

# Spring Symposium 2010

**Wednesday & Thursday May 26 & 27, 2010**

Eastern Oregon University  
presents the  
Twelfth Annual Spring Symposium



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

# Spring Symposium 2010

## Events Schedule



Wednesday & Thursday,  
May 26 & 27, 2010

**Please see pages 4 through 24 for extended descriptions  
and presenters of each session**

### Wednesday, 26

7:30-9:00 p.m.      EOU Chamber Choir and Women's Choir      Loso Hall: McKenzie Theatre

### Thursday, 27

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9:00-2:35 p.m.      Talks      Loso 115  
9:00-12:00 p.m.      Panel Presentations      Loso 117  
Noon      Performance      Loso Lobby  
1:15-2:55 p.m.      Talks      Loso 117  
9:00-3:00 p.m.      Posters Displayed      Badgley Hall:  
Simmons Gallery  
3:00-3:45 p.m.      Performance      Loso Hall: McKenzie Theatre  
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6:00-7:05 p.m.      Key note address      Loso Hall: McKenzie Theatre  
7:30-9:00 p.m.      Grande Ronde Symphony Orchestra  
with Guest Pianist, Guest Conductor,  
and Concerto/aria Festival Winners      Loso Hall: McKenzie Theatre

Abstract descriptions on the following pages are as submitted by the  
presenters and sponsoring faculty.

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# Key Note Speakers

**Presenter(s):** Murphy, K.V. (presenter), Kubin Z.J., Shepherd J.N., and Ettinger R.H.

Title of Project: Valeriana Officinalis Root Extracts have Potent Anxiolytic Effects in Laboratory Rats

Type of Presentation: Key note speaker

Location: Loso Hall: McKenzie Theatre

Time: 6:40-7:05 p.m.

*Faculty Sponsor: Chip Ettinger*

**Abstract:** Valerian root (*Valeriana officinalis*) is a popular and widely available herbal supplement, primarily used to treat insomnia and anxiety. Until recently, its mechanism of action has remained unknown. Neurobiological research has begun to show that the herb, with its active valerenic acid, interacts with the GABA(A)-ergic system, a mechanism of action similar to the benzodiazepine drugs. This series of experiments sought to corroborate these findings with behavioral measures, compare them to the benzodiazepine diazepam, and to analyze the chemical composition of *Valeriana officinalis*. Rats were administered either ethanol (1ml/kg), diazepam (1mg/kg), valerian root extract (3ml/kg), valerenic acid (3mg/kg), or a solution of valerenic acid and exogenous GABA (75µg/kg and 3.6µg/kg, respectively) and assessed for the number of entries and time spent on the open arms of an elevated plus maze. Results showed that there was a significant reduction in anxious behavior when valerian extract or valerenic acid exposed subjects were compared to the ethanol control group. The evidence supports *Valeriana officinalis* as a potential alternative to the traditional anxiolytics as measured by the elevated plus maze.

**Presenter(s): Madeline Smith**

Title of Project: School Nutrition

Type of Presentation: Key note speaker

Location: Loso Hall: McKenzie Theatre

Time: 6:35-6:40 p.m.

*Faculty Sponsor: Ruth Davenport*

**Abstract:** A review of literature has revealed a nationwide trend of less nutritious foods being offered to students enrolled in United States public schools. The purpose of this research study was to investigate the current national mandated school nutrition requirements, the school nutrition guidelines for the State of Oregon, and the ways in which the daily meal offerings at three schools in one rural Northeastern Oregon school district compare to these national and state standards over a two month period. Data sources included government websites; policy statements for state and national school nutrition requirements in school meals; and school district menus at one elementary school, one middle school, and one high school. Findings in the professional literature included the conflicts related to competitive foods offered in schools and current trends in students' meal choices. The presentation will include a summary of the current national school nutrition standards, a comparison between the national standards and those of the State of Oregon, and a brief analysis of the daily meal offerings of three schools in the rural school district. The significance of the research includes the recommendations for improving the current issues relative to school nutrition and conducting additional research in this area.

**Presenter(s): Tanner Denne**

Title of Project: The Beatles - A Cultural Phenomenon

Type of Presentation: Key note speaker

Location: Loso Hall: McKenzie Theatre

Time: 6:20-6:35 p.m.

*Faculty Sponsor: Linda Jerofke*

Abstract: This presentation is the culmination of my anthropology senior capstone. It has been a process underway since January. The project was associated with the music department's Beatles Concert, where at I staged a multi-media presentation to several of the songs. I also performed in the show, and during the concert/intermission I had the audience fill out a survey that I developed exploring their personal association and experience with the Beatles. My presentation is going to address the findings of my Quantitative Analysis. There were over 600 surveys filled out! The goal of my presentation is to discuss my findings in relation to American Culture and illustrate the power of music.

**Presenter(s): Victor Bednar**

Title of Project: Table Top Experiments with Diode lasers

Type of Presentation: Key note speaker

Location: Loso Hall: McKenzie Theatre

Time: 6:05-6:20 p.m.

*Faculty Sponsor: Tom Herrmann*

Abstract: Diode lasers (like those in laser pointers) may be adapted for laboratory use by mounting in an external cavity. The available power and low cost of such lasers make it possible to do sophisticated measurements in undergraduate physics laboratories. We will discuss some of the details of how one configures such lasers as tunable devices. One must carefully control the temperature of the laser's housing, so we will also present a temperature controller that we designed and built. Of particular interest is the phenomenon of fluorescence, which we will demonstrate with some fluorescent samples and a light source. Finally, we will present some results of energy level measurements in rubidium gas, and preliminary results from our investigation of Europium and Terbium fluorescence.

## Panels

**Presenter(s): Deneil Hill, Brynne Morningstar, Chantal Schefers, and Rellani Ogumoro**

Title of Project: Are Women's Rights Human Rights?: Global Gender Based Violence and the Barriers of International Policies

Type of Presentation: Panel

Location: Loso Hall 117

Time: 11:00-11:55 a.m.

*Faculty Sponsor: Tonia St Germain*

Abstract: The 1948 United Nations Universal Declaration of Human Rights expresses the credo that there are certain basic rights and freedoms entitled to all members of the human family. However, it was not until 1995 that the United Nations declared that women's rights be human rights. This panel will examine the gendered nature of victimization and the intersection between victimization and human rights abuses. To do this, we will identify some conditions in which gender based violence (GBV) exists, and move from description to analysis

of the limits to addressing GBV. We will consider what complex of factors- social, historical, economic, political, cultural- combine to create the conditions in which GBV unfolds in a particular setting and what barriers exist to meaningful redress of GBV harms. Finally, we critique current international policies by offering recommendations to activists, academics, and policy makers at multiple levels.

