

Spring Symposium

2005

Tuesday, May 17th

Eastern Oregon University
presents the seventh annual
Spring Symposium



*"A celebration of undergraduate achievement
in research and creative activities"*

Spring Symposium 2005

Events Schedule



Tuesday, May 17, 2005
Opening Sessions – 8:30 a.m.
McKenzie Theatre, Loso Hall

Talks 9:00 a.m. – 3:30 p.m.
Hoke 309

Talks 10:00 a.m. – 4:00 p.m.
Hoke 201-202

Panels 9:00 a.m. – 2:00 p.m.
Hoke Main Lounge

Artistic Display 9:00 a.m. – 4:00 p.m.
Nightingale Gallery Lobby, Loso Hall

Poster Sessions: Loso Hall Lobby

Session I 9:30 a.m. – 10:30 a.m.

Session II 11:00 a.m. – Noon

Session III 12:30 p.m. – 1:30 p.m.

Session IV 2:00 p.m. – 3:00 p.m.

Performance Art 10:00 a.m. – Noon
Schwarz Theatre

Plenary Session 5:30 p.m.
Huber Auditorium, Badgley Hall

Reception following in Simmons Gallery, Badgley Hall

8:30 a.m. – McKenzie Theatre – Loso Hall

Opening Session

*John Galliano: President, Associated Students of
Eastern Oregon University
Master of Ceremonies*

*Dean Sarah Witte
Eastern Oregon University
Opening Remarks and Welcome*

*Dr. Jodi Varon: Professor of English and Writing
Eastern Oregon University
Chair, Spring Symposium*

9:00 a.m • Hoke 309 • Talks

Chair: Ted Atkinson

Democracy and Judicial Review

Chellie Smietana

Faculty Sponsor: Jeff Johnson

This project explores the compatibility of democracy and the Supreme Court's power of judicial review. I will review John Hart Ely's work, *Democracy and Distrust*, as well as Ronald Dworkin's, *Law's Empire*, specifically noting Dworkin's 'law as integrity' model. I will argue that democracy and judicial review are compatible. I will conclude my project with a case study, applying Dworkin's 'law as integrity' model to two famous Supreme Court cases: *Bowers v. Hardwick* and *Lawrence v. Texas*.

Folktales All Around Us

Eden Kruger

Faculty Sponsor: Jodi Varon

Since October, I have been working with Professor Emeritus George Venn to transcribe, edit, categorize and contextualize folktales that Venn collected from his students while he taught at EOU. The presentation will include an overview of the project, the responsibilities of the folklorist, and the argument that folklore and folk tales are relevant; they are things that we inherit, and are traditions that connect everyone. I will give examples of some folktales from my culture.

You Stab 'em We Slab 'em

Chad Perry

Faculty Sponsor: Ted Atkinson

Now is a time to learn about the inevitable fact of life. Death is going to come to all of us. This subject is not comfortable for many people to discuss, but it needs to be done, and this is your opportunity. In this presentation, you will learn about operation management, training / education, interpersonal skills and realities of death. In addition, learning about the typical funeral and its process, caskets, prices, the cremation process, preplanning, prepaying and how to grieve and heal from the loss of a loved one.

10:00 a.m. • Hoke 309 • Talks

Chair: Rebecca Hartman

Commemoration of EOU Buildings

Ian Schroeder

Faculty Sponsor: Rebecca Hartman

Commemoration of Eastern Oregon University Buildings is a history thesis paper that examines the process of naming campus buildings. The paper is an historical analysis that focuses on three main buildings at EOU - Alikut Hall, Pierce Library, and the new Science Center, Badgley Hall. My work draws on the theory of vernacular and official culture presented by John Bodnar in his book *Remaking America*. I argue that successful commemoration of a campus building requires the intersection of both official (campus leaders) and vernacular (ordinary people such as students, community members and faculty) culture. After analyzing Bodnar's theory and commemoration at EOU, I found that his theory provides a good framework for EOU buildings, but is not as black and white when applied to a small community. This work makes a contribution to the ongoing process of developing historical accounts of Eastern Oregon University's past and offers fresh insights into the commemoration process.

Testimony As a Tool of the Feminization of the World

Keiko Odashiro

Faculty Sponsor: Jill Gibian

In this project, I scrutinize how social movements created by oppressed indigenous populations were achieved through testimonies of indigenous women's political activists such as Domitila Barrios de Chungara, Elvia Alvarado, and Rigoberta Menchu, who worked to overcome cultural and political oppression in Latin America. I also stress the power of language implied in these women's emancipation as women and political agents. By analyzing the structure and effect of testimony through feminist viewpoints, I will construct a peace theory in the context of Latin American women's movements.

EOU in the 1980's

Amy Anderson

Faculty Sponsor: Rebecca Hartman

The 1980's was a decade full of controversial social matters, economic trials and tribulations and political importance, all of which affected higher education. This paper will explore the impact of culture wars, economics, politics, and labor markets on higher education in the 1980's and how these affected Eastern Oregon University.

Although EOU was located in isolated Eastern Oregon, it too felt the impact of the 1980's with respect to social, economic, and political matters. EOU, along with other institutions of higher education across the country, experienced changes in their curriculum, student activities and student involvement, based on the growing demands generated throughout the 1980's. Whether these changes were for the better or the worse is undecided. However, the one thing that can be asserted is that EOU is here today due to the support that was gained as a result of this mission to support the regional area of Eastern Oregon.

11:00 a.m • Hoke 309 • Talks

Chair: Bill Grigsby

Haven from Hunger Non-Food Drive

Emily Wolfe, Ruben Villa, Sandy Franks, Ashley Brooks

Faculty Sponsor: Bill Grigsby

Poverty in the community of La Grande looks much different than in cities with a larger population. It is disguised in a different way, making it harder to detect and almost invisible. There are different organizations and services within the area to help those in need with things such as housing, utilities, transportation, and food. One organization that does a great deal of helping is Neighbor to Neighbor Ministries. Through donations and the Oregon Food Bank, they are able to assist those with monetary needs and monthly food boxes. What about non-food items such as toilet paper, toothbrushes, shampoo, and laundry soap? A panel of Sociology students will present findings from a food bank survey that was distributed on what items are the most important for those who experience poverty in our community. From there, we will present a Power Point presentation outlining social capital that we attempted to build within our business community to further sustain things such as non-food drives, donations, and volunteerism. We will then present the results from when we conducted a non-food drive at three local grocery stores and talk about how to sustain this project for the future.

Hunger and Shame

Renee Roman Nose

Faculty Sponsor: Linda Reed-Jerofke

Every day in our state people go to bed hungry, many of them children. Not only is this a matter of local concern, it is also a statewide problem. Many services in Oregon communities are focused on providing a safety net for those who are unable, for whatever reason, to provide sufficient food for their families and themselves.

How can we, as individuals, reach out to our communities and make a difference in the lives of others who have food insecurity issues? How can we adapt our current system to reach out to those who are in need while still acquiring important information? What are the benefits to revamping our current system and to providing additional training to state agencies dedicated to helping those with food insecurity? Why is it important to treat public service clients with dignity and respect and how can we do so?

Oregon is ranked among the top three states in the nation for food insecurity. While food banks and state agencies struggle to meet this mounting need, the requirements and difficulties placed in the way of those actually seeking services seem to be designed to discourage and demean, rather than help those in need.

Why Do Parents Choose Four Rivers Community School?

Jennifer Melendez

Faculty Sponsor: Kerri Wenger

This study investigates parent involvement within Four Rivers Community School and why they choose to enroll their children in a public charter school rather than a conventional public school. Surveys and interviews were conducted to discover the attitudes of parents towards second language education and bilingualism as well as the promotion of multiculturalism at the local level. Some important questions asked were: Why do parents choose the charter school? What do parents think it is doing for the children? Was the second language component a large factor in their decision to enroll?

This study was preformed to help Four Rivers Community School find areas of strengths and areas for improvement from the parental point of view. Parental interest in the addition of a middle school component at Four Rivers Community School was also investigated. Major themes included: Support for the Dual Language Program; highly effective teachers and staff; and support of the Character Building/Discipline Policy within the school. This information will be presented to the school board of directors so that it may be used for the school's charter renewal in the coming year.

