

NOVEMBER 9-10 2006

3RD ANNUAL



COAS

**COLLEGE OF ARTS AND SCIENCES
RESEARCH CONFERENCE**



**INDIANA UNIVERSITY
NORTHWEST**

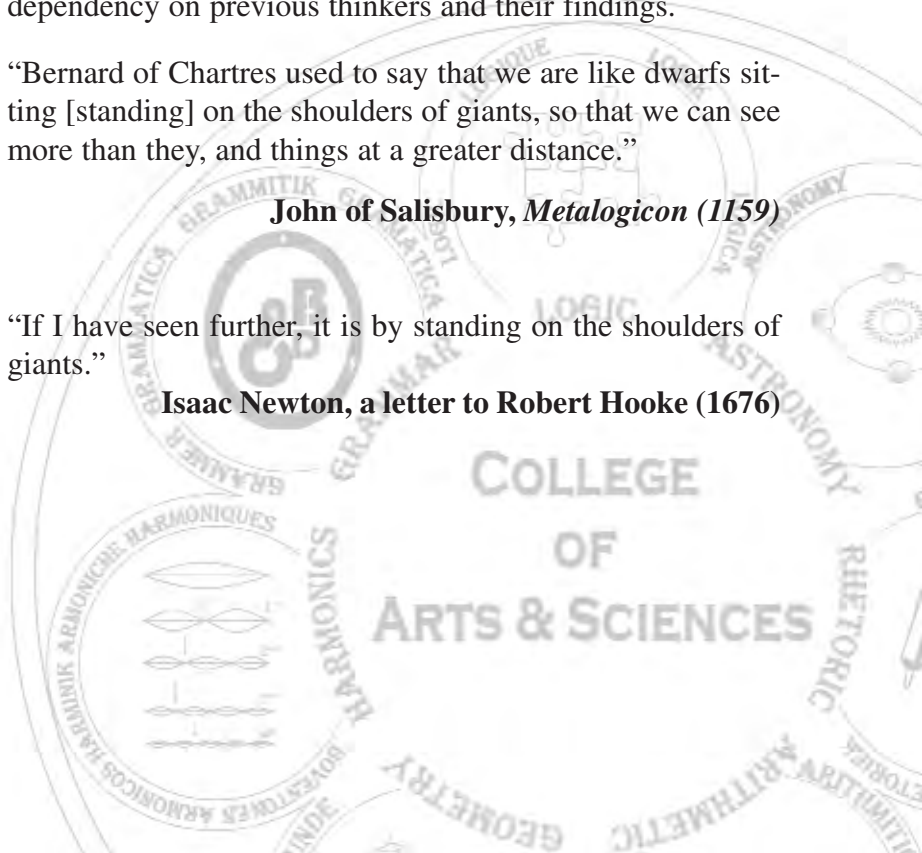
The logo on the cover, a modern rendering of the Seven Liberal Arts, visually connects contemporary studies in the Arts and Sciences to ancient and medieval conceptions of higher learning, which often divided the liberal arts into the trivium (grammar, rhetoric, and logic) and the quadrivium (arithmetic, geometry, harmonics or music, and astronomy or cosmology). In the medieval period, theorists also frequently envisioned Philosophy as an overarching area of study linking all knowledge branches. The theme of the COAS Research Conference, “The Shoulders of Giants,” deliberately alludes to a series of successive historical statements that assert both the advancement of knowledge and its dependency on previous thinkers and their findings.

“Bernard of Chartres used to say that we are like dwarfs sitting [standing] on the shoulders of giants, so that we can see more than they, and things at a greater distance.”

John of Salisbury, *Metalogicon* (1159)

“If I have seen further, it is by standing on the shoulders of giants.”

Isaac Newton, a letter to Robert Hooke (1676)



WELCOME

November 9, 2006

Welcome to the Third Annual College of Arts and Sciences' Campus-Wide Research Conference. The various sessions showcase the quality, depth, and breadth of original theoretical and applied research being conducted by the talented faculty, students, and alumni from Indiana University Northwest's College of Arts and Sciences and our colleagues from other divisions, schools, and universities.



The importance of research as a way of informing one's teaching and the pride I take in the research of faculty at IU Northwest represent major reasons for founding the conference. The event is the outgrowth of a strong constellation of academically excellent programmatic offerings. It illustrates the relevance of intellectual pursuit in the arts, humanities, social and natural sciences, and interdisciplinary studies to our understanding of ourselves, our communities, our nation, and our world. We know you will be intellectually stimulated by the caliber and variety of presentations. This year the abstracts for every presentation were reviewed by the Arts and Sciences Research Conference Committee as well as faculty peers from universities including Valparaiso University and Florida Southern College.

Please join me in celebrating the research, scholarship, and creativity at IU Northwest. We thank Chancellor Bruce Bergland and our new Vice Chancellor for Academic Affairs, Kwesi Aggrey, for their support and sponsorship. We want to thank the Center for Regional Excellence for its generous support of the Student Paper Awards. And finally, a special thanks to the planners and the internal and external participants for their contributions to this event. Learn and enjoy!

Dorothy W. Ige - Dean
College of Arts and Sciences – IU Northwest

THURSDAY, NOVEMBER 9, 2006

2:00-2:30pm

REGISTRATION & REFRESHMENTS - LC 105 A,B

2:30-3:00pm

OPENING REMARKS - LC 105 A,B

Dorothy Ige

Dean, College of Arts and Sciences

STUDENT AWARDS PRESENTATION

Kwesi Aggrey

Vice Chancellor for Academic Affairs

3:00-4:15pm **SESSION A**

COMPLEXES – CHEMICAL AND MATHEMATICAL - LC 105 C

Chairperson: John Morris, Departments of Chemistry, Physics, and Astronomy

Sonochemistry in Organic Synthesis: Nucleophilic Substitution Reactions of Alkynyl Iodonium Salts

Gene Maya, Christopher Klonowski, Kimberly Kenney, and Atilla Tuncay, Department of Chemistry

Energy of the Stochastic Wave Equation Driven by a Fractional Gaussian Noise

Peter Caithamer, Department of Mathematics and Actuarial Science

Lower Algebraic K-Theory and Rigidity

Bogdan Vajiac, Department of Mathematics

Characterization of Molybdenum (II) Complexes Containing Metal-Carbon Bonds

Alan F. Lindmark, Department of Chemistry

MOTHERS, DAUGHTERS, SISTERS: WOMEN & DISCOURSE - LC 110

Chairperson: Cynthia O'Dell, Departments of Psychology and Women's Studies

Evelyne Accad's *L'Excisée* and the Politics of Knowledge: Resisting Social Unequal Power Relations

Ada Uzoamaka Azodo, Departments of Minority Studies and Women's Studies

The Am-bivalence of Motherhood and Contemporary Discourse

Angela Elrod-Sadler, Department of History and Philosophy

America at War: Homefront Narratives on WWII from Women of the Calumet Region

Lori L. Montalbano-Phelps, Departments of Communication and Women's Studies

REPRODUCING RACE AND GENDER IN FAULKNER - LC 115

Chairperson: Eva Mendieta, Departments of Modern Languages and Women's Studies

The Trauma of War in Faulkner's *Absalom, Absalom!*

Rebekah Trollinger, Department of English, Indiana University Bloomington

Desiring Power: Divested Race, Invested Gender in *Absalom, Absalom!*

Mark Cassello, Department of English, Indiana University Bloomington

Desiring Wholeness: Whiteness and the Reproduction of Heritage in Faulkner's *Absalom, Absalom!*

Karen Dillon, Department of English, Indiana University Bloomington

Image of His Own Torment: Interracial Masculinity in *Absalom, Absalom!*

Andy Oler, Department of English, Indiana University Bloomington

4:15-4:30pm **Break**

4:30-5:45pm **Session B**

CONVERSATIONS IN SOCIAL SCIENCES - LC 105 C

Chairperson: Taylor Lake, Departments of Communication and Women's Studies

Africville: A History Untold

Noelle K. Bates, Departments of Modern Languages and Women's Studies

Drumming and Trance in Religious Ceremonies

Tanice G. Foltz, Departments of Sociology and Women's Studies

Cutting to the quick of it: The spaces of emotion in *Nip/Tuck*

Taylor Lake, Departments of Communication and Women's Studies

IALOGUE BETWEEN POETS ABOUT LIFE AND WORK IN STEELTOWN - LC 110

Chairperson: William Buckley, Department of English

Dialogue Between Poets About Life and Work in Steeltown

William Buckley, Department of English and Charlotte Noble, Department of Sociology and Anthropology

INTERPRETING CONFUCIAN VALUES: THE HISTORICAL AND THE CONTEMPORARY - LC 115 C

Chairperson: Diana Lin, Department of History and Philosophy

The Relation Of The Human Disposition To Its Environment In “Mengzi” Philosophy

Douglas L. Peters, Department of History

Pan Chao (48-116 C.E.) and the Influence of Confucian Values on Chinese Women

Erin Smith, Department of History

Marxist Historical and Dialectical Materialism and Intellectuals in Communist China: Feng Youlan and His Interpretations of Confucius

Xiaoqing Diana Lin, Department of History

5:45-6:00pm **Break**

6:00-7:30pm

KEYNOTE SPEAKER – SARAH VOWELL

Savannah Center Auditorium

Reception and book signing to follow presentation.

Sarah Vowell has turned her gimlet eye — and razor-sharp tongue — toward everything from her father’s homemade (and life-size) cannon and her obsession with the “Godfather” films, to the New Hampshire primary and her Cherokee ancestors’ forced march on the Trail of Tears. Vowell is best known for her monologues and documentaries for public radio’s *This American Life*. As a critic and reporter, Sarah Vowell has contributed to numerous newspapers and magazines, including *Esquire*, *GQ*, *Los Angeles Times*, *The Village Voice*, *Spin*, and *The New York Times Book Review*. She is the voice of teenage superhero Violet Parr in *The Incredibles*, a Pixar Animation Studios film. Sarah Vowell is president of the board of 826NYC, a nonprofit writing and tutoring center for students ages 6-18 in Brooklyn. Vowell has authored *Take the Cannoli*, *The Partly Cloudy Patriot*, and *Assassination Vacation*. She is currently at work on a new book about the Puritans tentatively titled *Puritan Nation*.