**Presenter(s): Lindsey McQuisten, Bill Winter, Louis Deednik, Sean Preston, and Casey Dreher**

Title of Project: What is Terrorism?

Type of Presentation: panel

Location: Loso Hall 117

Time: 9:00-9:55 a.m.

*Faculty Sponsor: Jeff Dense*

Abstract: The international community has grappled with attempting to isolate a cogent definition of terrorism. Given the multiplicity of actors, interests and perspectives, along with the number of academic disciplines attempting to address this phenomenon, the search has been less than satisfying. Separatist groups, white supremacists, paramilitary organizations, 'lone wolfs', and state sponsored terrorism all present formidable challenges to isolating a working definition of terrorism. Panel participants will lead discussion of the future of terrorism as it relates to the above five factors. This is a complete panel presentation proposal for PPE Capstone Students.

**Presenter(s): Kyle Janssen**

Title of Project: Citizen Journalism as an Emerging Medium and the 2009 Iran Election

Type of Presentation: panel

Location: Loso Hall 117

Time: 10:00-10:55 a.m.

*Faculty Sponsor: Jeff Dense*

Abstract: This paper explores the integrity of citizen journalism and its impact on and relationship to traditional news media. With the focus on the 2009 Iran presidential election, I maintain that citizen journalism is rapidly changing how traditional news sources function and develop news products. Citizen journalism is used as a political dissent tool, allowing citizens a voice despite government censorship or media bias and to communicate about events and ideas. However, it is not always a reliable source for news. Rather than replacing traditional news sources, it will be absorbed by mainstream media in a shift toward "collaborative journalism." The growth of citizen journalism is useful in exchanging information and in reflecting citizens' voices. It is changing the way traditional media operates, however it is not as effective in bringing about major social changes as traditional media is. Citizen journalism will not completely replace traditional news media, rather it will be accommodated by traditional news organizations as supplementary coverage. The acceptance of citizen journalism brings with it the potential to improve traditional media and reconnect with the community on issues that matter to the people, and touch on the social function of journalism.

# Performance

**Presenter(s): Erin Ruffner, Ashley Langley, and MaeLee Shepard**

Title of Project: Notturmo Concertant, Op 68

Type of Presentation: performance

Location: Loso Foyer

Time: 12:00-12:05 p.m.

*Faculty Sponsor: Lisa Robertson*

Abstract: J.L. Dussek lived from 1760-1812 and was a Czech composer and pianist. Even though Dussek was an important influence to his successors like Liszt, he is virtually unknown today. Today we will be performing a movement of Notturmo Concertant, Op. 68 for Violin, Horn, and Piano. A lot of work goes into preparing for a performance; individual practice along with scheduled group practice. There are also many other things to consider and work on. MaeLee Morris will be on violin. She's a sophomore music major, and economics minor. She has been playing for 18 years and teaches violin. She is a member of the Grande Ronde Symphony Orchestra. MaeLee studies with Dr. Lisa Robertson. Erin Ruffner will be on piano. She's a sophomore and a double major in music and history. She has been playing for 12 years and teaches lessons. She is also a member of the EOU Chamber Choir. Erin studies with Dr. Matt Cooper. Ashley Langley will be on horn. She's a freshman music major. She has been playing for 6 years and works at Foley Station and gives lessons. She is a member of the Grande Ronde Symphony Orchestra. Ashley studies with Dr. John McKinnon.

**Presenter(s): William Shakespeare**

Title of Project: Scenes from "Much Ado About Nothing"

Type of Presentation: performance

Location: Loso Hall: McKenzie Theatre

Time: 3:00-3:45 p.m.

*Faculty Sponsor: Kenn Wheeler*

Abstract: We would like to present scenes and dance numbers from the play, "Much Ado About Nothing" by William Shakespeare. This play is being set in India during the 17th century and will feature several "bollywood" type dances numbers. Music and the words of the Bard are highlighted by our 25 member cast in this 45 minute presentation.

**Presenter(s): Grande Ronde Symphony Orchestra with Guest Pianist, Guest Conductor, and Concerto/aria Festival Winners**

Type of Presentation: performance

Location: Loso Hall: McKenzie Theatre

Time: 7:30 p.m. May 26th

*Faculty Sponsor: Leandro Espinosa*

**Presenter(s): EOU Chamber Choir and Women’s Choir**

Type of Presentation: performance

Location: Loso Hall: McKenzie Theatre

Time: 7:30 p.m. May 27th

*Faculty Sponsor: Peter Wordelman*

Abstract: Dr. Peter Wordelman and J. Michael Frasier, directors.

## Posters

**Presenter(s): Angela Bragato**

Title of Project: Adding a Personal Training Preparatory Class to EOU’s PHYSH Program

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 9:00-10:00 a.m.

*Faculty Sponsor: Brian Sather*

Abstract: A good program provides its students with knowledge, but a great program will give its students an opportunity to apply that knowledge in a safe, non-threatening environment. I have proposed that EOU’s Physical Activity and Health (PHYSH) program transition from “good” to “great” by adding the appropriate classes that will give its students a hands-on experience in personal training, a career many of the program’s students are interested in pursuing. I believe two classes should be added to the degree’s curriculum. The first should focus on hands-on instruction and practical applications of the Exercise Science courses as they relate to personal training. This should be followed by a practicum experience in which students will serve as a personal trainer for interested members of Quinn Fitness Center, under the supervision of the overseeing professor. The addition of these classes to the PHYSH degree will help participating students apply their content knowledge in a practical way, expand their marketability, and enhance career opportunities.

**Presenter(s): Angela Bragato**

Title of Project: Lifting Technique and the Lumbar Spine

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 10:00-11:00 a.m.

*Faculty Sponsor: Brian Sather*

Abstract: One of the greatest deterrents to an enjoyable, movement-filled life is lower back pain. Injuries to the lumbar spine occur for a number of reasons, but most often are a result of repetitive, improper use of the back over time. The four factors associated with increased risk of back injury are amount of force, repetition, posture, and stress applied to the vertebrae. Unsurprisingly, one of the most common ways people injure their backs is by lifting a heavy object from floor level. The spine is oriented in such a way as to provide strength, protection, and shock absorption when in its natural position. However, lifting a heavy weight with a curved (flexed) lumbar spine causes the vertebrae to be loaded at an abnormal angle, increasing the likelihood of injury. This presentation will consider the basic anatomy of the vertebral column, explain potential lifting injuries, and discuss proper lifting techniques and exercises. Some suggestions include: lift with a squat technique, bring the load as close as possible to the pel

vis, and engage the muscles of the core. These recommendations, and the others provided, should be diligently observed in order to reduce the risk of injury to the lower back.