1:00 p.m • Hoke 309 • Talks
Chair: Sheldon Nord

Spanish for Native Speakers

Amanda Villagomez

Faculty Sponsor: Marla Johnson

If you are an educator interested in ESL or heritage languages, you should attend this session to see how Spanish for Native Speakers can positively impact your current or future students. This presentation will discuss why maintaining heritage languages, such as Spanish, is essential and why traditional foreign language courses do not meet heritage or native speakers' needs. Then I will explain what educators can do to support these students and to develop programs in order to help these students become competent bilinguals in a wide range of functions, resulting in both personal and national gains. The concept of Spanish and other heritage languages for Native Speakers is becoming very popular. However, most teacher preparation programs do not address the topic. So come to this session in order to get some exposure to this field.

Political Activism: Third Wave Feminists Meet Patriarchal Loyalists

Anne Marie Henriksen

Faculty Sponsor: Tonia St. Germain

The research argues that it is imperative that women of the third wave feminist movement become engaged in political activism for social change. The session will develop a conceptual framework regarding intentions of the contemporary feminist movement including: patriarchal loyalists' compliance to the male dominated institutions of Higher Education; third wave feminists' motive to create social change through political activism; and the perspective of a third wave feminist working to deconstruct the institutional sexist structure of patriarchal society.

A Profile of the EOU Student

Colleen Dunne-Cascio

Faculty Sponsor: Sheldon Nord

My PowerPoint presentation identifies the ideals for which students select EOU, their expectations, needs, and satisfactions of the students' EOU experience and what services EOU could focus on in order to maintain student satisfaction and retention.

The information reviewed and analyzed will be taken from the following:

1. Data of the Cooperative Institutional Research Program Freshman Survey (CIRP) - Institutional Summary and identify key points and areas of interest.
2. Data of the Student Satisfaction Inventory (SSI) over the past eight years and identify key points and areas of interest.
3. Data of the National Survey of Student Engagement (NSSE) and identify key points and areas of interest.

Outcome: An informed campus community of the needs, satisfactions and expectations of the EOU student.

2:00 p.m • Hoke 309 • Talks

Chair: Rosemary Powers

An Investigation of the Transitional Experiences and Current Realities of Women Released From Oregon Prisons

Marsha Jean Bates

Faculty Sponsor: Rosemary Powers

This is an on-going exploratory and qualitative research study that investigates the re-entry and transitional experiences of women released from Oregon prisons. The study focuses on two specific questions: 1) what are the current realities that women released from Oregon prisons encounter; and, 2) do Oregon prisons offer pre-release or post-release programming that prepares the women to re-enter society as responsible adults capable of sustaining themselves and their children. The research study is divided into two phases. Part I utilizes a "snowball" technique to survey the transitional experiences of twenty-two (22) women that ultimately grew to thirty-seven (37) women at the time of this report. The mailed questionnaire comprised of thirty-one (31) questions queried the issues of housing, income, medial needs, children and family contact, pre-release and post-release programs, transportation, and community support, as well as asking if the women will consent to be interviewed or know someone who would. Part II examines data from the ten (10) women who volunteered to be interviewed by either phone or in-person. Semi-structured questions are utilized in the interviews that allow the women opportunity to relate their experiences. Qualitative data analysis is based on the grounded theory method of Dick (2000). Dependent variables studied include recidivism, stability, role changing, and the availability of transitional programs. While transitional experiences of men have been studied extensively, few researchers have paid attention to the transitional experiences of women. This study explores the effects of having programs prior to release and what strategies the women use to re-enter their respective communities and resume caring for their children.

Women Living Near U.S. Military Bases in the Asian Pacific

Keiko Odashiro

Faculty Sponsor: Rosemary Powers

Women living near US military bases in the Asian Pacific are victims of cultural violence that prevails in a patriarchal society. Their security is threatened by the presence of the military in the form of violent assaults. In my research, I explore how local women living near military bases have overcome gender, cultural, and structural oppression, and what they can teach us about creating alternative solutions for the conventional notion of human security that relies on military power.

I am conducting historical comparative research to demonstrate the importance of women's leadership in socio-economic and political spheres and the importance of valuing those approaches to resolve conflict that are more often associated with women. I seek to present voices of living with danger and insecurity in Okinawa, Japan, Olongapo City in the Philippines, and South Korea.

Women have promoted peace with their voices in their communities through symbolic and non-violent means such as making human chains around military bases, presenting their local issues at various international conferences, and educating a new generation through war-movies and conversations with the elders who have experienced the Second World War.

Fostering Literacy Growth: The Home-School-Home Connection

Debra Ashton

Faculty Sponsor: Kerri Wenger

I will present the research findings of my inquiry project which sought to ascertain the influence of the home literacy environment on child literacy development. Findings in a case study of a local school with predominantly low SES student enrollment with regards to teacher views of the home literacy environment will be discussed. I will also seek to show several ways educators can foster home-school-home connections through implementing programs and procedures aimed at discovering and utilizing the home literacy funds of knowledge.

9:00 a.m. • Hoke Main Lounge • Panels

Chair: Jeff Woodford

The Frights and Delights of Social Research

Naomi Juniper, Keiko Odashiro, Marsha Bates, Suzanne Roberts, James Cain, Chris Martin, Cristi Slaybaugh, and Cierra Thomas

Faculty Sponsor: Rosemary Powers

Senior sociology students will present the difficulties and rewards involved in determining a researchable question, designing a project and method for studying the question, gaining access, gathering data, and making sense of what has been gathered. Students will address these questions using their individual projects which are: a qualitative study of the experiences of single mothers receiving welfare, a participant/observation study of community gardens, a comparative study of women living near military bases in the Asian Pacific, an interview-based study of women in transition from prison, an exploratory study of the social costs of compulsive gambling, an analysis of the effectiveness of academic advising, an historical/comparative study of the causes of genocide, and a content-analysis of gender and race in advertising.

The Culture of Poverty

Sandy Franks, Kathleen Cathey, Renee Roman Nose, Erin Wolford, Donald Cody, and Allan Sanada

Faculty Sponsor: Linda Reed-Jerofke

As part of Dr. Linda Jerofke's anthropology research, Haven from Hunger, we explored hunger and poverty in Union County, Oregon in the summer of 2004. One of my areas of research was viewing definitions and ideas about poverty –including generational and transitional forms. In surveying providers and clients, it appears that barriers are built into access so that resources are not depleted. Further, food bank clients are often subject to cultural suppositions about their behavior and “worthiness” in accessing food. In an agricultural community, where one can fish and hunt and garden, there is a particular irony to hungry, poor people.

11:00 a.m • Hoke Main Lounge • Panels

Chair: Kerri Wenger

Painting a Portrait of Bilinguals in the Treasure Valley: Case Studies of English Acquisition

Erika Crans, Beverly Smith, Rachel Mendez, Amber Fischer, Christy Van Winkle and Angela Anderson

Faculty Sponsor: Kerri Wenger

Juan Pablo's mother and father immigrated to the United States approximately three days before he was born, and he was raised by Spanish-speaking family members. During his early teenage years, Juan Pablo realized the need to speak English and taught himself the language. He is able to read, write, listen, and speak in his native language, Spanish, and his second language, English.

Holy Hooks and King Neptune's Ghosts: Performance in Folklore

Jeanette Benton, James Benton, Kendall Hagen, Stefan Kuhnle, and Jacoby Fox

Faculty Sponsor: Jodi Varon

Folk practice, beliefs, superstition, and tradition are explored in this multi-faceted presentation of folk performance. The menacing hook-man of urban legend, ritual hazing of sailors who cross the equator for the first time, drinking games, the southern German pre-Lenten celebration of Fasnacht, and one family's Christmas English muffin pizzas will be presented to underscore the relevance of the inherited traditions that connect us to our cultures.

10:00 a.m. • Hoke 201-202 • Panels
Chair: Jeff Johnson

Using Music to Teach Content

Sara Hammerquist and Christine Henderickson

Faculty Sponsor: Jan Dinsmore

The authors of this paper, pre-service teachers at Eastern Oregon University, did research on integrating music in the elementary school classroom to teach content area subjects. First, we completed a review of the literature, focusing on music and brain research, as well as reasons and ideas for integrating music into the classroom curriculum. We then conducted our own research by integrating music to teach social studies and science concepts in two separate elementary school classrooms. We wanted to see how music could help students learn. For this project, we each completed a research paper, and together presented the information to our cohort of pre-service teachers.