FRIDAY, NOVEMBER 10, 2006

8:30-9:00am

REFRESHMENTS - LC 105 A,B

9:00-10:15am

SESSION C

**ENVIRONMENTAL WATER ISSUES: BACTERIA,
ALGAE, AND CHEMICALS** - LC 105 C

Chairperson: Atilla Tuncay, Department of Chemistry, Physics, and Astronomy

**Challenges in microbial water quality monitoring
on the Northern Indiana Beaches**

Katarzyna Przybyla-Kelly, USGS, Great Lakes Science Center, Lake Michigan Ecological Research Station

**Mechanistic Determinations in the Photocatalysis of Cladophora,
a Lake Michigan Alga**

Aditya Shah, Jennifer Susoreny, and Julie Peller, Department of Chemistry

**Oxidative Destruction of Bisphenol A (BPA) in Deionized Water and
in Orange County (CA) Waste Waters**

Julie Peller, Kandis Knight, and Carolina Flores, Department of Chemistry

**CHAUCER IN THE BUFF: NARRATIVE, INVENTION,
AND ADAPTATION** - LC 110

Chairperson: Robin Hass Birky, Departments of English and Women's Studies

Re-Envisioning Chaucer: The Knight, Chaucer, and *A Knight's Tale*

Michael W. George, Millikin University

Rhetoric—Naked and Plain: Translation and Truth in the Chaucerian Corpus

Robin Hass Birky, Departments of English and Women's Studies

Tendentious Tales: Tension and Invention in *The Canterbury Tales*

Scott Troyan, University of Wisconsin-Madison

REINING IN RETRIBUTION: PHILOSOPHICAL DISCUSSIONS OF REVENGE AND FORGIVENESS - LC 115

Chairperson: Gianluca Dimuzio, Department of History and Philosophy

The Revenge of Philosophy

Anja Matwijkiw, Department of History and Philosophy

Revenge, Retribution, Punishment and the Aristotelean Dynamic of Anger

Greg Sadler, Department of Philosophy and Religious Studies, Ball State University

Forgiveness: Public Act or Private Meaning?

Angela Elrod-Sadler, Department of History and Philosophy

10:15-10:30am **Break**

10:30-11:45am **Session D**

DUNES, MOUNTAINS AND PRAIRIES: A JOURNEY THROUGH TIME - LC 105 C

Chairperson: Julie Peller, Department of Chemistry, Physics, and Astronomy

The Geomorphology of the Fair Oaks Dune Field, Northern Indiana, USA

Erin P. Argyilan, Zoran Kilibarda, and Steven E. Brown, Department of Geosciences

Facies Analysis of Middle Jurassic Mt. Rumija II Oolite in Southern Montenegro

Zoran Kilibarda, Department of Geosciences, and Damjan Cadjenovic
and Novo Radulovic, Geological Survey of Montenegro

Influence of Small Mammals on Prairie Restoration

Adam Wilson, Department of Biology

RECASTING RENAISSANCE DRAMA - LC 110

Chairperson: Doug Swartz, Department of English

The Gulling of Malvolio: A Director's Choice and a Character's History

Anne Louise Sharp, School of Education

Here, There, and Everywhere: Finding Ophelia in a Looking Glass

Margaret L. Patitsas, Department of English

Pleasure and Profit in Tourner's *The Atheist's Tragedy*

Doug Swartz, Department of English

11:45-12:15pm **Lunch**

Lunch will not be provided however, you may purchase your lunch at either of our on-campus eateries or at one of the area restaurants. Espresso Yourself, Ltd. Café is located in the Library Conference Center, and Redhawk Café is located in the Moraine Student Center.

Please bring your lunch back to LC105AB as our Lunchtime Keynote speakers will begin at 12:15 p.m.

LUNCHTIME KEYNOTE – GRAVERS: DEANERS, NAT-PACKERS, SHEIKS, AND THE CIVIL RELIGION OF DEAD CELEBRITY ICONS

Stephanie Shanks-Meile and Charles Gallmeier, Departments of Sociology and Anthropology
LC 105AB

Sociologists have been interested in "varieties of religious" experience and much has been written on political ideologies as civil religion. Shanks-Meile and Gallmeier examine the iconization of popular cult figures, such as James Dean, Natalie Wood, and Rudolph Valentino, and address how myths and imagery are sustained through forms of ritualized celebrity worship. Based on field work at celebrity cemeteries and memorial services in California and Indiana, they uncover the emergent subculture of "gravers" and other participants in remembrance ceremonies.

1:30-1:45pm **Break**

1:45-3:00pm **Session E**

MEDICAL RESEARCH AND MODELS: EYES, ENZYMES AND EXPECTED UTILITY ANALYSIS - LC 105 C

Chairperson: Zoran Kilibarda, Department of Geosciences

The effects of aging on corneal nerve density: implications for the development of dry eye disease

Lauren Dvorscak, Indiana University School of Medicine – Northwest

Explaining Variation In Practice: An Acceptable Regret Approach

Iztok Hozo, Department of Mathematics and Actuarial Science and Benjamin Djulbegovic, H. Lee Moffitt Cancer Center, University of South Florida

Poster: Expression of PGLYRP2, a bacterial cell wall degrading enzyme, is differentially regulated in skin and liver

Shiyong Wang, Xinna Li, Haitao Wang, and Dipika Gupta, Indiana University School of Medicine-Northwest

EDUCATIONAL ISSUES FROM PRIMARY TO HIGHER EDUCATION - LC 110

Chairperson: Charlotte Reed, School of Education

Impact of Prerequisites on Success of Students in Mathematics General Education Classes

Vesna Kilibarda, Stela Pudar-Hozo and Henry Wyzinski, Department of Mathematics and Actuarial Sciences

Justifying Preferences: The Foundation of the “Children First” Declaration

Willie Mack, University of Illinois at Chicago

Educational Inclusion: Reforming Society

Julie Anne Nicksic, Department of Sociology

Actuarial Science from the Air

Lary Schiefelbusch, Department of Mathematics and Actuarial Science

TRUTH AND FEMALE IDENTITY IN PROSE AND POETRY - LC 115

Chairperson: Mary Russell, Departments of English and Women’s Studies

Lightning Truth and Emily Dickinson's "tell it slant"

Richard Hull, Department of English

Where the Girls Are

Margaret L. Patitsas, Department of English

Listen to the Silence: Exploring the Interior Life of Sharon McCone

Patricia Buckler, Department of English

3:00-3:15pm **Break**

3:15-4:30pm **Session F**

ANALYZING IMAGES: POLITICAL PROPAGANDA, PICTURE BOOKS, AND SLASHER FILMS - LC 105 C

Chairperson: Bill Allegranza, Department of English

Illustration, the Childlike Art

George Bodmer, Department of English

The Immorality of Horror Films

Gianluca Di Muzio, Department of History and Philosophy

Political Propaganda in Rural Ukraine: Katerina Bilokur's Still Life '30th Anniversary of the October Revolution,' 1947

Adrienne Kochman, Department of Fine Art

"THE GREATEST WEALTH IS HEALTH": EXPLORATIONS OF GLOBAL & LOCAL HEALTH ISSUES - LC 110

Chairperson: Mary Ann Fischer, Department of Psychology

Canadian Aboriginal Health Care

Patricia Sullivan, Department of Modern Languages

HIV/AIDS in Haiti: An Ecological Approach

Charlotte A. Noble, Department of Sociology and Anthropology

Predicting and Increasing Healthy Eating and Physical Activity among Adolescents

Mary Ann Fischer and Karl Nelson, Department of Psychology and Susan Zinner,
School of Public and Environmental Affairs

HERESY IN THE MIDDLE AGES - LC 115

Chairperson: Jerry Pierce, Department of History

The Inquisition: Purpose and Procedure

Julie Mendez, Department of History

Inquisitional Reform and the Revision of Interrogational Methods

Misty Webb, Department of History

Heresy and Poverty among the Franciscans

Christina Hammermeister, Department of History

CONFERENCE ABSTRACTS

ABSTRACTS APPEAR IN ALPHABETICAL ORDER BY FIRST PRESENTER'S LAST NAME

ERIN P. ARGYILAN, ZORAN KILIBARDA, AND STEVEN E. BROWN, DEPARTMENT OF GEOSCIENCES

The Geomorphology of the Fair Oaks Dune Field, Northern Indiana, USA

The occurrence, distribution, geomorphology, and age of inland dunes provide valuable insight to the sediment supply, wind speed and direction, and climate of a region. The Fair Oaks Dune Field contains stabilized parabolic and compound parabolic dunes covering ~1100 sq. miles of northern Indiana and northeastern Illinois.

We identify four major sections within the dune field based on differences in dune size, spacing and orientation. In the northern section, an almost continuous series of compound parabolic dunes extends ~40 miles SW to NE along the southern margin of the Kankakee River valley. The occurrence and distribution of this dune cluster appears to have been influenced by the paleochannel bank of the Kankakee River Valley. The orientation and morphology of the northern dunes indicate a W to SW primary wind direction. The western section comprises series of parabolic dunes assembled in compound parabolic dune chains indicating SW winds. The dunes in the southern section are small, simple parabolic dunes created by W winds. The tallest dunes are in the eastern section and made of simple and compound parabolic shapes with steep eastern slopes indicating prevalent W winds. Optically stimulated luminescence dating of dune sand from the eastern section yields ages of ~13 to 16 ky. Glacial outwash from the Lake Michigan, Lake Huron-Erie, and the Saginaw lobe of the Laurentide Ice Sheet supplied sediment that was reworked to form this extensive dune field, providing insight to the timing of the last major meltwater pulse through the Kankakee River Valley.

ADA UZOAMAKA AZODO, DEPARTMENTS OF MINORITY STUDIES AND WOMEN'S STUDIES

Evelyne Accad's *L'Excisée* and the Politics of Knowledge: Resisting Social Unequal Power Relations

Fictional and non-fictional writings on female circumcision or excision abound, making it one of the most controversial topics of discussion in the world today. Yet how often, and unnecessarily, valuable time and effort are wasted with focus on the geographical scope of the practice, rather than the prevailing worldwide social inequities and injustices. Evidently, location, citizenship, and other compelling allegiances hamper scholars, writers, and activists in their resistance, as seen in, novelist Alice Walker's, *Possessing the Secret of Joy* (1992), and her video documentary with activist Pratibha Parmar, *Warrior Marks* (1993); they circumvent the real issues at stake, perform the lie, and forego

vigilance on the common humanity of all. A serious feminist must eschew postcolonial ambivalence and undertake metaphoric interpretations of female circumcision in order to unearth the part that class, gender, sex, and race play in the uneven exchanges. In this study of Evelyne Accad's *L'Excisée* (The Excised), I employ Egyptian physician cum novelist Nawal el Saadawi's thinking in her essay, "Imperialism and Sex in Africa," on the incongruous, yet abhorring, link between God, sex, and king. I will argue that the liberation of women's sexuality is implicated in the cultural liberation and recognition of their human rights. In the end, the panacea for ending excision resides not in the campaign to stop the mutilation of the female body, per se, but rather in equitable sharing of power between men and women, in particular, and in general, the North and the South.