**Presenter(s): John M. Waite, Cale M. Flesher, Byron K. Morris, Christian M. Kee, Tyler D. Hershey, Amanda B. Kay, and Ronald B. Kelley**

Title of Project: Comparison of Pyrrolizidine Alkaloids Between *Onosmodium helleri* and *O. bejariense* var. *occidentale*

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 1:00-2:00 p.m.

*Faculty Sponsor: Ron Kelley*

Abstract: Pyrrolizidine alkaloids (PA's) are found in the plant family Boraginaceae. The PA's have been extracted from the aerial plant portions. In this specific research, the plants *Onosmodium helleri*, a limestone endemic found in the Austin region of Texas, and varieties of *O. bejariense* have been collected. Comparison of the pyrrolizidine alkaloids will be made between the species. Preliminary research indicates the presence of similar pyrrolizidine alkaloid monoesters as the main compounds in the species. Chromatographic and spectroscopic instrumental analysis of the PA's will be done to determine the isomeric nature of the compounds. Chemosystematic comparisons between the current *Onosmodium* species and previously studied *Onosmodium* species will be presented. Further analysis using GC/MS, 1D and 2D carbon and proton NMR will determine whether the compound is consistent with the synthetic lycopsamine. Previous research and literature values will be compared to the research data acquired.

**Presenter(s): Chris Mello**

Title of Project: A Mathematical Analysis of Fire by Friction with the Hand Drill

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 2:00-3:00 p.m.

*Faculty Sponsor: John Thurber*

Abstract: This work presents a mathematical model simulating the process of creating a fire by friction with the hand drill (a spindle of *Conyza canadensis* and fireboard of *Calocedrus decurrens*). The equations of motion are derived for the rotation of the spindle. From there, the amount of thermal energy converted from mechanical energy through friction and wear can be determined. Principles of conservation of energy and conservation of mass are used to describe the heating – pyrolysis –oxidation process. A particle population model is used to describe how the wood dust accumulates. The equations are simultaneously numerically solved, and time to autoignition (i.e., when the smoldering reaction becomes self sustaining) of the dust pile is determined. The model results will be compared to trials with the same spindle and fireboard combination.

**Presenter(s): Cody Yeates and Heather Nawras**

Title of Project: The Effects of Sexual Arousal on Cognition

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 12:00-1:00 p.m.

*Faculty Sponsor: Chip Ettinger*

**Abstract:** In the current experiment 64 undergraduate students participated in a study measuring the effects of sexual arousal on cognitive tasks. Participants were arbitrarily placed into three conditions and their physiological responses were monitored using the BIOPAC system MP-35. After each condition was exposed to video stimuli, participants were given recall and recognition tests to measure cognitive performance. Results demonstrated that participants in the non aroused and generally aroused conditions performed significantly better than those in the sexually aroused condition. Sexually arousing material was shown to inhibit accuracy in mental tasks.

**Presenter(s): Shannon R. Thornton and Deanna L. Oman**

Title of Project: Illusion of Control: An Automated Manipulation

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 1:00-2:00 p.m.

*Faculty Sponsor: Chip Ettinger*

**Abstract:** Langer (1975) was the first to coin the term 'illusion of control'. An illusion of control is an inflated sense of control over the outcome of a chance event. This experiment was conducted in order to demonstrate an illusion of control while participating in an automated task. Previous experiments on illusion of control were conducted only by manual means indicating a possible illusion of control created by personal involvement. By using an automated manipulation it allowed the experimenter the ability not to rely on traditional measurements. Due to current views on the recency effect, the experimenters utilized a simple memory test to determine if any serial position effect was present, which, no serial position effect could be found. The experimenters determined an illusion of control is present utilizing only a win/loss ratio in an automated task and developed a physical measurement based on trials of play after condition.

**Presenter(s): Elizabeth M. Garton, Cherry A. Davis, David A. Pixton, Jason P. Palmer, and Colin R. Andrew**

Title of Project: Modulation of Cytochrome c' Reactivity by Proximal Heme Pocket Mutations

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 9:00-10:00 a.m.

*Faculty Sponsor: Colin Andrew*

**Abstract:** Cytochrome c' from the denitrifying bacterium, *Alcaligenes xylosoxidans* has a proposed role in binding toxic NO produced during the reduction of nitrates/nitrites in soil. This heme protein, termed AXCP forms an unusual proximal five-coordinate heme nitrosyl complex in which NO displaces the endogenous His 120 ligand. By contrast CO binds to the vacant distal heme face. All cytochromes c' have a basic residue (Arg124 in AXCP) that forms a cation-pi interaction with the nearby His ligand. We hypothesized that removal of this positive charge should facilitate Fe-His dissociation. Consistent with our hypothesis, the absence of a positive charge in R124 variants significantly increases the rates of proximal NO binding, but does not influence distal CO binding.

**Presenter(s): Emily A Byrd, Sarah A. Servid, Andy Berglund, PhD,  
and Anna Cavinato, PhD**

Title of Project: Towards the Development of Aptamer-based Sensors for Bacterial Detection

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 11:00-12:00 p.m.

*Faculty Sponsor: Anna Cavinato*

**Abstract:** Current tools for environmental assessment of fish pathogens have low sensitivity and require involved protocols. In the case of *Renibacterium salmoninarum* (Rs), the pathogen responsible for causing bacterial kidney disease (BKD) in salmonids, methods for its detection have focused primarily on tissues such as kidney or ovarian fluid, thus requiring that fish be sacrificed. Recent advances in nanotechnology have led to the development of very sensitive and selective biosensors for environmental and diagnostics applications. The sensors take advantage of the capability of aptamers, small sequences of DNA or RNA selected in vitro, to bind very specifically to a target analyte. Using the SELEX (Systematic Evolution of Ligands by EXponential amplification) approach, DNA or RNA that binds specifically to chosen target analytes can be isolated through an iterative process of selection, amplification and mutation. In this study we report the ongoing efforts to identify through the SELEX process a specific aptamer that will bind to p57 or Major Soluble Antigen (MSA), the principal antigenic protein found on the cell surface of the Rs bacterium. Six protein fragments were constructed from the full length MSA protein based on three selected regions; currently SELEX is being performed on a 19 kDa subunit. Once the aptamer will be selected, it will be conjugated to gold nanoparticles to design a sensor for use in the field to detect presence of Rs in water and mitigate infection in fish populations through water monitoring. The technique may also be modified for use in detecting other infectious diseases, and could potentially be similarly used in the treatment of disease.