After studying the research that has already been conducted on using music in classrooms (Gardner, 1999; Jensen, 1998; Rauscher, 2003), we conducted research by integrating music into 5-lesson units taught in elementary school classrooms. We conducted a pre/post test assessment of their knowledge and observed the ways students reacted to the music. At the end of the unit, we surveyed students and got their opinions on the lessons and their learning.

During our pair presentation, we will present research about using music to enhance students' learning. We will focus on the way music can be used to prime the brain, to teach content, and to arouse the brain. We will then discuss the way we, as pre-service teachers, integrated music into lessons we taught and summarize the results of our findings. To conclude, we will show some ideas of the way music can be effectively integrated into an elementary school classroom. Besides our presentation, our written research paper will be available.

Discussion on the Justness of the Current Iraqi Conflict: Patriotism in an Age of Globalization and Terrorism

Name: John Miller, Jenna Hare, and Jinhee Noh

Faculty Sponsors: Jeff Johnson, Colleen Johnson

John Miller: Discussion on the Justness of the Current Iraqi Conflict

The paper I wrote and the discussion I will present revolve around the idea that the current Iraq conflict the United States is engaged in is a just one under the "Just War Theory." A major thesis of the paper is that some people link the current conflict with the Vietnam conflict in an effort to make it look bad by comparison. Part of my paper deals with that idea as well and I will devote a small block of time exploring it during the presentation. The majority of the time will be spent discussing what is known as Jus Ad Bellum or justness in going to war in connection to the current conflict in Iraq. I will explore both the United Nations resolutions and the Joint Congressional Resolution that brought about the conflict and discuss historical points of interest in connection with these resolutions. My paper and discussion will also explore personal philosophical and political viewpoints on when intervention into a sovereign nation is warranted by outside military force, as well as the idea of intervention on humanitarian grounds.

Jenna Hare: Difficulty of Building a Democracy in Iraq

This presentation will focus on Iraq, a country, where dictatorship and violence have ruled throughout history. Changing that history through a U.S. invasion has already proved costly and there is no end in sight. The war in Iraq is made even more terrible by the errors or deceit that were used to justify it and the daily terror it has produced. U.S. prosecution of the war has alienated allies and intensified hatred in many parts of the world. Even though the invasion of Iraq was an unqualified military success, the occupation has had many problems. The United States may have done the right thing in deposing Saddam Hussein, but because it was done for the wrong reasons there are serious questions that must be answered about whether the war will lead to a sustainable democracy in Iraq. Relying on research from texts, the media and an interview with an aid worker who spent six months in Iraq, the presentation will briefly examine the history of Iraq and the events that led to the most recent war. It will also analyze politics and culture, the current conflict, and the effort to rebuild the country before drawing conclusions about what has been accomplished and what the future holds.

Jinhee Noh: Patriotism In An Age of Globalization and Terrorism

The event of September 11, the result of the intense hatred of terrorists for innocent people, shocked many Americans. It hurt Americans more when cheering Palestinians were captured on television portraying the celebration of the destruction, as well as the frequent response from the rest of the world that the U.S. had it coming and they deserved it. Unfortunately, Iraq is not alone in their unwelcoming attitude toward the U.S. as hostility toward the U.S. and the western world, as well as the rise of ethno-nationalism, is an increasing trend across the non-western world, and has been since the end of the Cold War.

I will present the relationship between ethno-nationalism and patriotism, and then explain how ethno-nationalism ignites terrorism. Globalization, the spread of democracy and market system by the West, is a force behind the spread of ethno-nationalism. Examples of ethno-nationalism in Indonesia and Rwanda as well as other countries will be discussed to reveal how those cases are similar to the terrorist attack against the U.S.

Noon • Hoke 201-202 • Panels
Chair: Ruth Davenport

Peace Education For All: Diverse Methods of Peacemaking

Keiko Odashire, Alexandra Faizulaeva, and John Jimeno

Faculty Sponsor: Ruth Davenport

Peace education should be incorporated in every level of society. We seek to construct peace education methods through the teaching of foreign languages. Peace education in our definition entails global awareness, sensitivity and respect for diversity, conflict, resolution skills, conservation of environment, and social and economic justice. Foreign language teaching can contribute to peace building because we believe that language is not only a tool of communication among people but also a door to the understanding of different cultures and the acceptance of diversity. Odashiro explores the emancipation of children with disabilities through the teaching of a foreign language. Faizulaeva employs peace themes in her foreign language curriculum for high school and college-level students. Jimeno investigates strategies for teaching peace in multi-cultural classrooms.

Behind the Number: Working Together With Words

Shelby Zacharias, Kathleen Cathey, Haley Tucker, Christine Winde

Faculty Sponsor: David Axelrod

This panel will discuss the collaborative role in writing projects. All four students are seniors in the writing program at Eastern. Working in pairs, the students wrote letters to each other and told stories, ultimately creating small books comprised of written and visual art. The collaborations were a new challenge. Writing is typically a solitary and independent exercise, and the act of collaboration required these students to trust each other and develop a new level of intimacy in their words.

Christine and Haley's book, *Unnecessary Distance*, reflects the trust and friendship that was built during the collaborative process. They exchanged objects from their lives and wrote about them from different standpoints. Some standpoints were about what the object meant to them, and others were about what they thought the object meant to the other person. The collaboration rises and falls and Christine and Haley reveal more intimate details of their lives. Interestingly, many of their stories are more reflective than a mere telling of an event. They really dive into the issues and become close friends in the process. The actual book is a beautiful creation connected with stories about fishing and the metaphorical idea of "fishing" for each other.

Shelby and Kathleen's book, *Between Six and Twelve*, grew out of an existing friendship. The two started walking together over the summer break and used this collaboration as an extension of their walks. They quickly discovered that the act of walking itself calls forth very personal stories. *Between Six and Twelve* opens with several unclaimed pieces, but within a short time the work demands that the writers name themselves and their feelings. Shelby and Kathleen buttress their book with visual images that represent their walks and the intense conversations and stories that arose from them.

9:30-10:30 a.m. • Loso Hall Lobby • Poster Session I
Chair: Linda Reed-Jerofke

Fossils and Stratigraphy of the Always Welcome Inn Fossil Locality, Baker City, Oregon.

Rob Ledgerwood and Calvin Davis

Faculty Sponsor: Jay Van Tassell

Terry Frest, a malacologist from Seattle, discovered fossils in the early Pliocene sediments (Brooks and others, 1976, Oregon DOGAMI GMS-7) behind the Always Welcome Inn in Baker City, Oregon in May 2002. The fossils include fish, gastropods (Gyraulus, Pisidium, Sphaerium, Lymnaeids, and possibly, Drepatoma), ostracods, charophytes, diatoms (including the freshwater planktic diatoms Aulacoseira and Cyclotella, and the benthic diatoms Anomoeneis, Cocconeis, Epithemia, Fragilaria, Navicula, Nitzschia, and Rhopaloidia), freshwater sponge spicules (Ephydatia fluviatilis), bird bones, and a small rodent's tooth.

The Always Welcome Inn sequence consists of an ~ 10 m-thick section composed of diatomites massive and laminated silts (some of which contain significant amounts of volcanic ash), and fine sands. The lower 7 meters of the Always Welcome Inn sequence includes three units of diatom - and sponge-rich shallow lake and lake margin sediments alternating with laminated and massive silts. These sediments contain spines, vertebrae, skull bones, and other fragments of a new species of the sunfish, Archoplites, which most closely resembles the Archoplites species in the Ringold Formation of Washington. The percentages of diatoms and sponge spicules decrease upward, suggesting that the water depth may have become shallower with time. The upper part of the sequence includes stream channel and floodplain deposits consisting of trough cross-bedded sands and the sandy silt unit in which the rodent's tooth was found. A silt unit that contains diatoms and sponge spicules, plus the bones of a large minnow similar to Gila and fragments of a smaller minnow caps these units. The Always Welcome Inn fossil sequence is tilted, faulted, eroded, and overlain unconformably by imbricated pebble gravels that contain clasts of argillite and chert derived from the uplifting Elkhorn Mountains of the west (Brooks and others, 1976).

