

# Alumni Association Dissertation Award Winners

## Spring 2005



**Laura E. Anderson**, Ph.D. Candidate in Art History  
(Adviser: Charlotte Houghton)

Laura's dissertation, "Artistic Exchange and Collaboration in Early Modern Haarlem," is an alternative approach in the study of Netherlandish art. It focuses on the interrelationships within and among circles of artists located in Haarlem during the late-sixteenth and seventeenth centuries, pointing out the economic and artistic advantages gained through exchange and collaboration. In April 2004, Laura received a Hyslop Memorial Fellowship and a Schwartz Research Grant from the Department of Art History, and in November, she was selected as the recipient of the Susan W. and Thomas A. Schwartz Endowed Fellowship for Dissertation Research in Art History. She also received the Committee on Institutional Cooperation Foreign Language Enhancement Program Scholarship in 2003 and a University Graduate Fellowship from Penn State in 2000-2001.



**Beshahwired Ayalew**, Ph.D. Candidate in Mechanical Engineering  
(Adviser: Bohdan Kulakowski)

Beshah's dissertation deals with the nonlinear control of electrohydraulic actuators employed in service load simulation testing. Typical applications of the research are structural test systems as road simulators, flight simulators, fatigue testers and shaker tables. Beshah has authored or co-authored several publications in professional journals and has presented at a number of professional conferences. He was awarded a Penn State Graduate Teaching Certificate in 2003 and a Certificate of Excellence from the Argonne National Lab, Illinois, for activities at Penn State's Graduate Automotive Technology Education (GATE) Center for Energy Storage in 2000. He was also named a Graduate Dean's Fellow in the College of Engineering in the fall of 1998 and the spring of 1999.



**Valentina Cesco**, Ph.D. Candidate in History  
(Adviser: Joan Landes)

Valentina's dissertation, "Elopement and Kidnapping of Women for Marriage in the Venetian Republic from the Late Sixteenth until the Early Eighteenth Century," offers a unique perspective for exploring gender relationships and marital strategies in the early modern age. Her research is based upon an analysis of the material circumstances under which women could express an authentic consent, as well as representations of female agency in legal documents, and literary and visual texts. She has authored and co-authored various publications and professional papers. She was awarded the Sparks Dissertation Fellowship from Penn State in 2003-04 and the Weiss Research Scholarship from Penn State in 2002-03.



**Long Chen**, Ph.D. Candidate in Mathematics  
(Adviser: Jinchao Xu)

Long Chen's research is mainly on the design, analysis and applications of efficient algorithms in numerical solutions for partial differential equations. His dissertation is titled "Robust and Accurate Algorithms for Resolving Anisotropic Singularities." Examples of his work include basic error estimates for anisotropic grids, optimal finite element schemes for convection dominated problems, and new optimal algorithms for curve simplification. His research is expected to have important applications in scientific computing and in information technology. Long Chen has authored and co-authored numerous publications in professional journals and has presented at several international conferences.



**Holly M. Dunsworth**, Ph.D. Candidate in Anthropology  
(Adviser: Alan Walker)

One of Holly's research goals is to elucidate the traits that define primitive monkeys versus those that define apes and our own human ancestors. Her dissertation, "The Ontogeny and Functional Morphology of the Proconsul Foot," contributes to the debate over the nature of the evolutionary split between monkeys, apes, and humans by studying the foot of the Proconsul. Holly has authored and co-authored many professional publications, and has received a plethora of awards, scholarships, fellowships, and grants during her academic career. Most recently, she received the Matson-Benson Museum Award, the Hill Foundation Fellowship, and a grant from the Baker Fund from the Department of Anthropology at Penn State. From 2000-2003, she also received a graduate fellowship from the National Science Foundation.

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**Kathryn L. Huisinga**, Ph.D. Candidate in Biochemistry, Molecular Biology and Microbiology  
(Adviser: B. Franklin Pugh)

Kathryn's research focuses on the functions of gene regulatory molecules, important directors of life processes, and how they control gene expression. The title of her dissertation is "Genome-wide Regulation of the TATA-Binding Protein." Overall, her studies have contributed to a greater understanding of how gene expression is regulated in yeast, discoveries which will most likely be beneficial to the understanding gene regulation in humans as well. Kathryn has co-authored many publications in highly respected journals in the field, and presented at numerous professional meetings. She received the Althouse Outstanding TA Teaching Award in 2001, the Braucher Scholarship in 2000, and the Braddock Graduate Fellowship in both 2000 and 2001.



**Jennifer M. Proffitt**, Ph.D. Candidate in Mass Communications  
(Adviser: Ronald Bettig)

Jennifer's dissertation title is "Structural Regulation, Concentration, and Democratization: A Political Economic Analysis of the National Television Station Ownership Rule." Her research analyzes the rhetoric and arguments surrounding debates of the rule and the actual and potential consequences of increased media concentration using a political economic approach. Jennifer has co-authored many publications in peer reviewed journals, and presented at numerous national and international meetings. She has received many academic awards, including two Dean's Excellence Awards from Penn State, an Excellent Teaching Award from the International Communication Association, a Top Three Paper Distinction at the National Communication Association Doctoral Honors Seminar, two First Place Debut Paper Submissions from the Broadcast Education Association, and a Top Student Competitive Paper Submission from the National Communication Association.



**Jae Kun Shim**, Ph.D. Candidate in Kinesiology  
(Advisers: Mark Latash and Vladimir Zatsiorsky)

Jae Kun's dissertation topic, "Rotational Equilibrium Control in Multi-Digit Human Prehension," contributes to the scientific understanding of the functional and structural aspects of human prehension. The goal of his research is to understand how the human central nervous system controls the hand and fingers. Jae Kun has authored or co-authored sixteen scientific publications in peer-reviewed journals as well as twenty-five conference proceedings and abstracts. In addition, he has presented at numerous national and international meetings. Jae Kun received the Young Investigator Award at the International Society of Biomechanics Conference in 2003. He was also awarded the Kligman Fellowship in 2004.



**Fei Wang**, Ph.D. Candidate in Engineering Science and Mechanics  
(Adviser: Akhlesh Lakhtakia)

Fei's research focuses on the elastodynamic as well as the optical properties and response characteristics of sculptured thin films. His dissertation is titled, "Optics of Slanted Chiral Sculptured Thin Films (STF's)." Potential applications of slanted chiral STF's include optical beam-splitters and couplers, spectra-hole filters, and biosensors. Fei is first author on a number of publications in professional journals. He has also presented at numerous conferences and professional meetings. Fei has received a graduate scholarship for his participation in the 8th Science and Engineering Education Scholars Program (SEESP) in 2004, a Weiss Graduate Fellowship in 2003-04 and 2001-