NOELLE K. BATES, DEPARTMENT OF MODERN LANGUAGES

SPONSOR: SCOOTER PEGRAM

Africville: A History Untold

Africville, a historical Canadian settlement, was a dwelling rich in tradition that resonated with the Black Canadian community. During the 1960s, the Nova Scotia Provincial and Halifax Municipal governments began to phase out the physical existence of the Africville district. With the stigma of African history in America at the forefront, the history of Africans in Canada is often overshadowed. The history of this community that was founded by former slaves, Black Loyalists, and immigrants remains virtually untold. In order to provide insight into the heart of Africville, this paper will discuss how this settlement originated, what struggles and hardships were encountered by its inhabitants, its destruction, and the current state of affairs regarding the settlement.

GEORGE BODMER, DEPARTMENT OF ENGLISH

Illustration, the Childlike Art

Two nineteenth-century developments have worked to devalue drawing and realistic representation: the invention of photography and the Impressionist revolution in art. In fact, Susan Sontag writes "Freed by photography from the drudgery of faithful representation, painting could pursue a higher task: abstraction" (*On Photography* 145). The use of the word "higher" suggests a contemporary and pervasive attitude toward realistic images. Abstract paintings are considered more authentic, and drawing is not even taught in art schools. In fact, Peter Steinhart argues, in *The Undressed Art: Why We Draw*, that realistic representation has been marginalized: "Since the middle of the twentieth century, abstraction and expressionism have been the lodestones of fine art, and drawing has been diminished and disparaged" (5). Drawing is an activity that all engage in as children and, just as narrative poetry survives in literature and picture books for children, it can be argued that illustration follows this same pattern. Not fully evolved toward abstraction and only there to serve the story, illustration is not only seen as inferior visual art, but as potentially weakening the power of the written word. Picture books not only make use of one of children's most important tools for understanding and dealing with their worlds--drawing--but they are responsible for instructing their young readers on how to draw and visualize their surroundings. This paper examines four picture books, two by standard illustrators and two by "easel" artists, to compare the use of representation vs. abstraction in the portrayal of childhood.

PATRICIA BUCKLER, DEPARTMENT OF ENGLISH

Listen to the Silence: Exploring the Interior Life of Sharon McCone

Throughout the Sharon McCone series, Marcia Muller's detective experiences a range of personal conflicts that are only temporarily resolved or held in abeyance. The essential tensions within the character carry the series forward as she grows and changes, yet she never becomes settled within herself. In the twenty-first novel, *Listen to the Silence*, Muller reveals that a significant part of McCone's inherent discomfort is rooted both in the past and in herself. The detective discovers that her family, the McCones, is not really her family at all. She is the natural daughter of an unidentified couple, at least one of whom was a native American. Suddenly Sharon's vague feeling that she has always been an outsider in her own family becomes sharply defined. As she questions everything she thought she knew or took for granted, her sense of self crumbles. Her life until age 40 was a charade, and she must dismantle it before she can re-construct herself. In her shock, pain, and fury, she sets off on her most personal investigation—to find her “identity. My paper will consider the family/identity crisis that this discovery precipitates and explore the impact it has on McCone's character and on the series itself.

WILLIAM BUCKLEY, DEPARTMENT OF ENGLISH

AND CHARLOTTE NOBLE, DEPARTMENT OF SOCIOLOGY & ANTHROPOLOGY

SPONSOR: WILLIAM BUCKLEY, DEPARTMENT OF ENGLISH

Dialogue Between Poets About Life and Work in Steeltown

The relationship between the written word and the image has always been an interesting one. Movies and stage productions come to mind, of course, as well as speeches given with backdrops of photos. William Buckley and Charlotte Noble will present a “dialogue” with poems about the area where we live with a backdrop of slide-photos. Noble will read one of her poems, and Buckley will respond to it with one of his, as a complimentary image is presented to the audience. This “back-and-forth” presentation will tell a story about living and working in Northwest Indiana. Poems and photos will focus on the mills and dunes.

PETER CAITHAMER, DEPARTMENT OF MATHEMATICS AND ACTUARIAL SCIENCE

Energy of the stochastic wave equation driven by a fractional Gaussian noise

The wave equation describes propagation of waves such as ripples in a pond of water, sound waves, or radio waves. This talk focuses on the effects of random disturbances to such systems. These stochastic disturbances have a fractal nature, which is to say that after being magnified they bear a resemblance to themselves, and model many processes occurring in nature. Separation of variables and asymptotic analysis are the primary methods utilized. The average energy of such systems is found and discussed in detail.

MARK CASSELLO, INDIANA UNIVERSITY BLOOMINGTON

SPONSOR: ROBIN HASS BIRKY, DEPARTMENTS OF ENGLISH AND WOMEN'S STUDIES

Desiring Power: Divested Race, Invested Gender in *Absalom, Absalom!*

Utilizing Kalpana Seshadri-Crooks' reappropriation and application of Lacan's theory of sexual difference to questions of race, I will explore how Faulkner's futuristic conception of a racially homogenous society in *Absalom, Absalom!* (one where discernability of visible difference becomes an impossibility) affects, and even displaces, "Whiteness" as a master signifier. Although Seshadri-Crooks' theory of race relies on the indeterminacy of sex, that is, "sex as that which escapes or confounds language" (SC 6), I propose that, as Whiteness loses its ability to promise the fantasy of wholeness, sex resurfaces as "that great category of human difference" (SC 20). Concurrently, other systems of organizing difference, especially cultural systems like social status and economic class, assume greater importance.

To put it another way, by foregrounding miscegenation, Faulkner anticipates the ramifications of his vision of a raceless society, ultimately, and perhaps unwittingly, revealing a subtext where gender, and not race, becomes the essential locus of anxiety. Sutpen's reenactment of the imperialist ritual reveals stratifications within the realm of Whiteness that transcend race as the primary delimiter of difference in the Old South. Further, as miscegenation slowly erodes the visible markers of racial difference, I contend that the feminization of the interracial male characters by the white male narrators, and particularly Mr. Compson, might indicate a preemptive move to assert authority that derives its power from organizing sexual difference in an effort to guarantee male superiority in the face of the diminishing authority of Whiteness as a signifier.

KAREN DILLON, DEPARTMENT OF ENGLISH, INDIANA UNIVERSITY BLOOMINGTON

SPONSOR: ROBIN HASS BIRKY, DEPARTMENTS OF ENGLISH AND WOMEN'S STUDIES

Desiring Wholeness: Whiteness and the Reproduction of Heritage in Faulkner's *Absalom, Absalom!*

Absalom, Absalom!'s white characters experience a kind of racial anxiety in which they are confronted with the (non)meaning of whiteness and the lack of a white heritage. Kalpana Seshadri-Crooks' *Desiring Whiteness: A Lacanian Analysis of Race* considers just such moments of racial anxiety when the white subject is confronted with the historicity of whiteness, the realization that "white" is merely a symbolic position of power, causing an investment in racial visibility as a coping mechanism for the lack produced at the realization of the fantasy of white superiority. The lack is filled by the desire for whiteness, which is really the subject's desire for wholeness. Faulkner posits the body as the site of heritage (marked by phenotype), and so the female body is the quintessential site of heritage, having the literal power to reproduce or not reproduce. The novel's three virginal women, Clytie, Judith, and Rosa bear the burden of Sutpen's heritage, becoming literal groundskeepers of the land and domestic monuments to his "legacy." Ironically, the virgin must bear the responsibility of heritage because heritage is produced and passed on through the birth of a child, but the virgin experiences a continually present lack in the absence of child, so the reproduction of heritage as the substitute child creates the fantasy of wholeness. Seshadri-Crooks' theory may be shifted from racial identity to gender identity because gender signifiers are still investments in visibility, the mark of the woman being the reproduction of a child.

The Immorality of Horror Films

With the exception of pornography, the morality of popular forms of entertainment has not been studied extensively by philosophers. The present paper aims to start discussion on the moral status of horror films, whose popularity and success has grown steadily since the 1970s. In particular, I wish to focus on so-called "slasher" or "gorefest" films, where the focus of the narration is on the graphic and realistic depiction of a series of murders. The paper's main thesis is that it is immoral to produce, distribute, and view films of this kind. The reasons are traced back to two facts: 1) reactive attitudes to displays of human victimization are central to the development and maintenance of an individual's moral profile, and 2) the most violent horror films either overwhelm the spectator or promote a desensitization to violence that may interfere with the development and maintenance of the correct reactive attitudes to human victimization.

LAUREN DVORSCAK, INDIANA UNIVERSITY SCHOOL OF MEDICINE – NORTHWEST

SPONSOR: CARL MARFURT, INDIANA UNIVERSITY SCHOOL OF MEDICINE – NORTHWEST

The effects of aging on corneal nerve density: implications for the development of dry eye disease

The corneal epithelium is the most densely innervated surface tissue in the human body. Corneal nerves promote functional integrity of the ocular surface by activating brainstem circuits that stimulate reflex blinking and tear production, and by releasing trophic substances that modulate corneal epithelial homeostasis. Individuals with damage to corneal nerves due to refractive surgery, ocular surgery, or prolonged contact lens wear suffer decreased corneal sensitivity, diminished tear production and increased incidence of dry eye disease. Elderly individuals are at increased risk for developing dry eye disease, and it has been proposed that this may be due in part to an age-related decrease in corneal sensitivity. The purpose of this study is to test the hypothesis that corneal nerve density decreases as a function of age in a rat model. Corneas from rats ranging in age from 6 months (young adult) to 24 months (aged rat) were immersion-fixed and the corneal nerves were stained in whole mounts and sectioned tissues by immunohistochemistry. Images of the corneal innervation were captured by fluorescence, transmission, and confocal microscopy. Epithelial nerve densities per cubic millimeter of corneal epithelium were determined from the captured images by using Image J analysis software. The results of this study to date have revealed an approximate 50% decrease in epithelial nerve density between 6 and 24 months of age. These data suggest strongly that the functional status of the corneal innervation should be evaluated carefully as part of the screening process for refractive or ocular surgery in the aged population.