Communication Among Non-Human Primates

Katrina Estudillo

Faculty Sponsor: Linda Reed-Jerofke

There have been many controversies regarding primate intelligence, and whether they have a language and can communicate with humans. Years of study have gone into these questions, and many researchers have become famous for their discoveries. This presentation will define what we consider language to be, how primates express themselves (such as through vocalizations or sign-language) in order to be understood, and will discuss the findings of researchers such as Jane Goodall, Dian Fossey, and Penny Patterson. It will also include specific examples of evidence in favor of language among primates as well as between primates and humans.

Tollbooth Optimization Model

Ihsane Bikri and Ivan Simeonov

Faculty Sponsor: David Allen

During this year from February 3 - 7, 2005, we participated in The Mathematical Contest in Modeling (MCM). The MCM is a unique international contest for high school students and college undergraduates. The MCM is designed to stimulate and improve problem-solving and writing skills. Students participate as team members rather than as individuals, creating an environment for sharing knowledge and skills. At the end of the four-day contest period, teams produce a substantial technical report. We were two of the three members on a team, and we will prepare and present a poster presentation describing the MCM problem and our solution.

Statement of the MCM problem chosen by our team:

Make a model to help you determine the optimal number of tollbooths to deploy in a barrier-toll plaza. Explicitly consider the scenario where there is exactly one tollbooth per incoming travel lane. Under what conditions is this more or less effective than the current practice? Note that the definition of "optimal" is up to you to determine.

Our work can be divided into three components:

1. The optimal number of tollbooths to deploy on any given toll road will be found using the advanced topics of Queuing Theory. We will find this number of tollbooths to be an integer greater than the ratio of the arrival rates of the vehicles to the service rates of the tollbooth attendants.
2. To capture qualitatively the key difficulties of this issue, we will create a sequence of data sets involving the single server model, multiple server models as well as a stochastic discrete model. These data sets will assume an infinitely large queuing area, a first come first serve basis, as well as the potential for a lane of traffic to expand to n number of tollbooths.
3. To analyze these data we will create a group of algorithms, implemented in Excel, and compare the effectiveness in generating an optimal steady-state condition. We use these models because they deal with the efficiency of waiting lines and offer the variation found in the real world at discrete time intervals.

The Fourier Grid Hamiltonian Method for Calculation of Vibrational Frequencies in Nitromalonamide

Name: Zachary E. Goude

Faculty Sponsor: Jeff Woodford

Hydrogen bonds are ubiquitous in nature. In particular, strong hydrogen bonds have been implicated in certain enzymatic reactions. They are also responsible for novel properties of unique substances such as Kevlar. Derivatives of malondialdehyde form strong O-H...O intra-molecular hydrogen bonds, which may be used as model compounds in further investigations of the hydrogen bonding phenomenon. Of particular interest is the O-H stretching vibrational frequency of the hydrogen bond donor. Ab initio calculations with the harmonic oscillator approximation on the vibrational frequency typically yield poor agreement with experimental results because of the anharmonicity of the hydrogen bond motion. Recent methods to determine vibrational frequencies without relying on the harmonic oscillator model include the Fourier Grid Hamiltonian method. This is the method that was chosen to apply to nitromalonamide. Results of these calculations will be presented.

Conservation and Restoration of Mountain Lady's Slipper Habitat at Growiser

Kevin Lair

Faculty Sponsor: Karen Antell

The mountain lady's slipper (*Cypripedium montanum*) is a large and charismatic perennial orchid once widely distributed in montaned regions of the northwestern United States. Very little data exists regarding *C. montanum*'s biology and ecology, resulting in difficulties for implementing management plans and conservation strategies to protect this beautiful flower. Since 1993, Grande Ronde Overlook Wildflower Institute Serving Ecological Restoration (GROWISER) has been committed to the preservation, restoration and education of native plant species. Dr. Andy Huber (founder and General Manager of GROWISER) has developed successful seed planting techniques and management plans for the orchid's habitat. As of Spring 2004, GROWISER is home to over 1600 individual plants of *C. montanum*, which stands to be an invaluable resource for providing information regarding the orchid's lifecycle and maintaining the specie's genetic diversity.

Connecting to the Community: Service Learning in Environmental Chemistry

Ricard Tache

Faculty Sponsor: Anna Cavinato

Creating research opportunities that extend beyond the local campus and that connect undergraduate students to the surrounding environment is an important step in attracting and retaining students interested in the chemical sciences. The chemistry program at Eastern Oregon University has established a partnership with the Confederated Tribes of the Umatilla Indian Reservation that enables students to pursue joint research projects and/or participate in a service-learning course in environmental chemistry. Students have an opportunity to learn about environmental issues of interest to the tribe and are given the choice of pursuing specific research projects. Some of these include analyzing sediments from a pond for lead content, detecting semi-volatile organic compounds in pond water, and sampling indoor air for detection of volatile organic compounds. The collaboration with the tribe not only creates opportunities for interdisciplinary projects that engage students to solve real-world problems, but also provides them with a realistic appreciation of Native American culture and values. In exchange tribal members gain access to expertise and instrumentation that may answer some of the pressing questions they have about the safety of their environment.

Marketing and Promoting Children's Rodeo—Elgin Stampede Family Night

Gretchen Jolly

Faculty Sponsor: Mike Pierce

This presentation examines the marketing and promotional strategies of the Elgin Stampede Family Night from 2001 to the present, 2005. The purpose is to provide the Officers and Board of Director members with the necessary information about Family Night to allow them to promote and implement a successful event. This report and presentation represents my volunteer work and how I came about organizing a successful community children's rodeo, wanting to leave behind a template of useful tools and databases for having a successful event. The marketing and promotional strategies are reported in subject areas: history and past practices of Family Night, SWOT analysis, budgets – past and present, concepts for promoting and marketing, advertising opportunities, and a timeline for successful implementation of the event. Among the appendices is a listing of information on past promotional, marketing, and advertising concepts, participant-event summaries, and awards and payouts summaries.

11:00 a.m. -Noon • Loso Hall Lobby • Poster Session II
Chair: Ron Kelley

Pyrrrolizidine Alkaloid Determination and Comparison from the Cynoglosseae Tribe

Mandi Conrad, Bina Hegtvedt, Jesse Brockey, Heather Nyby and Trent Holcomb

Faculty Sponsor: Ronald Kelley

As a continuing chemosystematic study of natural products from the Cynoglosseae tribe, pyrrolizidine alkaloids (PAs) are being studied for their biological effects. Pyrrolizidine alkaloids are potentially toxic secondary products commonly found in the Boraginaceae family, and more specifically in the genera of Omphalodes, Cynoglossum, and Caccinia. Through previous research on these genera using TLC and GC-MS, many undetermined PAs have arose. Based on this previous research, further investigation will be done in an attempt to determine the structure of these PAs through High Speed Counter Current Chromatography (HSCCC) and NMR analysis. A chemosystematic based comparison will be generated on the findings within these genera and PA profiles from other species of Omphalodes, Cynoglossum, and Caccinia.

Determination and Comparison of Pyrrolizidine Alkaloids From the Pacific Northwest

Senecoid Taxa

Ashley Jones, Danielle Kelly, and Andrea Miller

Faculty Sponsor: Ronald Kelley

As part of a continuing chemosystematic study of natural products from the plant family Asteraceae, pyrrolizidine alkaloids (PAs) are studied for their biological effects. Pyrrolizidine alkaloids, also known as senecio alkaloids, are potentially toxic secondary products and to be expected in relatives of the genus Senecio(i). In the Pacific Northwest of the contiguous U.S., there occurs a group of related mono- and ditypic genera, Luina(i), Cacaliopsis(i), and Rainera(i). Our investigation will focus on the Luina(i) serpentina(i), a rare species from Oregon, and Cacaliopsis(i) nardosmia(i), a widespread species from California to British Columbia. Preliminary GC-MS analysis of L. serpentina(i) has presented over fifteen different PAs. Both EI and CI type GC analyses will be performed on the samples to maximize mass spectral information. This is the first investigation of PA content for either plant species.