**Presenter(s): Emily A. Byrd and Jeffrey N. Woodford**

Title of Project: Self-assembly of Disubstituted Asymmetric Ureas

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 12:00-1:00 p.m.

*Faculty Sponsor: Jeff Woodford*

**Abstract:** Hydrogen-bond-directed self-assembly is commonly used to create spontaneously ordered systems. In this work we have investigated the self-assembly of disubstituted ureas and measured their self-assembly equilibrium constants via NMR. Theoretical calculations on the proposed solution-phase structures will also be presented.

**Presenter(s): Jesse Svejcar, Cara Greenfield, and Emma Winkelman**

Title of Project: Estimating Supply of U.S. Oats

Type of Presentation: Poster

Location: Badgley Hall: Simmons Gallery

Time: 9:00-10:00 a.m.

*Faculty Sponsor: Penny Diebel*

**Abstract:** The production of oats is influenced by many variables which can be used to

formulate models to predict future oat production. Oats are a cereal grain grown for animal feed and human consumption. They are an important crop in the upper-Midwest and Texas, but the U.S. also imports a large amount of oats from Canada. Forecasting future production is important to both producers and consumers as it will indicate the future supply of domestic oats. The purpose of this project was to develop an equation to predict the supply of oats. This project utilized the Ordinary Least Squares method of multiple regression to develop a production model. Price and supply variables were selected based on their relevance to oat production and their ability to predict it. We used the variables: nominal price of oats, barley production (acres), corn production (acres), and log oat production (bu), and nominal crude oil prices (barrel). After running a series of regressions on these variables we selected the best model, which was used to forecast four years of oat production. Our estimations show that the rate of decline in oat production is slowing significantly.

**Presenter(s): Kassandra Turner and Jennifer Lynnall**

Title of Project: The Picture Superiority Effect and False Recognition

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 2:00-3:00 p.m.

*Faculty Sponsor: Chip Ettinger*

Abstract: When looking through a photo album, pictures are probably remembered but not the captions of the event written below. This is the basis for the current project which examines the picture superiority effect in combination with pictures, text, and pictures with text accompanied by color or black and white. The literature states that pictures have superiority in recognition over text because of the dual coding of pictures (Paivio, 1971). This experiment used recognition tasks combined with critical lures as described by Rodieger and McDermott's (1995) study to see if pictures would produce fewer false memories when compared to words. Also color was manipulated between lists to see if it affects recognition. Results revealed significant differences in recognition of color verses black and white pictures. Critical lures showed significance between the black and white list and color unassociated list. This experiment demonstrated the picture superiority effect and produced new ideas that can be manipulated in future experiments.

**Presenter(s): Kayli Campbell, John DeVillier, Joe Corsini, and Karen Antell**

Title of Project: Coliform Analysis at the End Creek Restoration Project

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 10:00-11:00 a.m.

*Faculty Sponsor: Joe Corsini*

Abstract: The End Creek Restoration Project is a 550 acre farm near La Grande, OR, that was enrolled in the Wetlands Reserve Program in 2006. Its aim is to restore the farmland to its natural state. The project includes eight ponds and two large creeks. East Pond has a population of the endangered Columbia Spotted Frog (*Rana luteiventris*). To begin characterizing coliform bacteria populations in the restoration area, we have been collecting water samples from three of the ponds- East Pond, Middle South Pond, and South Pond. There were a total of six collection sites, two on each pond. Water was collected and assayed for presence of coliform bacteria five times over a nine week period. Coliform presence was determined by

vacuum filtration onto membranes followed by growth on EMB and MacConkey's agar. Preliminary data suggests more coliforms in the Middle South Pond (site III and site IV), possibly due to more use by birds. We have also observed fluctuations in coliform populations that may correspond with avian migrations.

**Presenter(s): Kevin Biddle, Wade Elliot, and David Gibson**

Title of Project: Theoretical Exploration of Shock-sensitive Peroxide Explosives

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 10:00-11:00 a.m.

*Faculty Sponsor: Jeff Woodford*

Abstract: Triacetone triperoxide (TATP) is a commonly synthesized explosive used in terrorist acts around the world. Currently the mechanism for formation of TATP in solution is not well characterized. We have investigated proposed intermediates in the formation of TATP from acetone and hydrogen peroxide using density functional methods, as well as possible transition states. Studies on a related explosive, diacetone diperoxide (DADP) will also be presented. Solvation in water will be accounted for using the Polarizable Continuum Model (PCM). By evaluation of the relative energies of reactants, intermediates and products, we will be able to shed further insight into the mechanism of formation of cyclic peroxides.

**Presenter(s): Kimmie Warren, Anil Giri, and Jason Jackson**

Title of Project: Estimating the Demand for Rice in Japan

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 12:00-1:00 p.m.

*Faculty Sponsor: Penny Diebel*

Abstract: Recent trends have shown a Westernization of Japanese diets. The main purpose of this project was to estimate the demand for rice in Japan and to determine the statistically significant variables influencing the demand for rice. Using time-series data from 1987 to 2007, theoretical models were developed and tested using the Ordinary Least Squares regression tool in Microsoft Excel. Two different models were chosen that had the most statistically significant regression results and followed the Best Linear Unbiased Estimator method. A population-based model was used as a primary estimator for the future demand of rice in Japan; however, a changing consumption model was used as a supplement to accommodate for the recent and growing trend in the Westernization of Japanese diets. Results indicate that a decreasing population growth and increasing national incomes show a strong correlation in the decreased consumption of rice in Japan. These factors, along with strong government influence over the Japanese rice market, have resulted in the diversification of U.S. agriculture imports to Japan. As a result, meat and wheat products will become more influential variables in the future as the demand for rice continues to decrease.

**Presenter(s): Micah Powlison, Mandy Griffin, Chelcee Noland, and Steven Doverspike**

Title of Project: Forecasting Wheat Consumption in the United States

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 11:00-12:00 p.m.