ANGELA ELROD-SADLER, DEPARTMENT OF HISTORY AND PHILOSOPHY

The Am-bivalence of Motherhood and Contemporary Discourse

The correspondence between two notable French thinkers, Julia Kristeva and Catherine Clément, culminates in an evocative work, *The Feminine and the Sacred*. Through their letters, the reader gains a deeper grasp of Kristeva's privileging of the transcendental as she explores the meaning of the way in which femininity and sacrifice are understood—especially as it relates to her larger project of resisting French Cartesianism and its effects for the person. This paper first offers an analysis of Julia

Kristeva's development of her concepts "feminine" and "sacred/sacrifice" and, then, explores their relations to maternity/the maternal, as well as the relevance these concepts have for Kristeva's own theory. Finally, it utilizes these concepts while also joining the discourse on motherhood. Particularly, it is my aim to show how motherhood may be seen as a positive response to the existential question of being and how a phenomenological analysis of motherhood leads to a deeper consideration of the person.

ANGELA ELROD-SADLER, DEPARTMENT OF HISTORY AND PHILOSOPHY

Forgiveness: Public Act or Private Meaning?

This paper examines the notion of forgiveness Julia Kristeva offers to readers in her interview with *PMLA* as one which "does not efface the act or the culpability [of the agent] . . . It is a question of hearing the request of the subject who desires forgiveness and, . . . of allowing renewal, rebirth" (Vol. 117, no.2, p.281). But despite the religious intimations in Kristeva's understanding of forgiveness, this articulation serves primarily to distinguish forgiveness as an act of attributing meaning, one which seems to call for a separation between the public and the private sphere. I say attributing and not instantiating, for Kristeva believes that the one offering forgiveness only does so through an identification with the one forgiven. Such an identification may only be temporary. Nonetheless, the common reality shared through identification is precisely what enables the forgiver to forge an intersubjective "link" with the offender, a link that allows the forgiver to interpret the offense and, thus, make the offender aware of a meaning which is already there, although previously unrecognized. Contrary to Kristeva, I will argue that forgiveness is neither strictly public nor strictly private and as a practice involves an understanding of communion that presumes a community to which both the forgiver and the offender belong.

MARY ANN FISCHER AND KARL NELSON, DEPARTMENT OF PSYCHOLOGY
AND SUSAN ZINNER, SCHOOL OF PUBLIC AND ENVIRONMENTAL AFFAIRS

Predicting and Increasing Healthy Eating and Physical Activity Among Adolescents

Two major models of health behavior, the Theory of Planned Behavior (TPB) and the Transtheoretical Model (TTM), were explored in order to understand factors that predict healthy eating and physical activity among high school students in two high schools in northwest Indiana. In addition, a randomized experiment tested the effectiveness of implementation intentions in which students were asked to write about when and where they would be more physically active or eat a more healthy diet over the following 2 weeks. An ethnically diverse sample of 333 students completed questionnaires at Time 1 and two weeks later, Time 2. Predictor variables measured at Time 1 included TPB variables of attitude, social norms, perceived behavioral control (self-efficacy), and intentions to eat healthy and be physically active; and the TTM variable, stage of change. Outcome variables of frequencies of healthy eating and physical activity behaviors were measured at Time 1 and Time 2. Results showed that the TPB variables of attitude and perceived behavioral control and the stage of change accounted for significant variability in both physical activity and healthy eating behaviors. Social norms did not predict intention or behavior. Writing implementation intentions at Time 1 led to an increase in physical activity reported at Time 2, but writing implementation intentions had no effect on healthy eating at Time 2. Implications for more powerful interventions including the refinement of implementation intentions and increasing positive attitudes and self-efficacy are discussed.

Drumming and Trance in Religious Ceremonies

This paper is part of a larger project that centers on drumming and its multiple uses. I propose that drumming is one of many contemporary spiritual pathways towards re-enchantment of the world, inasmuch as it facilitates trance and is employed in a range of religious ceremonies. Drum rhythms engender a brainwave state called "entrainment," whereby people unknowingly synchronize their rhythms, and this may trigger an altered state of consciousness or trance. By the same token, drumming can induce trance states among dancers and other participants and onlookers.

Drumming is analyzed as a form of "embodied spirituality" that connects participants in what Turner calls "communitas," defined by a feeling of unity and bonding. Scholarly studies of trance and entrainment are examined, and participant-observation research in religious venues in North and South America provide the database for analysis. Settings include Yoruba-inspired Candomble House ceremonies and religious street festivals in Bahia, Brazil, as well as contemporary North American Pagan rituals, and Praise Dance tambourine ceremonies in the Black church.

MICHAEL W. GEORGE, MILLIKIN UNIVERSITY

Sponsor: Robin Hass Birky, Department of English and Women's Studies

Re-Envisioning Chaucer: The Knight, Chaucer, and A Knight's Tale

Brian Helgeland's 2001 film, *A Knight's Tale*, has prompted at least one negative response published in a well-respected journal. Kathleen Forni criticizes Helgeland for offering his audience "a very loose adaptation of the first Canterbury tale". She is, indeed, correct in her assertion that this film is not an adaptation of Chaucer's tale. Nor was it meant to be. In none of the promotional materials was the film billed as an adaptation of Chaucer's work. Indeed, the Internet Movie Database only says that the film was "inspired by 'The Canterbury Tales'" (<http://www.imdb.com/title/tt0183790/plotsummary>), with no mention of a particular tale. In this paper, I argue, that rather than provide an adaptation of Chaucer's *Knight's Tale*, Helgeland has envisioned some of Chaucer's points of invention, fictional events that could have inspired him to write *The Canterbury Tales*, and all of these center on a fictional knight who bears a striking resemblance to the knight that Chaucer portrays in the "General Prologue" and the links between tales. In arguing my thesis, I will compare scenes from the film—particularly some of Geoff's introductions, his interactions with a pardoner and summoner, and those that depict the general character of Ulrich—with passages from *The Canterbury Tales*. Helgeland's film, then, is not—nor does it aspire to be—an adaptation of a particular tale. Instead, it is a fiction of what could have happened to inspire Chaucer to break from his traditional poetry to write a grand experiment that would have an immense impact upon literary history.

CHRISTINA HAMMERMEISTER, DEPARTMENT OF HISTORY

Sponsor: Jerry Pierce, Department of History and Philosophy

Heresy and Poverty among the Franciscans

Using Francis of Assisi and the "Testament" he wrote before his death in 1226 as an example of his views on apostolic poverty, this paper looks at the splintering of the Franciscan Order, analyzing how those groups considered heretics by the Church looked to apocalyptic commentaries to explain their

persecutions at the hands of ecclesiastical authorities. This paper briefly describes Francis' life and the legitimizing of his Friars Minor by the papacy and his belief in the 'vita apostolica' as well as how the argument of 'usus pauper' divided the Order into two major groups: the Conventuals, who allowed for qualified ownership and use of property, and the Spirituals, who firmly believed that any possession of property violated St. Francis' rule on poverty. It also provides case studies of two Spirituals, Petrus Olivi and Angelo of the 'Poor Hermits', and their plights against the Conventual's and the Church.

ROBIN HASS BIRKY, DEPARTMENTS OF ENGLISH AND WOMEN'S STUDIES

Rhetoric—Naked and Plain: Translation and Truth in the Chaucerian Corpus

In Helgeland's *Knight's Tale*, we first view Geoffrey Chaucer as a naked man "trudging" down a dirt road seemingly oblivious to his nudity. Helgeland's use of Chaucer's naked body in contrast to Chaucer's otherwise artful dissimulation casts that body in the role of a truth claim. Likewise, the historical Chaucer's rhetoric of nakedness rests on the bare body as metaphor for thought, truth, and story in varied acts of translation. Like John of Garland, who defines the "naked matter" as "whatever is not rhetorically amplified or embellished" (*Parisiana poetria* 65), Chaucer renders such material into English, as he suggests in the "Prologue" to the *Legend of Good Women*: "For myn entente is, or I fro yow fare, / The naked text in English to declare / Of many a story, or elles of many a geste" (ll.85-87). In the *Clerk's Tale*, Chaucer literalizes, in the form of Griselda, this process of stripping story down to its bare body and, then, re-clothing that body in the act of translation. The naked body becomes a signifier of the truth of the text, paradoxically even in works wherein the body is alternately depicted as fallen flesh. Chaucer's repertoire of truth claims as linked to translation and the relative lack of linguistic artifice extends to the notions of plain speech, accurate retellings, and "tales untrew" (CT I.735). Using medieval and modern conceptions of embodiment and language, I examine the naked Chaucer, or rather the rhetoric of nakedness in Chaucer's corpus.

IZTOK HOZO, DEPARTMENT OF MATHEMATICS AND ACTUARIAL SCIENCE AND

BENJAMIN DJULBEGOVIC, H. LEE MOFFITT CANCER CENTER, UNIVERSITY OF SOUTH FLORIDA

Explaining Variation In Practice: An Acceptable Regret Approach

There are well-documented variations in the practice of medicine; it is not uncommon that some doctors in the same clinical situations undertake a "wait-and-see" policy, while others order a diagnostic test or initiate treatment without testing. We used probabilistic Decision Theory to analyze these situations using Expected Utility Analysis and a measure of utility loss called regret. We defined acceptable regret as the loss of expected utility for which making a wrong decision will not be particularly burdensome to the decision-maker. Taking into account acceptable regret (R_0), sensitivity (S), specificity (Sp), risks of tests (Tr) benefits (B) and harms (H) of treatments, we derived three threshold equations that define a normative framework for the three-choice medical dilemma. We showed that if we could never order a test without exceeding acceptable regret. However, if we can always order a test without fear of exceeding acceptable regret. Since in most realistic clinical situations $(1-S)*B > (1-Sp)*H$ this may explain why physicians tend to overttest. Furthermore, we demonstrated that in the same clinical situation different decision-makers might decide to set their acceptable regret thresholds for withholding treatment to differ from the one for ordering a diagnostic test or for administering treatment. This in turn means that a normative model for one decision-maker may indicate that the most rational strategy is to "do nothing" while for the other it may point to ordering a diagnostic test and yet for the third committing to treatment may be the most rational course of action!