Structural Elucidation of the Pyrrolizidine Alkaloids from Heliotropium

Convolvulaceum

Lauren Rathbone, Melanie Bruck, Andrew Marlette, and Jenna Platt

Faculty Sponsor: Ronald Kelley

Pyrrolizidine alkaloids (Pas) are potentially toxic secondary natural products commonly found in the plant families Borginaceae and certain subfamilies of the Asteraceae. Heliotropium convolvulaceum, a taxon of southwestern North America, is the focus of this investigation. As Heliotropium convolvulaceum belongs to the Borginaceae, it may be presumed that Pas should be present. Other investigated Heliotropium species have been found to contain large quantities and great varieties of Pas. A previous investigation of this species included a simplified hydrolysis analysis of the pyrrolizidine amino alcohols. This study of intact PA structures will apply a gradient solvent extraction scheme in an attempt to achieve a higher degree of separation. Column chromatography and varying elutants will be used to isolate individual Pas. These isolated Pas will then be structurally elucidated using mass spectral and NMR analyses.

Senior Project

Jennifer Stockman

Faculty Sponsor: Ted Atkinson

Softball originated in Chicago of 1887 by a group of men of the Farragut Boat Club but was formed for women in 1895 at Chicago's West Division High School. Since the late 1800's, women's sports have fought for the respect they deserved by not only boys, but the public. For my senior project, I have chosen to support our women's softball program for many reasons. As we all know, the softball field on campus was torn down for the construction of our new dorms, and EOU will ultimately re-build the softball field in another on-campus location. This was my first indication that these ladies needed my help with promotion as they were transferred to Pioneer Park, 1.25 miles away from campus living. The park they were designated to is not an easy walking distance for most of our Eastern Oregon students, while walking to the baseball field is a hop and a skip away from the dormitories. I have spoken with multiple small businesses around La Grande for their support in supplying gift cards for lucky fans that attend the games and have received radio spots on KCMB announcing our team's home games. My senior project presentation will display the knowledge I've attained from my four years attending the EOU business program in both my paper and my power point presentation. Women's sports deserve a fair chance, and I feel I can give them that chance with my marketing/personal relation skills, not only for our EOU women's softball team, but also for my future plans in Sports Marketing.

Dangers of Using Latex in the Modern Medical World

Jacqueline Mahoney

Faculty Sponsor: Laura Mahrt

Latex is a versatile substance, which is found in trees and various other plants that grow in developing countries within Asia. While latex was discovered in the 19th Century, its large scale use only began 75 years ago. This use began with gloves for household and medical purposes. It is also used in comfort grips which can be used on pens, tools, cups, and various other products. While this grip may reduce the risk of a pen sliding in someone's hand, or reducing stress upon fingers, it exposes that individual to latex repeatedly. It is through this constant handling and the use of latex gloves in medical offices that a contact mediated allergic reaction can occur. It is through this exposure and the body's reaction to one or many of latex's 200 proteins that the body develops a possible life threatening reaction. Some individuals are born with an antibody to latex, but many acquire the allergy through repeated exposure. The increased use in latex products can produce a dangerous situation, one that carries varying reactions and dangers. In the most extreme cases, a person can suffer a Type IV anaphylactic reaction from being in the same room as a product made out of latex (most notably balloons and gloves). My talk will notify people of the rising danger, discuss how many people are currently affected by it, and raise some awareness to the issue. It is important in situations to understand the symptoms, biological mechanisms, and chemical make up that have put this issue in the forefront of current medical and personal safety.

The Effects of Gender on Talk-Facilitated Stress Relief

Audrey Oldham

Faculty Sponsor: Marie Balaban

This study was designed to measure the effects of gender pairings on discussion-facilitated stress alleviation. It is a widely held belief that talking about an experience can help diminish subsequent emotional stress, characterized by intrusive thoughts and a tendency toward topic avoidance. However, little research has been conducted to see if the effects of talk-facilitated stress alleviation would be the same for both males and females, particularly in same-gender and mixed-gender pairings. Subjects were asked to watch a brief (15 minutes) video depicting graphic footage of the Holocaust and then take part in a four-minute discussion with another subject, either of the same or opposite sex. Measurements of stress and arousal were taken at various points of the experiment in the form of blood pressure and heart rate, as well as a stress/arousal self-report checklist. To measure the effects of the discussion, subjects returned two days later and filled out an additional questionnaire regarding intrusive thoughts and topic avoidance. Due to apparent differences in the ways males and females process information and react to stressful events, it is expected that the beneficial effects of post-trauma (in this case witnessed) discussion will be altered somewhat depending on whether a talk occurred in a same-gender or mixed-gender pairing.

Advertising and Covert Marginalization: An Investigation of Advertising in Popular Magazines

Cierra Olivia Thomas

Faculty Sponsor: Linda Reed-Jerofke

Advertising is ubiquitous in America. Sociologist Michael Schwalbe (2000) writes “in a society like ours we are forced to rely on what we can see and interpret quickly,” and advertising is the capitalist’s vehicle in which to convey those visual messages (p. 137). Every visual commercial Americans are exposed to is entirely contrived by the advertising industry; every ad is clearly thought out, plotted and planned, and specifically placed where it will have the most (or the least) effect on the consumer. My research of the representation of African American women in print media will demonstrate this trend.

African-American women, and people “of color” in general, are considered to be “the minority” in the United States, and this phenomenon is created and perpetuated through the media. Arthur Asa Berger (2000) claims that the \$200 billion a year advertising industry exposes every American to nearly 15,000 images per day (p 1, 81). The multitude of commercials that humans are exposed to on a daily basis only serve to bolster and reinforce the marginalization of the Black community through a mass exclusion of images and representations of African-Americans from the mainstream media.

This advertising “behavior” began as early as the 1890s with highly derogatory remarks about “colored” people, which were always paired with a product that promised to fix any one of their multitudinous problems. Advertising of the late nineteenth century is blatantly racist both in its remarks and its images, and I will illustrate that this advertising strategy is still covertly in place today. Advertising has not changed much in the last century, only the method of marginalization has. Further, advertising does not merely reflect cultural values, interests, and demands, but, as my research will demonstrate, it also shapes those belief systems in America.

Through a quantitative analysis of all images in popular magazines I expect to find a low percentage of depictions of “minorities” in comparison to representations of Caucasians. I also expect to find deliberate patterns in the representation of minorities in these highest selling mainstream magazines. Ultimately, African-American women are marginalized by an impossible standard of beauty set by the ad world and reinforced through consumption; advertising creates and perpetuates a standard based on skin color, just as it did in the late 1800s, and its influence on consumers is the same. Educating people to deconstruct ads and recognize this covert marginalization is my goal.

Sources:

Berger, A. A. (2000). *Ads, Fad, and Consumer Culture: Advertising's Impact on American Culture*. Cumnor Hill, Oxford: Rowman & Littlefield Publishers, Inc.

Schwalbe, M. (1998/2001). *The Sociologically Examined Life: Pieces of Conversation*. Second Edition. Mountain View, California: Mayfield Publishing Company.

Hunger Calendar

Lucus Vinson, Keiko Odashiro, and Jessica Southwick

Faculty Sponsor: Bill Grigsby

For the past two years, Eastern Oregon University students and faculty, primarily from the Anthropology/Sociology department, have been working on various projects to raise awareness about hunger and food insecurity in La Grande. This project is known as Haven From Hunger.

Last term, as a part of a Social Welfare Practices class, our group undertook designing a calendar about hunger in hopes of further elevating awareness on this issue and to also raise money for future projects. We believe this project has the potential to be replicated annually, but we wanted to make a “practice design” as an example to other groups who may continue our work in the future. We hosted a mock drawing contest within some of the public elementary schools including Central, Willow and Island City. We created an entry form on which we asked students “what does hunger look like?” The students were allotted a week to complete the drawing form. Each completed form was to be handed into the teacher and then left in the front office at each particular school. After picking up the forms we selected pictures that we put onto our mock calendar. Along with these drawings of hunger we looked up international, national, and local statistics on hunger to place within the calendar. Each page has 3-6 different statistics on hunger and food insecurity. We also, in the future, would like to provide dates within the calendar for such things as soup kitchens and food drives. There are many other aspects of this project that we dealt with. These experiences should be shared with others.