*Faculty Sponsor: Penny Diebel*

**Abstract:** The US is a major wheat producing nation, and wheat ranks as the 3rd highest produced field crop, behind corn and soybeans. The wheat market is extremely volatile, shifting based on prices of other complement and substitute crops, dietary shifts, income, new innovations, tastes and preferences, and the price of wheat itself. The demand for wheat is a function of its own price, its substitutes and complements, and income. This project used an ordinary least squares regression to forecast US wheat consumption. We looked at two different sections of data: 1967-2008 and 1985-2008. We ran multiple models with a range of independent variables including: soybean prices, corn prices, rice prices, wheat prices, per capita income, and population. We narrowed down our models to the most economic sound model which we used to predict wheat demand. In our analysis we conclude that wheat consumption will hit a trough in 2008 and will sharply increase through 2010 hitting near record consumption levels. We have taken into consideration recent volatility in US wheat prices, which may make our predictions too high. Wheat commodity groups can use this information and expect the demand for wheat to increase and peak in the next 2-3 years.

**Presenter(s): Michael Towle**

**Title of Project:** The Effect of a School-wide Science Fair on High School Students' Enthusiasm for Science

**Type of Presentation:** poster

**Location:** Badgley Hall: Simmons Gallery

**Time:** 11:00-12:00 p.m.

*Faculty Sponsor: Sharon Porter*

**Abstract:** The purpose of this study was to determine whether the inclusion of a science fair into the curriculum of three different science classes would increase participation in the science classroom. The students were to choose topics that were within the scope of the science class. The three classes that were studied were biology, chemistry and physical science. Biology and physical science are both graduation requirements, while chemistry is not. Data was collected in the form of surveys which were given before, and after the project. Observations were also made by the researcher recording students' participation and any deviations from normal behavior while working on the project in class. This study will not be concluded until May 13th. However, preliminary findings show an increase in the participation among physical science students ( $n = 8$ ). The scope of the physical science class is much wider than that of biology and chemistry, allowing students more freedom in choosing a topic. Once more data is obtained this study may shed some light on whether or not science fairs and inquiry learning increase participation and enthusiasm among high school students.

**Presenter(s): Nolan M. Schmidt, Calvin Erickson, and Jeffrey Woodford**

**Title of Project:** Theoretical Modeling Approach to Metal-organic Frameworks

**Type of Presentation:** poster

**Location:** Badgley Hall: Simmons Gallery

**Time:** 1:00-2:00 p.m.

*Faculty Sponsor: Jeff Woodford*

**Abstract:** Metal-organic frameworks (MOFs) are promising candidates for hydrogen storage in fuel cells. MOFs generally consist of transition metal atoms coordinated with multiple biden

tate ligands, such as para-benzenedicarboxylate, to form a porous network capable of storing small gas molecules. As a first step to developing accurate theoretical models for MOFs, we have studied metal-formate and metal-acetate complexes using a variety of ab initio theoretical methods. Preliminary results on the study of formate and acetate complexes with first row transition metals will be presented.

**Presenter(s): Sarah Servid, Andy Berglund, and Amy Mahady**

Title of Project: RNA Binding to MBNL, a Protein Associated with Muscular Dystrophy

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 9:00-10:00 a.m.

*Faculty Sponsor: Anna Cavinato*

**Abstract:** Myotonic dystrophy, a type of muscular dystrophy, is a severely debilitating disease whose various symptoms include insulin resistance, myotonia, cataracts, and heart disease. Myotonic dystrophy occurs when CUG triplet repeats in an individual's RNA bind to a protein called Muscle-Blind-Like (MBNL) which normally acts as a splicing regulator in the cell. The MBNL protein is characterized by four distinct zinc finger regions which constitute the active sites responsible for binding to RNA. When MBNL is sequestered to the CUG repeats, it causes a deficiency in the cell, resulting in MBNL being unable to correctly regulate splicing. If more were known about MBNL and RNA binding, then more could be done to find ways of preventing myotonic dystrophy. Using the SELEX (Systematic Evolution of Ligands by EXponential amplification) approach, a method is being developed that will be eventually used to identify RNA that can selectively bind to MBNL's zinc fingers 3 and 4. These regions were chosen because of their ability to bind to RNA with higher affinity. Once identified, the RNA will be used in gaining a better understanding of its interaction with the MBNL protein.

**Presenter(s): Sarah A. Servid, Mariah J. Talbott, Joel P. Van Eenennaam, Serge I. Doroshov, Peter Struffenegger, Molly A.H. Webb and Anna G. Cavinato**

Title of Project: Rapid and Noninvasive Characterization of Ovarian Follicular Atresia in Cultured White Sturgeon by Near Infrared Spectroscopy

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 12:00-1:00 p.m.

*Faculty Sponsor: Anna Cavinato*

**Abstract:** We report a rapid and non-invasive method based on short wavelength near infrared spectroscopy (SW-NIR) to assess different stages of ovarian maturity and detect atresia in farmed white sturgeon (*Acipenser transmontanus*). This approach has the potential to replace oocyte polarization index (PI), the only current means to assess ripeness which requires surgical biopsy. In this study abdominal scans were collected non-invasively by SW-NIR on anesthetized females using a diffuse reflectance fiber optic probe. Also, during each sampling roughly 30 cm<sup>3</sup> of eggs were surgically removed and transferred to a teflon holder for spectral acquisition. Prediction models for atresia were constructed using Soft Independent Modeling of Class Analogy (SIMCA). Cross validation results for spectra collected on eggs were slightly better than on whole fish with 57.8% of all atretic spectra correctly classified. These results improved considerably when excluding spectra from two potential outlier fish. Similarly, 55% of all atretic spectra collected non-invasively in whole fish were correctly classified while

prediction results on individual fish ranged between 20% and 100%. This study represents the first example of detecting atresia in female sturgeon using a non-invasive approach based on SW-NIR. The availability of the proposed spectroscopic approach would grant sturgeon growers a powerful tool to follow more closely the maturation cycle with the goal of producing a consistently uniform product.

**Presenter(s): Tenny Paul-Bowden and Alexa Loscutt**

Title of Project: Implicit Attitudes Towards Athletes

Type of Presentation: poster

Location: Badgley Hall: Simmons Gallery

Time: 10:00-11:00 a.m.