RICHARD HULL, DEPARTMENT OF ENGLISH

Lightning Truth and Emily Dickinson's "tell it slant"

Emily Dickinson's "Tell all the Truth" aims to tell the truth about telling the truth. It distinguishes gradual truth telling, which withholds the unpleasant or upsetting parts, from sudden shocking truth that strikes like lightning. Only such lightning precipitates "the Truth's superb surprise." The poem resumes what Plato called "the old quarrel between poetry and philosophy" and points to Nietzsche in showing that lies participate in the truth. Dickinson's distinction between gradual and lightning parallels Aristotle's distinction between historical and poetic truth and Heidegger's distinction between truth as mere correctness and *aletheia* (unconcealedness). The truth about telling the truth is that it's impossible to tell it all.

VESNA KILIBARDA, STELA PUDAR-HOZO AND HENRY WYZINSKI,

DEPARTMENT OF MATHEMATICS AND ACTUARIAL SCIENCES

Impact of Prerequisites on Success of Students in Mathematics General Education Classes

Understanding the success of students in college classes is a complicated issue. Predicting success based on measurable factors is hard to achieve. In our paper we focus on answering the question: how significant is the impact of prerequisites on the success of students in general education mathematics courses M100 and M118? A chi square test compared the frequency of occurrence of seven grade categories (A, B, C, D, F, W, R) for two groups of M100 students. The first group of 212 students finished M007 and/or M 14 with a C or better before M100. The second group contained 660 students without a prerequisite. The grade category R includes students that took the course at least two times. It was hypothesized that students with no prerequisites have the same grade distribution as the students with prerequisites. A significant deviation from the hypothesis was found (the chi-square is 32.844 and $p < 0.001$). In an additional chi square test we hypothesized that the same proportion of students with no prerequisites finished M100 with a satisfactory grade as students with prerequisites. A significant deviation from the hypotheses was found (the chi-square is 11.088 and $p < 0.01$).

Our analysis suggests that differences in the success rates of M100 students with and without prerequisites are significant. This supports our goal of improving the pre-test and better advising students into proper courses. Further analysis of M100 data and similar analysis of M118 data will help in our efforts to understand how to best aid students' learning.

ZORAN KILIBARDA, DEPARTMENT OF GEOSCIENCES, WITH

DAMJAN CADJENOVIC AND NOVO RADULOVIC, GEOLOGICAL SURVEY OF MONTENEGRO

Facies Analysis of Middle Jurassic Mt. Rumija II Oolite in Southern Montenegro

The most complete stratigraphy of Jurassic System in the world is found in the southern part of the Adriatic Carbonate Platform which is located in Montenegro. The study area is on the northern slopes of Mt. Rumija. The Middle Jurassic Mt. Rumija II Oolite unconformably overlies Lower Jurassic Tejani Limestone and is conformably covered by Upper Jurassic Coralline Limestone Formation. Mt. Rumija II Oolite is 60 m thick and divided into three members. The Lower Member is thinly bedded bluish limestone comprised of grainstone, cerebroid oolite, and fenestral grainstone/mudstone. The Middle Member is thinly bedded bluish gray grainstone made of poorly sorted algal rich oolite sandwiched

between the two thin layers of intraformational black pebble conglomerates. The Upper Member is medium bedded bluish ooid/pisoid grainstone that contains whole or disarticulated corals and calcareous sponges near its top. Mt. Rumija II Oolite deposition began with the Bajocian transgression and partial reworking of Lower Jurassic carbonates. The peak of transgression was marked by development of ooid shoals and lagoons that experienced seasonal changes in salinity. Filling of the sedimentation space caused progradation of supratidal flats and end of Lower Member deposition. Early Bathonian exposure and erosion surface are revealed by intraformational black pebble conglomerates that contain rhizocorallium and indicate plant growth. Late Bathonian transgression began with partial reworking of the Middle Member and continued with extremely agitated ooid shoals that were eventually fixed by early colonies of calcareous sponges and corals.

ADRIENNE KOCHMAN, DEPARTMENT OF FINE ART

Political Propaganda in Rural Ukraine: Katerina Bilokur's Still Life '30th Anniversary of the October Revolution,' 1947

The post World War II years were a period of recouping and rebuilding in Soviet Ukraine. The region was a major battle sphere on the Eastern Front, from the 1941 German invasion until their expulsion by Soviet forces in 1944. By 1947, Ukraine's population was approximately 5 million less than it had been before the war, 10 million were homeless, and about 85 percent of its industrial and agricultural operations did not function. It was also a year of famine.

Katerina Bilokur's (1900-1961) painting, *30th Anniversary of the October Revolution 1947*, was a clear attempt to rally hope among Ukrainians beset with the hardships of recovery for their government. It was a propaganda piece used to reassert Ukraine's connection to the Soviet system, through the ideals of communism, at a time when national Ukrainian and Soviet identity seemed diffuse.

Bilokur paired mass media tools such as Soviet political posters with nature still life to promote ideological unity and historical validity to the communist model. Posters of women fighting for the revolutionary cause or symbolizing the motherland celebrated the 1917 October Revolution. Women were an important symbol of strength and renewal and became connected with the land and bounty it provided. Bilokur's identity as a war survivor, a peasant and largely self-taught artist, added credibility to the propagandistic message her painting conveyed. Her work helped forge a new Soviet Ukrainian identity based on nature's model of cyclical renewal and the power of idealistic cooperation.

TAYLOR LAKE, DEPARTMENTS OF COMMUNICATION AND WOMEN'S STUDIES

Cutting to the quick of it: the spaces of emotion in *Nip/Tuck*

In the FX television series *Nip/Tuck*, plastic surgeons Sean McNamara and Christian Troy, during their off hours, are engaged in a quest for emotional satisfaction within their relationship as best friends and professional colleagues and their relationships with significant others. They seek out, experiment with, and reflect on ways to establish authentic emotional connections with those they care for—to transcend the boundaries between individual subjects and the boundary that separates their own interior emotional forces and the exterior surface of their bodies. However, while operating as plastic surgeons, McNamara and Troy “treat” the emotional pathologies of their patients with medical inscription. They cut, tear, remove and augment flesh and bone to rewrite the patient's exterior surface; they heal the pain of gender and sexual identity by altering and thus energizing the physical networks of the flesh.

This paper argues that the series *Nip/Tuck's* representations of emotions reveal the contradictions in current cultural constructions of emotions. Emotional expression is, in one sense, constructed around the binarized spaces of inside/outside and human connectedness in terms of a breaking through or transcending the line that separates an emotional authentic self and the exterior social face/façade. In the other sense, emotional expression is an instrumental process of inscription through which the plastic surgeon rewrites the patient's authentic emotional self onto the surface of the body thus recreating both anew.

XIAOQING DIANA LIN, DEPARTMENT OF HISTORY

Marxist Historical and Dialectical Materialism and Intellectuals in Communist China: Feng Youlan and His Interpretations of Confucius

Marxist historical and dialectical materialism gained prominence in China especially in the 1930s. This paper seeks to explore the Chinese intellectuals' approaches to Marxist historical and dialectical materialism in Communist China, especially in the case of Feng Youlan(1895-1990), a preeminent philosopher and authority on Confucius, in his successive interpretations of Confucius from the 1930s to the 1980s, to see how Marxist interpretations influenced Feng's intellectual framework.

In his early publications on Confucius in 1931, Feng described Confucius as an innovator and emphasized genuine human sentiments as the basis of Confucian moral values such as humaneness. By 1960, his Confucius had become a representative of the newly emerging landlord class in a declining slave society. Feng continued to assert the validity of Confucian humaneness, but this time the validity came from the progressive social forces Confucius represented, rather than natural human sentiments. By 1980, Feng's Confucius regained much, if not more, of his previous emphasis on natural human sentiments. I will use Feng's approaches to Confucius as a trope to explore Chinese intellectuals' relationship with Marxist historical and dialectical materialism in the Communist era.

ALAN F. LINDMARK, DEPARTMENT OF CHEMISTRY

Characterization of Molybdenum (II) Complexes Containing Metal-Carbon Bonds

Molybdenum is an important, yet enigmatic transition element. Its numerous oxidation states (varying from 0 to +6) and the fact that it is the only transition metal outside the first transition series to have any significant biological function has made it an extremely important venue for investigators. Current work focuses on its ability to form stable metal-carbon bonds and its ability to form numerous seven- and eight-coordination number metal complexes. Work is also focused on the kinetics of reversible substitution reactions of molybdenum (II) - seven-coordinate isocyanide complexes with halide ions. Characterization of similar complexes of molybdenum(II) (and tungsten (II)) involving seven-coordinate complexes with isocyanide and related ligands containing metal to carbon bonds is reported. Characterizations of these complexes have been made using various spectroscopic techniques such as NMR(Nuclear Magnetic Resonance)— both C13, and H1, IR (Infrared), and UV-Vis (Ultraviolet-Visible). Magnetic susceptibility measurements were also obtained. Information obtained through these techniques includes: 1) assignment of metal-carbon and metal-halogen stretching frequencies, 2) fluxionality of the molecules in solution, 3) d- electron configurations, 4) magnetic moments and, 5) the energy of d-d electron transitions.

WILLIE MACK, UNIVERSITY OF ILLINOIS AT CHICAGO

Sponsor: Anja Matwijkiw, Department of Philosophy

Justifying Preferences: The Foundation of the “Children First” Declaration.

Using the distinction between the Narrow and Wide Stakeholder Theory, I examine the implications in the context of the “Children First” declaration. While the main normative sub-positions, on the one hand, relativism and utilitarianism (cf. Narrow Stakeholder Theory) and humanism and universalism (cf. Wide Stakeholder Theory) are traditionally treated as antagonistic, I synthesize these by arguing that the interests that are at stake for school children ought to be favored at the expense of all other groups that can make claim to consideration. My appeal to fundamental ethical principles entails that children be treated as holders of human rights to, among other things, education. Furthermore, the corresponding duty-bearers are required to provide quality education that satisfies the strict notion of academic excellence, just as their legitimacy depends on moral meritocracy. Linking ethics and politics, I also show that, ultimately, accountability falls on the superintendent, who is otherwise hired by the board of education within a given school district. In order to be perceived as principled or ethically consistent, the superintendent must pro-actively prevent political patronage interest groups from dominating the decision-making process. In the real world, retaliation or revenge can be expected. Admitting to the commonplace of this practice – for which dismissal or forced resignation is the paradigm – I debate the fairness of a High Principles approach from both an individualistic and a public policy perspective.