We believe that through such things as calendars, we can raise awareness about hunger and food insecurity, which is a problem not only world wide, but locally also. We will present this at the Spring Symposium to educate others about the process that we went through to learn about hunger.

12:30 – 1:30 p.m. • Loso Hall Lobby • Poster Session III
Chair: David Axelrod

Rapid, Non-Destructive Detection of Microbial Spoilage in Trout Fillets by Short-Wavelength Near-Infrared (SW-NIR) and Fourier Transform Infrared (FT-IR)

Spectroscopy

Lea Croft

Faculty Sponsor: Anna Cavinato

The goal of this research project was to evaluate the effectiveness of Short Wave Near Infrared (SW-NIR) and Fourier Transform Infrared (FT-IR) Spectroscopy in detecting the onset of spoilage in fish fillets. SW-NIR spectra were collected in the diffuse reflectance mode (600-1100nm), and FT-IR spectra were collected using an attenuated total reflection cell. The fish was held at room temperature after thawing, and experiments were conducted over a range of approximately 48 hours, with testing every four. Spoilage was seen after four hours in the fish fillet compared to the control taken at hour 0. Using complex algorithms and a method called Principal Component Analysis, a change in the composition on the fish was detected to show signs of spoilage. In addition, a Partial Least Squares prediction model was used to calibrate spectral data with microbial count. Areas of interest were nitrogen peaks, indicating changes in the amine composition (protein); oxygen peaks, which indicate changes in water amount; and carbon peaks, which show changes in lipid content, as well as general deterioration of the sample. Because SW-NIR and FT-IR can acquire a metabolic snapshot and quantify microbial loads of food samples rapidly, accurately, and non-invasively, these methods would allow for more expeditious applications of Hazard Analysis Critical Control Point (HACCP) systems in the food industry.

Title of Project: Non-Invasive Determination of Gender and Maturity Status in Chinook Salmon by Short Wavelength Near Infrared Spectroscopy

Calvin Davis

Faculty Sponsor: Anna Cavinato

The development of a non-invasive process to qualitatively determine gender and level of maturation in salmonids is of increasing interest to northwestern U.S. hatcheries and those working to preserve salmon runs. The availability of a technique to determine maturation status (immature or maturing) and gender at the earliest possible date has great implications for the successful maturation and spawning of captive reared salmonids. In this approach SW-NIR light from a hand-held probe penetrates skins, scales, and muscle in the ventral area reaching the gonadal tissue. Distinct gonadal signal features have been observed and classification is based upon spectral differences between mature and immature and male and female fish. Results of Soft Independent Modeling of Class Analogy (SIMCA) and principal Component Analysis (PCA) conducted on spectra collected on Chinook salmon demonstrate that a reliable classification of gender and maturation can be achieved. Practical application of this method will depend on the rigor of the model developed.

EOU High School Writing Connection

Katie Edwards

Faculty Sponsor: Susan Whitelock

The purpose of the EOU/High School Writing Connection is to connect high school students with college students in order to improve their writing, and more importantly show students the benefits of attending college. We are trying to improve writing skills while also trying to improve the number of students who go on to college in our region.

In my poster session I will showcase my experience with the project as an Americorps volunteer working with Mrs. Tolan's creative writing class at La Grande High School during winter term of 2005. My session will give a general overview of the purpose of the project and the mechanics of it, but the emphasis will be on the success of the project and what I have learned. The knowledge I gained falls into four main categories:

- The experience of tutoring electronically and the possibilities of teaching without being face to face.
- The knowledge of the high school students in terms of what strengths and weaknesses they have. Also, what issues they deal with beyond writing, in terms of pursuing education beyond high school.
- A greater understanding of high school dynamics versus college dynamics and how this will apply to my future as a teacher.

The overall possibilities of service learning and how it goes from idea to application, and also the experience of presenting the project at a service learning conference and sharing my work with others will be modeled.

The Experience of a Chinese-Speaking Pre-First Grader in a Rural Idaho School

Erika Crans

Faculty Sponsor: Kerri Wenger

I will create a poster which describes LiLi's experiences, including immersion into the classroom, no involvement in the pull-out program, and her struggle to understand her new environment. I will present the volunteer work done over a year in effort to help LiLi with her reading and her success. I will show what methods worked for her and what did not, and give proposed recommendations for the school.

All data collected is from direct interaction with LiLi, over 50 hours of observations in and out of the classroom, and conversations with her teacher.

Student and Teacher Perceptions of AR Motivation

Sara Hammerquist

Faculty Sponsor: Kerri Wenger

The purpose of this project was to research the perceptions of students and teachers about Accelerated Reader (AR). I wanted to see how teachers felt about AR: did they feel it was motivating for their students? Then, I wanted to research the way students felt about AR. For this project, I created a written report as well as a poster.

The aspect I researched was if AR helps students become enthusiastic readers. I wanted to know if students had good attitudes toward AR reading and what type of prizes they earned for their AR points. I also wanted to see if teachers saw AR encouraging students to read. Did they feel that the program encouraged reading? Also, did they feel AR created life-long readers? Personal interviews of teachers and students in both elementary and middle school settings, in several rural communities, were the basis for my conclusions.

During my poster presentation, I will present information on AR reading and the results of my research. I will show students' and teachers' perceptions toward the motivation of AR. I will then give suggestions for using AR and other methods of encouraging students to read. Besides my poster, I will provide a written report.

Influence of Lev Vygotsky: Looking at a Learner Centered Approach

Melissa Garrett

Faculty Sponsor: Jan Dinsmore

After inquiring about the influence of Lev Vygotsky and his theory on learner centered techniques, I discovered that his theories were quite fascinating and I wanted to facilitate his ideas of a learner centered approach in an actual classroom setting. As a pre-service teacher I was able to incorporate learner centered techniques into a five-lesson integrated unit on the topic of volcanoes which was part of my teacher preparation work sample. I conducted my lessons using learner centered strategies with a group of 23 second graders and found the results of my inquiry to be quite remarkable. My poster presentation will include a short biography of Lev Vygotsky, digital photos taken from my work sample, as well as techniques and strategies that can be used in a constructivist teaching approach. I have also included an “interactive” demonstration on Vygotsky’s theory of the Zone of Proximal Development. As part of my poster presentation I will have brochures available which will include: the pre-test/post-test results from my volcano unit, information on ways to make a classroom learner centered, and the benefits of a learner centered approach. Finally, on the back of the brochure I will include several “Vygotskian” quotes that I have found inspirational as a pre-service teacher.

Eastern Oregon University Alumni Bibliography

Leslie Mitts

Faculty Sponsor: David Axelrod

The Eastern Oregon University alumni bibliography is a project that began as far back as 2003. As a group project for Dr. Axelrod’s professional editing and publishing class during the fall of 2004, the project was adopted and has become extensive enough to form a document of more than forty pages. The bibliography lists books published by alumni writers. Since the university celebrates the 75th anniversary this year, finding and recognizing books that past students have written is highly appropriate.

When completed, the entries will use a new format combining MLA style with library bibliography, such as non-textual matter and publication status. A brief abstract describing the content of each book will identify the subject matter and details about the publication. Currently there are nearly 140 books by 25 authors listed.

All of the articles, stories, poems, and other works published in various forms are not represented in the bibliography. There are, undoubtedly, countless other works written by Eastern Oregon University alumni that are worthy of such recognition. However, the bibliography does include information uncovered involving books written by Eastern Oregon University alumni since 1938. Both students who graduated and students who attended are included.

Various genres are exhibited in this document, ranging from fiction and poetry to textbooks and scientific documents. The depth and range in genres and literary works shows how diverse and remarkable the EOU community is. The research conducted for this project has resulted in a document that demonstrates the diversity and appeal of EOU.

12:30 – 1:30 p.m. • Loso Hall Lobby • Other

Ovaries of Steel: Encouraging Women's Leadership From The Classroom to The Community

Becky Collins and Linda Schreiner

Faculty Sponsor: Tonia St. Germain

The Gender 201 class held an open mic event called "That Takes Ovaries" during winter term 2005 in Hoke. This event originated from a book by Third Wave feminist activist, Rivka Solomon. She encourages young women (and men) to organize open mic events in their communities in order to tell stories of women they have known who were strong and courageous. This event had a powerful impact on the student organizers as well as the participants. This presentation shares the experience of women students in bringing the theory of feminist activism into practice.