*Faculty Sponsor: Chip Ettinger*

**Abstract:** Implicit attitudes are the opinions that we subconsciously hold but do not necessarily project to the outside world. These subconscious associations are developed and defined throughout our lives through our personal experiences, cultural assimilations, and reinforcement (Lun, Sinclair, Whitchurch, & Glenn, 2007). This study assessed the implicit attitudes of athletes and non-athletes towards different social groups of athletes by comparing association reaction times using the IAT procedure. The specific social groups of athletes selected consisted of female volleyball players, female basketball players, baseball players, and football players. An underlying assumption of the IAT is that longer reaction times demonstrate a negative implicit attitude, meaning that the participant had more difficulty pairing pleasant words with images. Dissimilar reaction times between congruent and incongruent stimuli indicates a stronger implicit attitude. The difference between mean reaction times from the congruent and incongruent stimuli indicated the strength and sign (negative or positive) of the implicit attitude. Sixty-two on campus students from Eastern Oregon University participated in the study. Thirty-eight participants were identified as athletes, while the other 23 participants were identified as non-athletes. The athlete group consisted of 23 female and 15 male participants. The non-athlete group consisted of six male and 17 female participants. Results showed that female non-athletes have stronger negative implicit attitudes towards male athletes, and both female and male athletes have a more positive implicit attitude towards football players.

## Talks

**Presenter(s): Rosette Braaten**

Title of Project: Physical Education Workshops for Elementary School Teachers

Type of Presentation: talk (online)

Location: Loso Hall 117

Time: 2:20-2:35 p.m.

*Faculty Sponsor: Brian Sather*

**Abstract:** **Statement of Purpose:** The purpose of this proposal is to research the feasibility of providing physical education workshops for elementary school teachers. The intention will be to support, train and motivate classroom teachers in meeting the standards for physical education while providing their students with a comprehensive and developmentally appropriate program. **Methods:** **Participants:** Newhall School District (NSD) administrators through direct interviews and email correspondence. Administrators were asked questions with regards to the considerations that needed to be made due to the current budget climate while

meeting federal and state mandates, and how that would have an impact on funding physical education workshops for classroom teachers. NSD classroom teachers answered a survey that focused on how much time was given to teaching P.E., and how P.E. was prioritized, and what were some of the difficulties that hinder them from meeting the state standard for their grade level. Equipment: P.E Survey (sent to all NSD classroom teachers) was submitted and sent via email - 35 replied. Research about various physical education workshops, and findings from studies relating to subject matter was completed via internet. Textbooks were also utilized as a reference material in providing additional background knowledge. Results: When dollars are scarce, funding for P.E. workshops will take a back seat. Outside funding, grant-based or voluntary attendance (teacher pays out of pocket) would be the only means of funding these types of workshops. Significance: As the spotlight on the epidemic of childhood obesity grows, in contrast the funding for providing elementary schools with a quality physical education programs is decreasing. Providing classroom teachers with P.E. workshops is a step to ensuring that students continue in their cognitive and associative development. The training will assist the teachers in understanding the developmental levels of various age groups, teaching and management of curriculum, and providing support.

**Presenter(s): Michael Godfrey**

Title of Project: The Role of the Violent Woman in Hollywood

Type of Presentation: talk

Location: Loso Hall 115

Time: 9:40-9:55

*Faculty Sponsor: Rebecca Hartman*

Abstract: My senior capstone project, a written thirty-five page historical thesis paper, will be presented using a PowerPoint presentation. I will discuss the role of the violent woman as a character in Hollywood films during the 1980's and early 1990's in conjunction with the ideological representations concerning family values that are reinforced during the film. The dichotomy present in cultural values during this time period was extremely controversial regarding the roles women were playing in society. Their place in the work force and in the traditional American home was examined in several popular films including Fatal Attraction, The Hand that Rocks the Cradle, Basic Instinct, and Disclosure. The blockbuster film added to the cultural outcry these films produced from the majority of Americans. Analyzing the films from a feminist and cultural perspective, I will discuss how these films used imagery, narrative, and violence to paint independent career women as a negative aspect of society while reinforcing the traditional housewife and the "American" family. My presentation will include several photos and bullet points which I will explain in greater detail while describing my thesis in a more condensed version. The research effort for this project was extensive.

**Presenter(s): Alexa Loscutt**

Title of Project: Media Images of Female Athletes

Type of Presentation: talk

Location: Loso Hall 115

Time: 1:40-1:55 p.m.

*Faculty Sponsor: Tonia St Germain*

Abstract: Sports is an influential part of our society and images of athletes play an important role in how people define their own identity. Some athletes enjoy an enormous celebrity, such

as Kobe Bryant and Jennie Finch, and enjoy large followings of fans from children to adults. This presentation argues that media presents male athletes in ways that celebrate their physical power and athletic achievements, but depicts women athletes as sexual objects. Using content analysis as a method of inquiry, the talk explores how the media sexualizes female athletes, emphasizes their heterosexuality, and exaggerates their femininity. The literature identifies how some scholars see sexualized images of the woman athletes as empowering, while others counter that these images only increase the negative attitudes held towards athletic women and contribute to the subordination of women and girls in sports. The audience will be encouraged to explore both sides of the debate.

**Presenter(s): Brittany Young**

Title of Project: Writing Across the Curriculum

Type of Presentation: talk

Location: Loso Hall 115

Time: 9:20-9:35 a.m.

*Faculty Sponsor: Ruth Davenport*

**Abstract:** The focus of this research is on writing across the curriculum as used in four 2nd grade classrooms in two elementary schools in rural Northeastern Oregon. The purpose of this study was to examine the benefits of this methodology in supporting students' learning in the content areas. The data collection methods included classroom observations, teacher interviews, and student interviews. The results have shown that writing across the curriculum builds on students' interest in writing, develops writing skills, and helps students actively engage with nonfiction texts. Other benefits include: using writing to help improve reading skills; validating other learning experiences by tapping into prior knowledge from outside the classroom; and increasing students' comprehension by writing in different genre about the content they are learning. The findings of the research will include a summary of the teachers' methods observed during the classroom visits, and summaries of the teachers' and students' perceptions of the benefits and challenges related to using writing across the curriculum in 2nd grade classrooms. The significance of the findings will be a comparison of the methods observed with those described in the professional literature and a source of strategies to inform my own teaching of writing across the curriculum.

**Presenter(s): Brynne Morningstar**

Title of Project: Student Beliefs About Diversity

Type of Presentation: talk

Location: Loso Hall 117

Time: 1:40-1:55 p.m.

*Faculty Sponsor: Rosemary Powers*

**Abstract:** Knowledge about diversity is crucial in a world that is becoming more globalized. In order for students to be sufficiently prepared to interact with people of different genders, races, sexualities, religions, and cultures, universities and colleges need to ensure that tomorrow's leaders are equipped to deal with a diverse workforce. This research project asks, "Is there a correlation between the number of diversity-focused classes students have taken and their attitudes about diversity?" Results from a random survey of 500 on-campus students will be presented and analyzed.