ANJA MATWIJKIW, DEPARTMENT OF HISTORY AND PHILOSOPHY

The Revenge of Philosophy

This paper offers a comparative analysis of pro-revenge and anti-revenge arguments as a foundation for a critical examination of international criminal law, first and foremost serious human rights violations such as genocide, torture and rape, which correspond to the duties to prosecute and, if the accused are found guilty, punish the deserving perpetrators. In the context of post-conflict justice, prosecution is a prior condition for the legitimate application of alternative accountability-securing measures, for example, truth commissions and vetting. However, the perpetrators’ escape from “the consequences of the law” (cf. legal punishment) may enhance the victims’ need for revenge. If so, the state is the party that ought to balance reality and morality. Adequate justice has not been done until the victims have been provided with effective satisfiers. Any intervention that is also a valid analogy to just punishment must respond to the need for revenge, so as to say that it ought to extinguish it. If revenge outside a proper court of law is the Last Option, then there seems to be no morally good reason to impose a ban on revenge on behalf of victims or, if these are dead or incapacitated, their heirs or representatives. Therefore, in the failed state, which is characterized by the absence of a competent, effective and impartial judiciary, the tension between, respectively, revenge versus justice, strict and legal versus non-strict and non-legal accountability-securing measures, and idealism versus pragmatism is maximized.

GENE MAYA, CHRISTOPHER KLONOWSKI, AND ATILLA TUNCAY, DEPARTMENT OF CHEMISTRY

Sponsor: Atilla Tuncay, Department of Chemistry

Sonochemistry in Organic Synthesis: Nucleophilic Substitution Reactions of Alkynyl Iodonium Salts

Ultrasound has been used recently and effectively in various organic reactions. The use of this technique has both diminished reaction times and increased product yields. Additionally, reaction products that are not accessible by conventional methods can be obtained using sonochemistry. Alkynyl iodonium salts have emerged as valuable reagents for organic synthesis in recent years. These alkynyl iodonium salts can be formed by sonicating a terminal alkyne with [hydroxy(tosyloxy)iodo]benzene or [hydroxy(mesyloxy)iodo]benzene. In particular, two of the alkynes used in this research to synthesize the iodonium salts were 3,3-dimethyl-1-butyne and 1-heptyne. The reactions of the iodonium salts with different nucleophiles were studied. The use of hypervalent iodine methodology along with sonication resulted in a reactivity reversal of the terminal alkynes, which is very significant. Reactions of these alkynyl iodonium salts using sonochemistry with diethylmalonate, alkynide, and selenide ions were also investigated. Additionally, this research reports the impact of variables such as time and amplitude of sonication on product yields.

JULIE MENDEZ, DEPARTMENT OF HISTORY

Sponsor: Jerry Pierce, Department of History

The Inquisition: Purpose and Procedure

This paper explores the purpose(s) behind the creation of the inquisitorial process during the thirteenth and fourteenth centuries as a means to combat the rising threat posed by so-called "heretics." One of the medieval Church's first goals was to gather information regarding heretical activities in order to first understand, then, impede the spread of heterodoxy, thereby rescuing good Christians from the eternal punishments associated with such grave sins. In addition to examining the purpose behind the inquisition, this paper also charts its actual process, which included investigation, questioning, the approved use of torture, and penance. In doing so, this paper argues that the primary goal of the inquisition was not simply the conviction and execution of heretics, as has been often assumed, but rather the absolution and ultimate salvation of wayward souls.

LORI L. MONTALBANO-PHELPS, DEPARTMENTS OF COMMUNICATION AND WOMEN'S STUDIES

America at War: Homefront Narratives on WWII from Women of the Calumet Region

War and war rhetoric of the past represent important data of historical significance. Research on personal narratives suggests that through narration, we construct an understanding of life events, make sense of the past and plan for our future. In this study, I examine narratives of nine women who live in the Calumet Region, as they recount their experiences of living on the homefront during World War II. Participants recount memories of working as riveters, the travesty of Japanese interment camps, rationing, and raising families alone in a time of very traditional gender-specific family roles. Specifically in this paper, I analyze the themes embedded in their rhetoric, looking for communicative patterns against literature on the communication styles of women. Gender roles and expectations during a time of role-reversal in industry, as well as traditional patterns of sacrifice for the greater good are

highlighted. These themes typify the sentiment contained in the narratives, as well as an unrelenting patriotism that resonates throughout the discourse even today, as the women share their memories of an era that shaped a generation.

JULIE ANNE NICKSIC, DEPARTMENT OF SOCIOLOGY

Sponsor: Tanice Foltz, Department of Sociology and Anthropology

Educational Inclusion: Reforming Society

This paper focuses on the inclusion of physically and/or mentally challenged individuals into the public education environment and mainstream society. It begins with a brief history of the development of education as an institution, concentrating on societal aspects. The paper further examines the complete exclusion of physically or mentally challenged individuals from this institution, and therefore from normative society. It offers an in-depth view into the stigma that disabled people and their families suffer due to this exclusion, and addresses how individuals and families have dealt with this stigma. Further, it presents the laws intended to benefit the lives of physically and/or mentally challenged people, as well as how the laws have been utilized. The paper offers an examination of the possible effects of mainstreaming physically and/or mentally challenged individuals into the public schools, workplace, media, and society in general.

Focusing on the public school system, this paper analyzes the pros and cons, both societal and individual, of educational inclusion reform. It examines previous research pertaining to the progress of inclusive classrooms and analyzes the effectiveness of the current system. It offers results of studies that indicate the extent of reform that may be necessary to successfully include and de-stigmatize mentally and/or physically challenged children into the general education classrooms. The paper proposes that successful inclusion at the early childhood level may be the most effective method for a future that does not stigmatize nor exclude members of our society based upon mental abilities or physical attributes.

CHARLOTTE A. NOBLE, DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

Sponsor: Christine Malcom, Department of Sociology and Anthropology

HIV/AIDS in Haiti: An Ecological Approach

Medical anthropologists must consider many factors when studying human health in a variety of environmental and cultural contexts. McElroy and Townsend (2004) present a theoretical model in which to study health called Medical Ecology. The framework of this interdisciplinary approach is characterized by four different data sets, each providing a level of analysis key to understanding health cross-culturally. These data sets are Bioenvironmental, Clinical, Epidemiological, and Socio-cultural.

The reason that this approach is critical to understanding the epidemic of HIV/AIDS in Haiti is twofold. First and foremost, disease does not occur in a vacuum. In the epidemiological model of disease transmission, four things are required: a host, an environment, an agent or pathogen, and time. Changes in any one of these factors affects the outcome. Moreover, we simply cannot consider these factors from the outsider's perspective. Knowledge of the cultural environment in which these factors exist is vital, especially if the intention is to affect the course of the disease.

It is through these data sets that I explore HIV/AIDS in Haiti. This paper discusses the understanding of HIV/AIDS as it currently stands, but more importantly, indicates that much more research needs to

be done to understand health and disease from an anthropological perspective. Ethnographic research conducted in Fond des Blancs, Haiti, during the summer of 2006, will serve to further enhance the understanding of HIV/AIDS in Haiti.

ANDY OLER, INDIANA UNIVERSITY BLOOMINGTON

Sponsor: Robin Hass Birky, Department of English and Women's Studies

Image of His Own Torment: Interracial Masculinity in *Absalom, Absalom!*

Thomas Sutpen, *Absalom, Absalom!*'s protagonist, derives much of his power from racial and sexual characteristics. Though he is identified as the alpha white male, racial obfuscation blurs Sutpen's white masculinity, marks him as interracial and affords him access to exceptional power and social mobility. Although usually presented as white tempered by black, Sutpen is also "cast [...] in retrograde, reverse" and rendered similar to his interracial son, Charles Bon. Frequently associated with his geographical origins, Bon is a racial orphan; like the "little lost island" of Haiti, Bon floats between white America and black Africa, connecting him to the expectations of white Southern society and the productivity of a long-lasting African "female principle."

Hybridity of race and gender in *Absalom, Absalom!* enables a productive vitality: purely white characters wither while white interracial Sutpen produces four children and black interracial Bon becomes the progenitor of Sutpen's most vigorous line. However, Sutpen's interracial characteristics increase his power while Bon's suggest a more prevalent pattern of emasculation. In this vein, it is useful to consider Sutpen's plunge into photo-negative blackness, in which he is feminized, made "vain [and] unsubstantial." The question becomes, since Sutpen derives power from his white interracialness, whether and why Bon, as the black interracial, is feminized and emasculated. One possible response is found within the geographical evocation of Bon's origins, in that traditional manhood is combined with a feminine productivity, allowing his line longevity but removing it from Sutpen's traditional masculine powers of labor, authority and virility.

MARGARET L. PATITSAS, DEPARTMENT OF ENGLISH

Sponsor: Douglas Swartz, Department of English

Here, There, and Everywhere: Finding Ophelia in a Looking Glass

This paper analyzes the moral, emotional, and psychological characteristics of Shakespeare's Ophelia. It discusses the narrative and cultural context of her obedience to authority, her madness, and her death, considering the ways in which her role as a passive, compliant daughter contributes to her demise. The essay also contemplates the ways in which Ophelia's fate is symbolic of women's cultural reality. The character of Ophelia is discussed as both a cultural product and a narrative archetype. The essay seeks to uncover the cultural genesis of the Ophelia-like character as a narrative type, using Classical myths and Christian theology to explore deeply-embedded cultural attitudes towards women, which have influenced the portrayal of women in art. The paper traces the way in which cultural restrictions upon women's rights have led to the emergence of certain narrative patterns and types of female characters and examines how these patterns are tied into female history. Often, these narrative patterns simultaneously condemn and perpetuate such restrictions by ending in the destruction of the Ophelia-like character. The essay also reflects on the continuing presence of Ophelia's image in Western art post-Renaissance, from the works of Victorian writers and artists through contemporary art.