This presentation argues that service learning projects like this one are vital to the scholarly growth of the student body as a whole and that they encourage women students' leadership. The presenters will share community reaction to this project, the liberating experience of speaking out at the open mic, and the skills gained by the event. The goal of this session is to show how feminist activism, incorporated into course-related service learning activities, builds bridges for women to explore leadership.

2:00 – 3:00 p.m. • Loso Hall Lobby • Poster Session IV

Chair: Colin Andrew

Evolution vs. Creation: A Sample of Opinions

Kathleen Cathey, Christa Bode, and Rose Stevens

Faculty Sponsor: Linda Reed-Jerofke

The debate over the origins of the earth and all life is primarily between two main ideas: Evolution or Creation. Within each of these theories are multiple variations and combinations. This poster was created on research done on these theories and their variations, and on an opinion poll conducted on the Eastern Oregon University campus. The results of the poll will be presented in the totals, in a division by building, and in comparison with several nationwide polls including a Gallup poll. Many of the ballots for the EOU poll had comments written on them, and many of these are featured on the poster. Quotes regarding evolution and creation are also on the poster, ranging from quotes by evolution-oriented scientists questioning evolution to differing definitions of evolution. The goal of this poster is to demonstrate a few of the complexities in the debate between evolution and creation, and to examine how the beliefs of the students, faculty, and staff of EOU compare to those held nationwide.

Heme Coordination Chemistry of Ferric Cytochromes C'

Michael Kecskes, Arianne Tiwari, Amy Servid, and James Stafford

Faculty Sponsor: Colin Andrew

Cytochromes *c'* are heme proteins that occur in certain types of denitrifying and photosynthetic bacteria. Although the exact biological function of cytochromes *c'* is unknown, it has been suggested that their heme coordination chemistry (particularly the binding of nitric oxide) could be relevant to mechanisms of nitric oxide detoxification and/or heme-based gas sensing. The proximal heme face of cytochrome *c'* is occupied by a histidine ligand, whereas the empty distal coordination site is free to bind exogenous ligands that are able to access the crowded hydrophobic distal pocket. Previous investigations of cytochrome *c'* have focused largely on the ferrous heme. In this study, the reactivity of ferric cytochromes *c'* with exogenous ligands of different size and charge has been investigated using UV-visible absorption spectroscopy. Reactivity trends, including pH-dependence, are discussed in terms of the heme structure and its protein environment.

Drove Through Rain and Changing Lanes: A Graphic Novel Collaboration

Eden Kruger and Lucas Kruse

Faculty Sponsor: David Axelrod

Last December, we took a walk in one of La Grande's first snow showers and came back motivated to bring writing and images together for our senior project graphic novel. Our poster will display the first five pages of our graphic story, "Drove Through Rain and Changing Lanes: An Illustrated Account of a Disrupted Life." In addition, we will have a copy of the book that people will be able to look at. We will discuss the technical aspects of our project, the problems we encountered, and will present a rough timeline of how we paced ourselves. We'll also consider our varied collaborative approaches to this project.

Genetic Differences Among Dendroctonus Bark Beetles

Heather Johansen and Jamie Sullivan

Faculty Sponsor: John Rinehart

Bark Beetles are highly destructive pests of deciduous and coniferous trees worldwide. In the New World, Beetles of the genus *Dendroctonus* are particularly harmful, attacking pine, fir, spruce, and larch in most forests of North America. We are interested in investigating the genetic differences within and among populations with the ultimate goals of better understanding evolutionary relationships in the genus as well as understanding genetic differences that contribute to greater or lesser destruction of forest lands.

DNA was extracted from individuals of several different populations of the bark beetles *Dendroctonus pseudotsugae*, *D. valens*, *D. rufipennis*, and *D. brevicomis*. DNA was subjected to RAPD-PCR and the banding patterns resulting were analyzed both for within and among population differences. Analysis of these data includes constructing a dendrogram of genetic similarities and differences among populations of these species.

COMAP: Optimizing Interstate Toll Plaza Flow

Voya Petrovic, Jason Vielma, and Zach Goude

Faculty Sponsor: Anthony Tovar

Toll plazas are one of the largest sources of time delay on heavy-traveled toll roads. The task behind the problem is to minimize that time delay. One way to accomplish this is to optimize the number of tollbooths so that congestions at the entrance and exit of the toll plaza are minimized.

We designed seven models to accomplish this:

- One booth per lane
- Greater number of booths than number of lanes
- Non-specific booth choice with greater number of booths than lanes
- Specific booth choice with only five booths
- Decreased incoming time through lane merge with only five booths
- Combination of the three previous random traffic density models with increasing number of booths
- Analytical model (based on the combination of queuing and traffic flow theories)

In our models we assumed our highway has four lanes and the processing time of the booths is 9 seconds. After comparing our computer generated and analytical data, we came to these conclusions:

- For an equal amount of tollbooths and highway lanes the congestion at the exit will be minimal
- For an equal amount of tollbooths and highway lanes the congestion at the entrance would be at its maximum
- The optimal number of booths is 8.

For our computer models, future investigations could include increasing the number of lanes, implementing continuous merging of traffic, and adding random traffic behavior. For the analytical model, improvements could be: modeling different payment types for tollbooths, randomizing service times, randomizing vehicle merge back onto the highway, and using the more realistic structure of the toll plaza.

Learning to Cope with New Siblings

Klista Starner

Faculty Sponsor: Carol Lauritzen

For my senior seminar capstone project, I am researching and observing the effect a new sibling has on a toddler. My sister and her family agreed to let me monitor them in the first months after their twin babies were born. The main subject of my study is their two and half year old daughter, Samantha. I have chosen to examine her reactions to the birth of the two siblings because I feel that she will be the most affected and will also have fewer qualms about "wearing her emotions on her sleeve." The final product presented at Spring Symposium will be my own children's book, written for Samantha and her family, including picture illustrations of Samantha that will help to show her how important she is to the family and her new twin sisters. I will present the material with a poster detailing what my research has shown me and some information on how other parents can help their children cope with a new baby in the family.

Teaching Kindness Through Books

Hillary Jensen

Faculty Sponsor: Carol Lauritzen

This poster presentation highlights research that I have conducted this spring. I have worked with Dr. Lauritzen to develop a book list of titles that promote kindness and caring.

I have noticed that many classrooms around the valley are filled with students who regularly treat each other disrespectfully. This action is very hurtful to many students. As a future teacher, I wanted to find a way to change the classroom environment. I thought that modeling positive behaviors through books would be a great way to help students change the way they interact with each other.

For my research, I have read many books at all different reading levels that pertain to kindness and caring. I have chosen the books that specifically have kindness and caring as a central theme. My research focused on books that have been published within the last 5 years, so they can easily be found in libraries and bookstores.

For my poster presentation I will offer an introduction to my research, a book list with complete bibliographic information, and a short synopsis of each book. I will also include visuals of book jackets and any additional resource a teacher could use to promote kindness and caring in their classroom.

2:00 – 3:00 p.m. • Loso Hall Lobby • Other

Eastern Oregon Science Journal

Kristy Piper and Sara Reed

Faculty Sponsor: Colin Andrew

The award-winning *Eastern Oregon Science Journal* managed and edited by EOU students - is the only student-published undergraduate science journal in the state of Oregon. For over 20 years the *Science Journal* has been a defining feature of EOU, garnering national honors, and providing students with outstanding opportunities for publishing experience and creative outlets in the sciences. To ensure the journal's future success, it is vital that students become acquainted and involved with the journal's activities. The current editorial staff is developing strategies to increase awareness of the *Science Journal* among EOU students, and to encourage students to submit articles on their research activities. The *Science Journal* editorial team will set-up a display table providing information about the journal and details of how students can get involved. Other features of the display will include samples of recent journal issues, examples of cover artwork, and some of the awards won over the years. Submission packets for the 2005-2006-edition will also be available at the display, as well as contact information for the editors. The deadline for article submission has been purposely set to the week after the symposium to help synchronize student efforts for both events. It is hoped that having journal information easily accessible and all in one place will reduce some of the hurdles to article submission.

