 2010
- Member, Search Committee, CLIR “Open Access” Research Fellow, Library and Information Services,. Spring 2010
- Committee Member, Nature and Human Communities Initiative Steering Committee, Bucknell University. December 2009 – present
- At-Large Representative, Committee on Library and Information Resources (CLIR) subcommittee, Bucknell University. September 2009 – present
- Faculty Advisor, Bucknell University Vietnamese Students’ Association. January 2008 – present
- Committee Member, Residential College Advisory Board, Bucknell University. Spring 2006
- Library Liaison, Bucknell University Department of History. 2004 – 2007
- Committee Member, Equity and Multicultural Affairs Committee (EMAC), California Lutheran University. 2002 – 2003
- UC Davis History Department’s Information Technology Coordinator. Responsible for day-to-day maintenance of the Department’s Information Technology Center for graduate students and instructing students in use of computer programs; awarded a \$16,000 grant by the UC Davis Obsolete Equipment Replacement fund for new computer equipment and refurbishing of the Department’s Information Technology Center. 1994-1995

**RECENT PROFESSIONAL TRAINING:**

- Learning and Refining Geographical Information Systems Training, sponsored by the Information Services and Resources, Bucknell University. During a weeklong training session, reviewed and expanded GIS skills. May 2006
- Maps and Map-Making in the Social Sciences, sponsored by the CSISS (Center for Spatially Integrated Social Science) at the University of California at Santa Barbara. Over the course of a week studied the August 2001

theoretical and practical background and implications of map-making and computerized map production for the social sciences.

**LANGUAGES SPOKEN:**

- French with professional fluency in reading, writing, and verbal expression and comprehension.
- Vietnamese with advanced intermediate fluency in reading, writing, verbal expression and comprehension.

**PROFESSIONAL AFFILIATIONS:**

- American Historical Association (AHA)
- Western Society for French History (WSFH)
- Association of Asian Studies (AAS) and its group in Vietnam Studies (VSG)
- French Colonial Historical Society (FCHS)
- World History Association (WHA)
- AsiaNetwork