THE NEW ORU

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Academic News for College of Science and Engineering

February 2011

Behavioral Sciences Department

Meet the officers for the 2010-11 year: Jeff Fox, Ben Hase, Sara Bird, Whitney Doyeto, and Bethany Elmore. We are a fantastic group for those ORU students interested in learning more about the human mind. We will have monthly speakers come and share their experiences with us about careers in the Behavioral Sciences field, as well as social events to encourage unity! We invite everyone interested to engage in our intense discussions, debates, monthly meetings, and good times. The club has also been involved in some fundraising efforts for child trafficking awareness and prevention. The new Social Justice Minor is growing in numbers and the club is trying to include topics of interest in this area, as well. The semester will culminate on April 2 with an afternoon outing at a large ranch owned by Dr. Feller's family. It has proven to be an exciting event of fun, food and fellowship with the entire Behavioral Sciences department including Social Work club. Stay in touch with the Behavioral Sciences department and come join us for fun and learning this spring.
this spring.

Engineering, Computer Science, Physics & Math Department

Dr. Xiaomin Ma: Journal publication: Xianbo Chen, Hazem H. Refai, Xiaomin Ma: On the enhancements to IEEE 802.11 MAC and their suitability for safety-critical applications in VANET. Wireless Communications and Mobile Computing 10(9): 1253-1269 (2010)
Presented a paper in a international conference in Miami, FL: Xiaomin Ma, Jinsong Zhang, Tong Wu: Reconsider Broadcast Packet Reception Rates in One-Dimensional MANETs. GLOBECOM 2010: Dec.1-6
A paper has been accepted by IEEE International Conference on Communications (ICC2011): Xiaomin Ma, Hazem Fefai, Analytical Model for Broadcast Packet Reception Rates in Two-Dimensional MANETs.

Dr. Vincent Dimiceli: Acknowledged as reviewer in *Mathematical Ideas* 12th Edition by Miller, Heeren, and Hornsby.
Presented paper *Estimation of Black Globe Temperature for Calculation of the Wet Bulb Globe Temperature Index* at the Joint Mathematics Meetings in New Orleans. Paper written while on sabbatical at NOAA/NWS.
Contributed to severe weather prediction project at NOAA/NWS.
Contributed to Probabilistic Quantitative Precipitation Forecast (PQPF) project at NOAA/NWS.

Biology and Chemistry Department

Retired Professor Emeritus John Nelson and his colleague have been working diligently over this past year collecting, identifying and cataloging Lepidoptera (butterflies and moths) in Oklahoma. They have submitted 62 butterfly & 512 moth new County Records which includes 47 State Record moths to the 2010 Lepidopterist's Society Season Summary Report. As of the end of 2010, we have a total of 2029 species (195 butterflies & 1834 moths) recorded for Oklahoma county records. Over the past 20+ years this pair have been able to lift Oklahoma from near the bottom of the states in knowledge of their Lepidoptera well up in the standings. At the end of 1981 when the survey was started, there were an average of only 15.4 butterfly species recorded per county. As of the end of 2010 we have an average of 74.5 butterfly species per county on record. Dr. John Nelson has been maintaining this collection of Lepidoptera in the ORU biology insect museum for several years and it is considered the best repository of Lepidoptera in the state.

Dr. Korstad's publications on algae and biofuels:
Sharma, Y., B. Singh, and J. Korstad. 2010. A high yield and conversion of biodiesel from a non-edible feedstock (*Pongamia pinnata*). Journal of Agricultural and Food Chemistry 58 (1): 242-247.

Sharma, Y., B. Singh, and J. Korstad. 2010. Application of an efficient nonconventional heterogeneous catalyst for biodiesel synthesis from *Pongamia pinnata* oil. Energy and Fuels 24 (5): 3223-3231.

Sharma, Y., B. Singh, and J. Korstad. 2010. Latest developments on application of heterogenous basic catalysts for an efficient and eco friendly synthesis of biodiesel: A review. Fuel doi:10.1016/j.fuel.2010.10.015.

Sharma, Y., B. Singh, and J. Korstad. 2011. Advancements in solid acid catalysts for ecofriendly and economically viable synthesis of biodiesel. Biofuels, Bioproducts and Biorefining. doi:10.1002/bbb.253.

Sharma, Y., B. Singh, and J. Korstad. Manuscript to be submitted in 2011. A critical review on recent methods used for economically viable and eco friendly development of microalgae as a potential feedstock for synthesis of biodiesel.

Danielle Lavigne presented her research at the Annual Biomedical Research Conference for Minority Students (ABRCMS) conference in Charlotte, NC on November 10-13th. This trip was supported by Biology Alumni.

David Bulger travelled to Knoxville, TN on November 19th to present his research at the Undergraduate Research Conference hosted by the National Institute for Mathematical and Biological Synthesis(NIMBioS) at the University of Tennessee. This trip was supported by NIMBioS.

Health, Physical Education, and Recreation Department

The Human Performance Lab received a new computerized cycle ergometer and updated equipment for the underwater weighing system. This is GREAT NEWS for the HPER Department! The underwater weighing system is a piece of equipment that accurately measures body fat. Students in Exercise Physiology class are trained how to use and administer tests using the new equipment.

The newly formed HES/HPER Club met off campus at the Techanchuk Residence. It was attended by students who that night elected the President and VP for the year. What a great way to start off the new year!