**Presenter(s): Deneil Hill**

Title of Project: War Crimes Against Women and International Humanitarian Law

Type of Presentation: talk

Location: Loso Hall 115

Time: 11:20-11:35 a.m.

*Faculty Sponsor: Rebecca Hartman*

Abstract: Directly following World War II in 1945, war tribunals were set up to address and punish the war crimes that had occurred. These tribunals together with the 1949 Geneva Conventions created contemporary International Humanitarian Law, often referred to as the rules of war. However, International Humanitarian Law has traditionally ignored war crimes committed against women. This presentation will examine the history of International Humanitarian Law and its neglect of women's human rights during times of armed conflict. To do so, I will analyze The Nuremberg Trials, the Tokyo War Crimes Trials, and the Fourth Geneva Convention of 1949 and their lack of attention to the widespread and systematic rapes of women. I will then draw upon information I gathered while attending the United Nations Commission on the Status of Women to analyze modern war tribunals and the attention given to war crimes against women in the present. Last, I will offer suggestions to women's rights organizations and policy makers to better prosecute crimes committed against women during times of armed conflict.

**Presenter(s): Brianne Sjolund (presenter), Irina Huber (presenter), Rob Duke, and Gretchen Daugherty**

Title of Project: Using Mobile Devices to Enhance Student Learning

Type of Presentation: talk

Location: Loso Hall 117

Time: 1:00-1:15 p.m.

*Faculty Sponsor: Brian Sather*

Abstract: This is a video project that was created in our HWS 320: Activities and Games for Youth class. It presents an insight into how modern technology can be used in the Physical Education classroom in order to enhance student learning. The video presents several methods that can be applied in the classroom to record student's performances, which will be sent to their email address for analysis. With the help of these methods, students can analyze their own movement patterns, aiming to improve their performance. The video presents a student who improves his Frisbee throw through positive and constructive feedback from the teacher, through practice and individualized video analysis. The class focuses on gaining experience in terms of teaching Physical Education with an emphasis on classroom management, giving feedback, evaluation and health-related vs. skill-related fitness. The video was also submitted for the NASPE (National Association for Physical Education) video contest.

**Presenter(s): Jason Rector**

Title of Project: Expatriates, Immigrants, & Xenocentrism

Type of Presentation: talk

Location: Loso Hall 115

Time: 10:20-10:35 a.m.

*Faculty Sponsor: Linda Jerofke*

**Abstract:** This paper analyzes how society has had an influence on the views people take when categorizing and labeling expatriates and immigrants of a new society. Though the titles may have a similar definition in the dictionary, they do not hold the same for society. Further discussion will be made about the reasons behind the categorization of these labels. This paper will also include an elusive idea in the cultural realm: xenocentrism, seeing another culture as superior to one's own, and how it differs from the more common ideas of cultural relativism and ethnocentrism. In explaining these concepts, I will bring more light to society's "rules".

**Presenter(s): Noelle Carstens, Ashlee Michelson, Shaylee Nielsen, Kami Hernandez, Kimmy Moore, Tristan Patton, and Angela Bragato**

Title of Project: Using Video Technology to Enhance Physical Education

Type of Presentation: talk

Location: Loso Hall 115

Time: 11:00-11:15 a.m.

*Faculty Sponsor: Brian Sather*

**Abstract:** The purpose of this project was to enhance student learning in a physical education classroom through the use of technology. In order to do this, we believe it is important to give appropriate feedback to students so they can improve their motor skills. Video feedback is an excellent way to involve students in the process of self-assessment and reflection. Throughout this process, we used a video recording device to record students performing a sports skill. Then, with basic computer editing software, we uploaded the footage onto the Internet at [pevideo.org](http://pevideo.org). Through this website, created by EOU's own Dr. Brian Sather, students and instructors can log on, watch the video, and provide comments and feedback as a way to analyze and critique skills for individual or collaborative learning. It was also used as a form of assessment for pre and post testing of an individual's performance of a particular sports skill. This is an excellent tool for teachers that we believe will help maximize skill development and interest in student participation in the PE classroom.

**Presenter(s): Kevin Elliott**

Title of Project: Issues with Attracting Physicians to Union County

Type of Presentation: talk

Location: Loso Hall 115

Time: 10:40-10:55 a.m.

*Faculty Sponsor: Heidi Harris*

**Abstract:** Access to healthcare, particularly to quality physicians, is a concern for many people in the United States, especially access to specialty physicians for rural residents. Union County has a large population of older adults for whom traveling for medical care is a logistically impossible. Union County needs to attract more physicians to our community. This presentation will address the findings of a study that compiled and assessed demographic data on Union County residents and reviewed which healthcare providers are not currently available in the community. Furthermore, the study assessed how many physicians are in Union County and what specialties are available. The presentation will present the results of the findings along with a review of previously successful recruiting techniques to provide suggestions for future recruitment of physicians to this area.

**Presenter(s): Kristin Anderson**

Title of Project: La historia de una mariposa que se llama  
La Malinche (The History of a Butterfly named La Malinche)

Type of Presentation: talk

Location: Loso Hall 115

Time: 11:40-11:55 a.m.

*Faculty Sponsor: Jill Gibian*

Abstract: I will be exploring La Malinche the mexican archetype for the “mother” and how her representation has changed from the perception of being a traitor in original literaure of her role to a national heroine in chicano literature of today, much like a butterfly. I will begin my presentation with an expanation of who La Malinche is then describe what was her role in the conquest of Mexico, by Hernan Cortes. I will then go over the first writing of La Malinche and the perception that they gave of her and how it formed the perceptions later on of writers such as Octavio Paz, then of the literature today by chicano authors. I will discuss what is chicano literature and how it relates to La Malinche, being a mixture of two cultures, and some of the recent works by chicana authors who have portrayed her as a Mexican idol. And finally the book by Laura Esquivel La Malinche and how this book is the culmination of current thoughts today.

**Presenter(s): Laura Eddy**

Title of Project: Examining Methodologies to Support Second Language Acquisition

Type of Presentation: talk

Location: Loso Hall 115

Time: 1:20-1:35 p.m.