Oregon East Magazine

Caitlin Mack and Katie Taylor

Faculty Sponsor: Dr. Jodi Varon

Oregon East is Eastern's literary magazine. It is a student run, student-funded magazine that offers all of Eastern's students and the campus community a place to have their work published. Submitting pieces of writing or works of art to *Oregon East* is an exercise in understanding and improving one's work.

The magazine also provides rare and excellent opportunities for students to participate in the production of a literary magazine. It is an opportunity to learn the demands of an editing job and offers practical working experience. Working on *Oregon East* helps to hone a range of skills in teamwork, in financial and organizational management, in professional and technical editing, and in critical reading.

Oregon East is a concrete, unified, and polished product that represents, proudly, Eastern Oregon University's capacity for academic excellence across several disciplines. Many in the campus community still don't know about Eastern's only student literary magazine and the opportunities the magazine offers. The *Oregon East Magazine* staff would like to present a poster during the spring symposium showing students where the magazine has come from and where the magazine is going. A display of some earlier *Oregon East* publications will offer an interesting history and offering some recent magazines to the student body will show how student involvement has shaped the student literary magazine. Presenting *Oregon East* at the spring symposium will further educate students of the opportunities available to them and further expose the magazine to the student body and the community.

10:00 a.m. • Schwarz Theatre • Artistic Performance **Chair: April Curtis**

10:00 a.m. – 11:00 a.m.

With Bees in Their Hair: EOU Writers Read Original Fiction and Poetry

Caitlin Mack, Eden Kruger, Katie Edwards, Haley Tucker, Ali Holland, Shelby Zacharias, and Katie Taylor

Faculty Sponsor: Jodi Varon

Students will introduce and read selections of their original poetry, flash fiction, and longer stories. After the presentation, the group will entertain questions about drafting and the creative process.

11:15 a.m. – Noon

The American Experience/ Vietnam

Shannon Rempel

Faculty Sponsor: April Curtis

What began as an advisory role for the U.S. in the 1950's, escalated into a full blown military commitment in Vietnam in the 1960's. Many men were injured and almost all suffer from Post Traumatic Stress Disorder. With the war in Iraq, men and women are again at risk for the same overwhelming outcome. It is important that we never forget the devastating effects war has on the human mind and body. The project I propose for Spring Symposium is a part of my senior project (Theatre Directing). *The American Experience/ Vietnam* is a collection of scenes, songs, and quotes about the Vietnam War.

The first scene, "Fragments," is a five minute heart-breaking story of a couple in an airport saying good-bye as the man leaves for Vietnam. Next, is a ten minute scene called "Spades." This is a story about two Marines in Vietnam whose mundane lives of caring for their dead comrades change in an instant when one body turns out to be alive. "Fields" is a ten minute scene about two soldiers holding on to life with jokes, while walking through a mine field. *Carved Into Stone* is a four minute monologue written by me, about a mother in 1982, making her first visit to the Vietnam Memorial Wall in Washington DC. Her son's name is on the wall. Finally, I will present a scene from James McClure's one act *Pvt. Wars*. This is a story of three men in a Veterans mental hospital, learning to live with physical and mental injuries caused by the war in Vietnam. It is important to me and should be important to every American that our soldiers are always honored. For their courage, *The American Experience/Vietnam* is for them.

**9 a.m. – 4:00 p.m. • Nightingale Gallery Lobby • Artistic Display
Chair: Cory Peeke**

Points of a Circle: The Cycles of Life

Debbie Davey and Patricia Hansen

Faculty Sponsor: David Axelrod

The book, *Points of a Circle: The Cycles of Life*, is an autobiographical piece written by Deborah Davey and Patricia Hansen. This book is a compilation of short stories, written back and forth between the two authors, describing the memorable moments of their childhood and college experiences. These short pieces reflect certain cycles of life, for example, what the parents do, the children reflect, and so on.

Points of a Circle begins with Davey and Hansen giving brief stories without detail. Toward the end of the series of exchanged letters, the pieces reflect the more intimate moments of Davey's and Hansen's lives. It moves from briefly mentioning that the world is full of circulating subjects, to the authors' lives circulating around their school, their friends, their failure to stray away from their parents' bad influence, and their dreams for the future.

Within the development of this book, the intimacy between Davey and Hansen grew as well. A sort of friendship arose unexpectedly, and the book became whole. The discussions of their different childhoods and such led to a stronger bond between them. *Points of a Circle: The Cycles of Life* shows this friendship.

Message in a Bottle

Patricia Hansen

Faculty Sponsor: Mark Shadle

Messages in bottles have been cast out to sea for hundreds of years. I am in the process of researching this as a subtopic for my multi-project in Applied Discourse Theory (WR 206). I am discovering what forms of writing and art have been sent in bottles, such as poetry, love letters, fortunes and food-for-thought, portraits, and sketches. For this presentation I plan on displaying my discoveries. There have been thousands of messages sent out to sea, and I am studying the forms of these messages. I will recreate them in a style that illustrates both the modern and the traditional message. Viewers of my display will read examples of such messages, in individual bottles, as well as get a sense that the tradition still lives on. I hope to attract other writers and artists who are interested in these forms of messages and the tradition of distant communication.

Set Design- Medea

John Nehlich

Faculty Sponsor: April Curtis

Spanning time and space, cultures and beliefs, *Medea* is a classic tragedy that claims lives and teaches lessons.

My symposium presentation consists of one aspect of the production – set design. Every step in the design process will be shown, from initial concept to finished design. Also, problems and solutions that arose during the design process will be discussed and visual pictures and a scale model will be presented.

Masks, Myth, and Magic in Medea

Danae Yurgel

Faculty Sponsor: April Curtis

The display will be of the masks used in the production of the play *Medea* in April 2005. The 27 masks created for the production showcase design considerations both for artistic value and theatrical production. The display will include some of the historical anthropological and cultural background research that influenced the design choices.

The demonstration of techniques used for the mask construction will include information on the research involved, examples of the choices for possible mask making techniques, and discussion of the process in selecting the production techniques used.

The vertical display will be up from 9 a.m. to 4 p.m. The demonstration of technique (involving glue and paper) will be for a limited time. The table used for the demonstration will display materials and the original mock-ups created for the design process when not used for the demonstration.

The combination of product and process for creation of these theatre masks will offer an intriguing exploration of artistic creation.

5:30 p.m. • Huber Auditorium • Plenary Session

Chair: John Galliano, ASEOU President

Keynote Speaker: Annie Tester

Introductory remarks by Nancy Knowles, Assistant Professor of English

Annie Tester is an Eastern Oregon University graduate of the English/Writing Program, the MTE Program, and the Oregon Writing Project. She has distinguished herself in education and especially as an advocate for Native American education. She is the first principal of the newly formed Nixyaawii Community School on the Umatilla Reservation in Pendleton, Oregon.

Closing Remarks: Dr. Sarah Witte, Interim Dean of the School of Arts & Sciences

Reception in Simmons Gallery, Badgley Hall, following Plenary Session

The Symposium Planning/Advisory Committee dedicates this year's symposium to the Class of 2005 and to these esteemed colleagues retiring this year from Eastern:

Burr Betts
Denny Swanger

Bob Larison
Shapur Shahbazi

Symposium Planning/Advisory Committee

Jodi Varon, 2005 Chair

Marie Balaban
Anna Cavinato
Ruth Davenport
Leandro Espinosa
Jill Gibian
Rebecca Hartman
Ron Kelley
Kris Olson

The Symposium Planning Committee thanks the following for their valuable contributions of time and energy to this event:

Colin Andrew
David Allen
David Axelrod
Burr Betts
Anna Cavinato
Ruth Davenport
John Galliano
Bill Grigsby
Janet Hume-Schwarz
Jeff Johnson
Ron Kelley
Karyl Kramer
Laura Mahrt
Max Moffit
Sheldon Nord
Cory Peeke
Mike Pierce
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Jeff Woodford

The committee greatly appreciates the support of all faculty sponsors of symposium presenters and financial and administrative support from the Office of the Provost.

The 2005 Spring Symposium is sponsored by the EOU Chapter of Phi Kappa Phi



EASTERN OREGON UNIVERSITY

One University Boulevard
La Grande, OR 97850-2807

(541) 962-3672
www.eou.edu

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