MARGARET L. PATITSAS, DEPARTMENT OF ENGLISH

Sponsor: George Bodmer, Department of English

Where the Girls Are

The paper offered for submission is a literary-critical essay that addresses the female experience of growing up as it is portrayed in several works of children's literature. The paper focuses on works from the mid-Victorian period to the early twentieth century. The books discussed in the essay are Louisa May Alcott's *Little Women*; Gene Stratton-Porter's *Girl of the Limberlost*; Laura Ingalls Wilder's *Little Town on the Prairie*; Frances Hodgson Burnett's *The Secret Garden*; and Eleanor Estes's *The Hundred Dresses*. Using these books, the essay explores how traditional Christian concepts of feminine virtue created cultural values and expectations for female morality and behavior distinct from those governing male morality and behavior. Culturally-determined differences in gender expectations resulted in a female literature that absorbed and emphasized different cultural values and personal experiences. The paper examines how female writers created stories that center around the heroines' self-sacrifices and goodness as integral parts of female growth. These ideals are in direct contrast to stories of adventure and independence written for boys. The essay explores the ways in which culturally-embedded notions of gender differences inform and dictate literature, and addresses how the works discussed present specifically female experiences in female-centric settings. The protagonists of these works navigate situations in which their success in reaching maturity depends upon living up to societal expectations of female virtue rather than by completing a journey or adventure.

JULIE PELLER, KANDIS KNIGHT, AND CAROLINA FLORES, DEPARTMENT OF CHEMISTRY

Sponsor: Julie Peller, Department of Chemistry

Oxidative Destruction of Bisphenol A (BPA) in Deionized Water and in Orange County (CA) Waste Waters

Bisphenol A (BPA) is an organic compound used in large amounts in the production of polycarbonate plastics. Bisphenol A is also classified as an organic water contaminant and an endocrine disrupting compound (EDC), a substance that binds to a receptor and mimics a natural hormone or prevents a normal hormonal response. Many organic compounds, such as BPA, are being detected in natural water supplies, indicating their ability to evade municipal water treatment and natural water cleansing processes. In an effort to remediate these organic contaminants, advanced oxidation processes are being utilized, which rely on extremely reactive and highly oxidative hydroxyl radicals. Ultimately, the hydroxyl radicals oxidize toxic organic compounds to produce carbon dioxide and water. A cobalt-60, gamma radiation source, housed at the Radiation Laboratory on the University of Notre Dame campus, was used to produce the hydroxyl radicals in water solutions. Various levels of treated waste waters from Orange County California were spiked with bisphenol A, and the BPA degradation rates were compared to those of deionized water and tap water. The changes in concentration of bisphenol A were studied over time with respect to the water quality, intermediates formed in the oxidation were identified, and a reaction mechanism was proposed for the BPA-hydroxyl radical degradation.

Sponsor: Diana Lin, Department of History and Philosophy

The Relation Of The Human Disposition To Its Environment In “Mengzi” Philosophy

Over 3,000 years ago, Mengzi, a disciple of Confucius, debated and argued the question over the original condition of the human disposition. Mengzi elaborated on the human capacity to perform “good,” or on what the West might consider as simply human nature. The role or function of feeling serves as a focal point in Mengzi philosophy, because he believed dogmatic doctrines could not be trusted as the environment or social institution that produced the doctrines had changed. This paper will argue that the philosophy of Mengzi holds that the human capacity to perform “good” is dependent upon the specific environment in which it grows and is cultivated, regardless of the original form or condition in which the human disposition was created.

Mengzi spoke in botanical terms and argued that, if the individual could be properly cultivated along a predetermined path, the individual would eventually become morally righteous, and finally could be considered “human.” For individuals to cultivate their dispositions to the level of human, they must concentrate their efforts on what is known in Mengzi thought as the “Four Virtues,” or the “Four Sprouts.” These virtues are more than feelings and are found translated differently from one source to another, although the commonly agreed upon interpretation of the Four Virtues are “Ren”, or humanity; “Yi”, or righteousness; “Li”, or propriety; and “Zhi”, or wisdom. Mengzi thought that every person has the capacity or the potential to become virtuous; however, tragically most people do not fill out their potential.

KATARZYNA PRZYBYLA-KELLY, USGS, GREAT LAKES SCIENCE CENTER, LAKE MICHIGAN
ECOLOGICAL RESEARCH STATION

Challenges in microbial water quality monitoring on the Northern Indiana Beaches

For the last few years, summer brings higher expectations for resolving the problem of beach closures. The currently used method, which delivers the results of bacterial contamination the next day, is an inadequate way for protecting public health. Project SAFE (Swimming Advisory Forecast Estimate) is an alternative method of informing the public about water conditions the same day without time-consuming (18-24 h) E. coli testing. SAFE uses a regression model built upon the relationship between E. coli and the combination of different hydrometeorological factors (like rainfall, wind speed and direction, wave height and direction, current direction, lake turbidity, etc.), and generates the probability number for beach closure. This statistical model was created by testing correlations of numerous variables with E. coli counts. SAFE was first implemented in 2004 on five Northern Indiana beaches; it was validated in 2005 and 2006, yielding better results than the EPA method. Predicting E. coli levels is still quite challenging, since concentrations of these bacteria vary within the replicates, fluctuate seasonally and diurnally, but persist in the environment. Furthermore, determining the sources of pollution is problematic. Newer rapid methods are being tested to obtain the results of E. coli levels within 2-3 hours (QPCR – Quantitative Polymerase Chain Reaction), and to search for better indicators of water pollution and non-point sources.

GREG SADLER, BALL STATE UNIVERSITY

Sponsor: Anja Matwijkiw, Department of Philosophy

Revenge, Retribution, Punishment and the Aristotelean Dynamic of Anger

While Aristotle's moral philosophy does not have a fully articulated theory of retribution and punishment, his discussions of anger provide a fruitful and commonsensical way of understanding such matters. My paper will discuss several themes raised by Aristotle's discussions, my main thesis being: if Aristotle is correct in his understanding of the relations between anger, retribution, and moral valuations, we can distinguish between rightful retribution, mere revenge, and even malice or cruelty. These distinctions will not be adequately captured in sets of rules, but rather require reference to character, judgment, and virtues. Affectivity will be an integral part of the proper moral response to wrongdoing, so that the difference between retribution and revenge, from an Aristotelean standpoint, will not reside in a putatively "objective" and affectless retribution and a purely subjective and affect-laden revenge. Although Aristotle does hold out the possibility of an affectless retribution, he does not view this as normal. Indeed, Aristotle views desiring that those who violate norms suffer some penalty to be an integral part of a good character. What is ultimately decisive for Aristotle, and what reins in retribution, allowing it to be distinguished from revenge or malice, are moral norms.

LARY SCHIEFELBUSCH, DEPARTMENT OF MATHEMATICS AND ACTUARIAL SCIENCE

Actuarial Science from the Air

To see the interconnection of streams and rivers in an unfamiliar land, take to the air. As one rises from the ground, the big picture emerges. From the ground, individual streams may seem isolated; but from the air they are visible as interconnected features of a larger watershed. So it is with mathematics. Examples that initially appear unrelated may, in fact, be connected. To see the connections, we take to the air. Much of mathematics describes the "real world" that we touch and see at close range; but the wings of abstraction can take us to a higher vantage point, where we can see a broader mathematical landscape.

Actuarial science studies the mathematics of the insurance industry. A part of that study involves a variety of seemingly unrelated examples that can, nevertheless, be connected by a single unifying theory. Specifically, a number of topics in actuarial science involve a sequence of possible payments. Whether or not each payment in the sequence is actually made depends upon certain conditions or contingencies. If these contingencies are understood, we may attempt to assign a probability to each payment, namely, the probability that it will actually be made. Assigning different probabilities can create a variety of theoretically related examples involving different types of life insurance and life annuities. The purpose of this presentation is to explore some of these examples from the perspective of the unifying theory.

ADITYA SHAH, JENNIFER SUSORENY, AND JULIE PELLER, DEPARTMENT OF CHEMISTRY

Sponsor: Julie Peller, Department of Chemistry

Mechanistic Determinations in the Photocatalysis of *Cladophora*, a Lake Michigan Alga

A long term solution to the problem of algal overgrowth on the shores of Lake Michigan may be the utilization of TiO₂ photocatalysis. *Cladophora*, one of the algae growing heavily along the lake during

the summer, was successfully degraded in our earlier studies using TiO₂ and sunlight. Although the *Cladophora* is obviously destroyed in the photocatalytic process when it makes contact with the photocatalyst in the presence of UV light, the mechanism involved in the decomposition is not understood. The loss of green color is an indicator of plant cell death and was the basic measurement of cell viability. While microscopic images are useful in realizing the lack of chloroplast pigment content, further information is being obtained through various cell stains and more sophisticated microscopic techniques. Healthy *Cladophora* and damaged *Cladophora* have been studied using various microscopes and fluorescent staining microscopy. Concrete microscopic visualizations, which show cell leakage and verify chlorophyll content outside the cells, point to a mechanism involving the lyses of the cells. The viability stain, Evans Blue, was utilized to determine the rate of destruction, since it stains compromised cells blue and is not taken up by healthy algal cells. But, the lysed cells from the photocatalysis do not hold the stain and allow for determination of destruction rate. More information on the mechanistic pathway in the oxidative cell destruction is proposed.

ANNE LOUISE SHARP, SCHOOL OF EDUCATION

Sponsor: Douglas Swartz, Department of English

The Gulling of Malvolio: A Director's Choice and a Character's History

Watching recent film versions of *Twelfth Night*, directed by Trevor Nunn and Kenneth Branagh, I was struck by the malevolence with which the other characters treat the butler Malvolio. Were I to direct this play, I surmised, I would approach his mistreatment with more humor than malice, having Malvolio appear less truly pitiful and more indignant, to engender the audience's sympathy for Malvolio and allow for a more fully-realized, multi-faceted portrayal of the character. This has increasingly been the approach of modern directors. In Shakespeare's day, however, the subplot known as "The Gulling of Malvolio" had its roots firmly planted in current events. The religious reform movement known as Puritanism had spawned a legalism and religious fervor that sought to extinguish immorality from every facet of society. The Theatre, with its boys dressed as women and its often gender-bending plots, raised questions about gender and sexual attraction in a way that the Puritans found particularly offensive. Consequently, the Theatre became a prime target of Puritan persecution. In the character of Malvolio, we have Puritanism both personified and vilified - he is pompous, arrogant, self-righteous, and a killjoy. While a director may wish to present a dignified Malvolio with whom audiences can identify, lending the character an air of realism and humanity, this interpretation detracts from what one might reasonably expect to have been Shakespeare's true intention: to poke fun at the Puritans. This paper considers the difficult question of how to choose between "modern" theatrical notions of a fully-realized character and the "early modern" origin of that character.