*Faculty Sponsor: Ruth Davenport*

Abstract: The purpose of this research was to develop a deeper understanding of instructional methodologies for Second Language Acquisition (SLA) in primary grades. The primary research question of the project was: What SLA methodologies are employed in select primary classrooms in two elementary schools in rural and urban settings in Oregon? A classroom observation protocol was developed for this study. Data collection included classroom observations in two schools in rural and urban settings and interviews with six teachers from three different schools, with questions based primarily on my classroom observations. The main result of this study was a clearer understanding of teaching methodologies, specifically in environments where students are acquiring a second language in primary grades. Additionally, a comparison was made between the instructional strategies observed and the methods described in the current professional literature. This exploration of SLA strategies is part of my Honors Capstone, which combines work in my two major areas: Multidisciplinary Studies, modern Language and Global Culture with a Spanish emphasis; and my minor, English for Speakers of Other Languages (ESOL). The value of the project is my own knowledge of teaching second language learners is better informed and therefore, it will greatly impact my future students.

**Presenter(s): Salena Leavitt**

Title of Project: The Use of Math Manipulatives in Upper Elementary Classrooms

Type of Presentation: talk

Location: Loso Hall 115

Time: 10:00-10:15 a.m.

*Faculty Sponsor: Ruth Davenport*

Abstract: The purpose of this research was to investigate the use of manipulatives when teaching mathematics in upper elementary classrooms to support students' learning. The primary questions guiding the research were: a) What do select 4th and 5th grade teachers identify as the benefits and challenges related to the use of manipulatives for students learning mathematics in their classrooms? and b) In what ways do the teachers' comments about their practices related to the use of manipulatives compare to the benefits and challenges identified in the professional literature? The data collection methods included interviewing four different teachers at elementary schools in rural Northeastern Oregon: one taught 4th grade, two taught 5th grade, and the other is a resource room teacher. Additionally, I assessed and adapted lessons from current math textbooks and did an extensive review of literature based on the subject. The results of the study will be: a) a summary of the teachers' views of the benefits and challenges related to using math manipulatives, b) a comparison of those views to the professional literature, and c) a brief curriculum based on both. Preliminary findings will inform my work as a classroom teacher relative to the use of manipulatives in mathematics.

**Presenter(s): Teren Humphrey**

Title of Project: Art: An Important Aspect in all Areas of Education

Type of Presentation: talk

Location: Loso Hall 115

Time: 9:00-9:15 a.m.

*Faculty Sponsor: Ruth Davenport*

Abstract: With an emphasis on testing in primary grades and lower budgets for schools, many districts are cutting art out of the curriculum. However, art has many benefits for students other than teaching skills as an artist. The purpose of my study was to explore how art is used across the curriculum in primary grades. I examined the importance of art for developing eight areas in the learning process based on the theory of multiple intelligences developed by Howard Gardner. Data collection methods included classroom observations in six Kindergarten and first/second grade classrooms in rural Eastern Oregon as teachers used art in content area lessons. Interviews were conducted with classroom teachers and professors in the field of art education. The results include a brief art curriculum and a summary of the information gained from classroom visits and the interviews. This research is significant to the field of education because teachers are being held more accountable for students' success on tests, yet it is critical they do not neglect areas of the curriculum such as art that also support students' learning. This research will also inform my own teaching in the primary grades.

**Presenter(s): Tiffannie Feller**

Title of Project: The Post Dirty War of Argentina

Type of Presentation: talk

Location: Loso Hall 117

Time: 1:20-1:35 p.m.

*Faculty Sponsor: Jill Gibian*

**Abstract:** This presentation, an investigation from my senior capstone, will focus on the Post Dirty War in Argentina which took place from 1976 to 1983, and will include aspects such as the governments' role, what the war was about and the events that occurred, the Mothers of Plaza de Mayo, and the sentencing of the armed forces. The Dirty War occurred due to the government being over thrown by the military branch and a mass genocide began. Some of the events that happened throughout the Dirty War included: Torture, rape, murder, horrible beatings, as well as many other inhumane acts. Even after such terrible acts had occurred many of the military men received impunity from their trials. Because of the inhumanity that was put upon the Argentineans, many believe the members of the military that caused such brutality need to be punished in a more pressing matter. While some generals have been to court and were relieved from their castigation, other soldiers have not been tried for their wrongful acts. Argentineans believe this unjust occurrence within the courts needs to be brought to a fair trial for all of the victims and their families who have suffered over the following years. The Mothers of Plaza de Mayo who march and protest everyday in front of the 'Casa Rosada' are still looking for justice to be brought upon many of these soldiers. They gathered every day during the seven years to protest their missing family members in hopes of finding information of the disappeared. After the war lasting a long seven years, many Argentines hope to not have the generals and soldiers receive impunity but have justice finally brought.

**Presenter(s): Victor Bednar**

Title of Project: Table Top Experiments with Diode lasers

Type of Presentation: talk

Location: Loso Hall 115

Time: 2:20-2:35 p.m.

*Faculty Sponsor: Tom Hermann*

**Abstract:** Diode lasers may be adapted for use as external cavity lasers, which makes them tunable. Setting up an external resonator is usually done in either a Littrow and Littman-Metcalf configuration, which we will describe. Using an grating, the line width can be narrowed to a fraction of a nanometer. Since diode lasers are tunable and inexpensive at many wavelength ranges, they are excellent candidates for tabletop experiments. For stability, these devices must be strictly controlled in temperature, so we will describe a temperature controller we designed and built, in which an Atmel AVR micro-controller is employed. We will present our results of measuring some hyperfine splitting of energy levels of rubidium, and our observation of Zeeman effect in this regard. We will also present our initial observations of Fluorescence in lanthanides via two-photon excitation.

**Presenter(s): Kimberly J. Rollison**

Title of Project: A Look Into Transition Programs Today

Type of Presentation: talk (online)

Location: Loso Hall 117

Time: 2:40-2:55 p.m.

*Faculty Sponsor: Rosemary Powers*

Abstract: For the past three terms, I have had the honor to participate as a staff member as I conduct my capstone research project entitled, A Look into Transition Programs Today. With close direction from our transition program director and my EOU faculty sponsor, an online survey was designed that assessed eleven state programs in nine areas that include: program information, courses, services, staff, population, program completion, director responses, funds, and student success stories. As a sociological researcher, I questioned how these programs in Oregon operate and what populations are addressed now. Single Parent and Displaced Homemaker Programs (SPDH) originated with the United States Department of Education funds that were directed towards people in life, education or job transitions due to a loss of unexpected income and do not have marketable job skills, as I understand it. Slowly these funds have been removed and most programs are supported by other funds that require college admission; only a few programs, which include the program I intern at, offer help to obtain a GED. My presentation will include a talk about my project and display a folder which contains my capstone paper as well as other relevant information I learned about transition programs.

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