ERIN SMITH, DEPARTMENT OF HISTORY

Sponsor: Diana Lin, Department of History and Philosophy

Pan Chao (48-116 C.E.) and the Influence of Confucian Values on Chinese Women

Women in ancient China were greatly restricted by a complex web of law and tradition and were taught as children to be submissive toward men. During the time of Pan Chao (48-116 C.E.), Confucianism had been accepted as the state ethic. In a system characterized by filial piety, a woman's life was described by her three main authoritative figures, which were her father during childhood, her husband while married, and her son when she became widowed. Marriages were arranged by these authoritative figures with neither the participation of the young woman nor the knowledge of the principles.

Pan Chao, who achieved unprecedented glory for a woman, was the daughter and sister of famous Chinese historians in the Han Dynasty (206 B.C.-220 A.D.). Pan finished a monumental history of the Han Dynasty started by her brother whose work was cut short by his untimely death. Yet, this woman still emphasized the Confucian teachings on female obedience to male authority. This paper seeks to explore the lasting hold of Confucian values on (even professionally successful) Chinese women such as Pan Chao who chose to reinforce and perpetuate female obedience to men on herself and on her female posterity, through a close examination of Pan Chao's treatise "Lessons for Women," which since became a (Confucian) classical treatise on female behavior and its rationale.

PATRICIA SULLIVAN, DEPARTMENT OF MODERN LANGUAGES

Sponsor: Scooter Pégam, Department of Modern Languages

Canadian Aboriginal Health Care

Before the Europeans settled on this continent bringing previously unknown diseases, Aboriginal People of North America relied on the ways of their people for their total health and well being. The advent of European Colonization prior to 1876 brought smallpox, diphtheria, tuberculosis and influenza to native peoples. These new diseases did not respond to the shaman's medicinal herbs resulting in whole villages being wiped out.

The treaty of 1876, known as Treaty 6, between the First Nations and the British Crown provided a 'Medicine Chest' in exchange for British appropriation of the land. Within the clause, Medicine Chest, an agent was appointed whose responsibilities included the decision as to whose needs should to be met. Today the First Nations people, including the Inuit and Métis feel that their needs are not measured in accordance to beliefs and values of the people.

This paper will discuss medical care for First Nations and their expectations, in regard to their medical needs, along with the Canadian government's responsibility to these people. By studying articles written by First Nations people pertaining to their medical needs, it is apparent that the Canadian Government, as subjects of the British Crown, has failed in its responsibility to the First Nations people of Canada.

DOUG SWARTZ, DEPARTMENT OF ENGLISH

Pleasure and Profit in Tournier's *The Atheist's Tragedy*

Cyril Tournier's *The Atheist's Tragedy*, written and performed at the end of the first decade of the 17th century, is a play comprised of interruptions, of unfinished exchanges, unresolved debates, and unachieved aims. It ends in a spectacular coup de theatre literally exemplifying what Horatio in *Hamlet* calls "purposes mistook/Fallen on the inventors' heads": the titular villain, D'Amville, dashes his own brains out with the ax with which he intended to execute the hero and the heroine of the play, who had offered their necks to his stroke with extravagant stoic submission. This last interruption has seemed to signify unambiguously the effective expression of God's displeasure, the like of which had either been conspicuously absent or radically uncertain in the play's (many) precursors from the previous decade. But this unmistakable sign of divine displeasure, and its decisive interruption of the atheist's naturalistic pursuit of immortality through bodily legacy of progeny and the accumulation of a monetary estate to secure that legacy, does not unambiguously attest to the supervision and superseding of the natural by the supernatural in the play. Critical readings of the play have tended to emphasize centrality of the

dramatic certainty of its de casibus-like moral as its intended didactic “profit,” but in the paper, I examine the text of the play and its often complexly structured scenes which return compulsively to the themes of profit and pleasure, as the playwright engages in a speculative and skeptical commentary on Horace’s *Ars Poetica*’s well-known combination of delight and instruction.

REBEKAH TROLLINGER, DEPARTMENT OF ENGLISH, INDIANA UNIVERSITY

Sponsor: Robin Hass Birky, Department of English and Women’s Studies

The Trauma of War in Faulkner’s *Absalom, Absalom!*

Moments of widespread trauma, such as those caused by a natural disaster or war, compromise a society physically and economically. We see these affects in newspapers and on TV. But what is rarely explicitly discussed is how such instances of trauma can rupture a society’s most foundational psychological structures. Despite being (rightfully) celebrated as a vehicle for freedom, the United States Civil War was also one such instance of trauma. Not only did the war kill thousands upon thousands of soldiers and civilians, and leave the south economically destitute, but it also caused the disintegration of foundational structures of society, most notably that of masculinity.

Kaja Silverman’s psychoanalytic understanding of masculinity and Stephanie McCurry’s historical interpretation of antebellum Southern politics and family life lend depth to William Faulkner’s *Absalom, Absalom!* Both Silverman and McCurry posit the family unit as the primary locus of masculinity, and both articulate the fear of racial mixing that comes with (especially) white masculinity. *Absalom, Absalom!* portrays the breakdown of a particular white, (United States) Southern masculinity and the effects of the United States Civil War. This masculinity is dependent upon the dual domination of women and African Americans, especially through the family structure. But these categories of domination reveal the fictional status of that masculinity. The novel portrays the collapse of masculinity, through incest and biraciality, and reveals the deep crisis that resulted from the trauma of the war. Indeed, the only surviving, breeding man is quite possibly the antithesis of white, Southern masculinity.

SCOTT TROYAN, UNIVERSITY OF WISCONSIN-MADISON

Sponsor: Robin Hass-Birky, Departments of English and Women’s Studies

Tendentious Tales: Tension and Invention in *The Canterbury Tales*

Medieval rhetorical manuals urged authors to invent texts by reworking material from new or different perspectives. In *The Canterbury Tales*, Chaucer took his advice in a different direction, preferring instead to invent texts by re-inventing narrative forms. To accomplish this, he chose to undermine audience expectations for types of narratives, in the process not only inventing greater depth for his tales and narratives, but also imbuing his characters with greater depth as well. The resulting tension between audience expectations for narrative forms and the actual tales told generates a tendentious relationship between text and audience through and by which one gains greater insight into the pilgrims.

BOGDAN VAJIAC, DEPARTMENT OF MATHEMATICS

Lower Algebraic K-Theory and Rigidity

Strong geometric conclusions can be drawn from algebraic constructions attached to spaces. One of the motivating questions for studying the algebraic invariants contained in the lower K-theory groups comes from topological rigidity. The theorems of Bieberbach and Mostow proved early that in certain

cases, the isomorphism class of manifolds is decided by algebraic invariants, such as the fundamental group. One of the leading conjecture in this area (still open) is Borel's conjecture, which asserts that any two closed aspherical manifolds with isomorphic fundamental groups are homeomorphic. By applying geometric techniques, Farrell and Jones proved Borel's conjecture for a certain class of groups which are "negatively curved". They showed that certain lower K-theory of the group rings in question vanish. Hence the obstruction to rigidity must vanish in those cases. Their results involve computing the lower K-theory of certain virtually cyclic groups.

This talk will present the history of the subject and our results in computing of the "atoms" in the above discussion, i.e. to calculate, in special cases, the K-theory of virtually cyclic groups. The methods will be outlined and theorems will be stated, but the talk will be directed to reach a large audience.

SHIYONG WANG, XINNA LI, HAITAO WANG, AND DIPIKA GUPTA,
INDIANA UNIVERSITY SCHOOL OF MEDICINE-NORTHWEST

Sponsor: Xinna Li, IU school of Medicine-Northwest

Poster: Expression of PGLYRP2, a bacterial cell wall degrading enzyme, is differentially regulated in skin and liver

Peptidoglycan recognition proteins (PGRPs) are a group of newly identified proteins with emerging functions in mammalian innate immunity.

PGRPs are a novel family of pattern recognition proteins that are highly conserved from insects to mammals. Humans have a family of 4 PGRPs, which were named PGLYRP1, PGLYRP2, PGLYRP3, and PGLYRP4.

PGLYRP2 is an N-acetylmuramoyl-L-alanine amidase, which allows this enzyme to cleave PGN between the sugar moiety and the peptide moiety. PGLYRP2 is differentially expressed in the two major organs in the human body, liver and skin.

In this study, we identified the transcription start site for *pglyrp2*, and demonstrated that the differential expression of PGLYRP2 in hepatocytes and keratinocytes is regulated by difference transcription factors whose binding sequences are located in different regions of the *pglyrp2* promoter.

Induction of *pglyrp2* in keratinocytes is regulated by sequences in the distal region of the promoter and requires the transcription factors NF- κ B and Sp1.

Induction of *pglyrp2* in hepatocyte cell line is regulated by sequences in the proximal region of the promoter and requires the transcription factors c-Jun and ATF2.

MISTY WEBB, DEPARTMENT OF HISTORY

Sponsor: Jerry Pierce, Department of History

Inquisitional Reform and the Revision of Interrogational Methods

This paper examines the changing interrogational process of the medieval "inquisition" from its more benign beginnings (generally known as the way of caritas) to a much more rigid and harsher system concerned with punishment (the way of potestas), a change which developed under both the early thirteenth-century emperor Frederick II of Germany (1212-1250) and Bernard Gui, a fourteenth-century French inquisitor (1261-1331) who wrote the *Practica inquisitionis heretice pravitatis*. This paper dis-

cusses the development of inquisitorial methods from their decentralized beginnings until their revision and “perfection” by Bernard Gui. The paper, then, explores how the inquisitorial process, reflecting a change to more repressive and centralized institutions, was revised from an ad hoc series of investigations into a frighteningly effective judicial system designed so that no heretic from any sect might evade conviction or consignment to the flames.

ADAM WILSON, DEPARTMENT OF BIOLOGY

Sponsor: Spencer Cortwright, Department of Biology

Influence of Small Mammals on Prairie Restoration

Habitat destruction is the biggest threat to natural areas remaining on Earth and this certainly includes northwest Indiana. In northwest Indiana, not many high quality natural areas remain, and most of those have been preserved. Our primary remaining option for enhancing our natural environment is through habitat restoration of degraded areas. Once restoration activities on a site begin, the enhancement in the variety of animals can attest to the emerging quality of that site; however, the presence of some animals may retard the restoration process. Species of herbivorous small mammals might eliminate certain plant species, thereby reducing plant diversity in the restoration. This project quantifies the impact of prairie voles and deer mice on a prairie and wetland restoration project immediately north of the IU Northwest campus. Results show that these small mammals can drastically change in abundance from year to year, and in years of low abundance have minimal negative impact on survival of the two test species.

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