NEW PEOPLE IN EAS
Nathan Daniel Wilkens
Postdoctoral Research Associate

Nathan is working with Brenda Beitler Bowen, studying the Cambrian Mount Simon Sandstone in the midcontinent United States. This work is in support of carbon sequestration projects across Indiana, Illinois, and Kentucky. Nathan graduated from Arizona State University in May 2008 with a PhD in Geological Sciences. His dissertation work was titled “Paleoecology of Jurassic Navajo Sandstone Interdune Deposits” where he described climate change evidence in the Early Jurassic seen as transitions from desert to mesic conditions. His research emphasis has been on sedimentology, geochemistry, and paleontology with an emphasis on the tools that tell us what we know. After a year of full time teaching at Mesa Community College, Nathan came to Purdue University in May 2009.

Xudong Zhu
Graduate student

Xudong obtained his Bachelor degree, with a major in Geographical Science, from East China Normal University, and Master degree from the Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences (CAS). Starting this Fall semester, he is working with Prof. Qianlai Zhuang towards a doctoral degree at Purdue. His thesis research will focus on studying carbon, water and nitrogen cycles in the context of climate change, land cover change and human activities through integrating satellite and in situ data and mechanistic models.

OUR RECENT PUBLICATIONS

UPCOMING MEETINGS
Monday, August 30
• EAS Faculty Meeting, CIVL 3201 (11:30 a.m.)
• EAS Primary Committee, CIVL 3201 (~1:30 p.m.)

Wednesday, September 1
• Graduate Committee, CIVL 2201 (1:30 p.m.)

EAS SEMINAR
Thursday, September 2, at 3:30 p.m. in CIVL 1252: “BP Oil Spill: A Look at What Happened.” William Zinsmeister, EAS, Purdue University

For more information, see the EAS online calendar.

RECENT PRESENTATIONS
Larry Braile was a participant in the NAGT/SERC Cutting Edge workshop Teaching Geoscience in the Field in the 21st Century and presented an invited talk: “Field Geophysics at SAGE: Strategies for Effective Education.” He also had a poster presentation: “Field Geophysics – Sampling and Aliasing Theory and Examples.” The workshop was held August 12-17 at Montana State University in Bozeman, Montana and was very interesting. The program and links to most of the presentations (PowerPoint), as well as contributed field activities, discussions of assessment, field safety and other topics can be found at: http://serc.carleton.edu/NAGTWorkshops/field/workshop10/program.html.

Hersh Gilbert presented an invited talk entitled "Crustal structure of the Sierras Pampeanas, central Chile and Argentina" at the 2010 AGU Meeting of the Americas in Iguazu Falls, Brazil. The meeting was the 8th to the 12th of August.

Jim Ogg: "Into the Deep – Gulf of Mexico Petroleum Geology"; 20 August 2010; to the Purdue Global Sustainability Initiative and the Purdue Oil Spill Response groups. Mann Hall, Purdue.

FALL PICNIC PHOTOS
The pictures from the 2010 fall picnic may be seen at http://www.purdue.edu/eas/news/highlights.php.
MARK YOUR CALENDARS!
All meetings will be held in CIVL 3201 from 11:30 a.m.-1:30 p.m.

Fall Faculty Meetings:
August 30
September 20
October 25
December 6

Fall Primary Committee Meetings:
September 13
October 4
October 6 (Wednesday) (if needed)
October 13 (Wednesday) VOTING MEETING

EAS AT THE STATE FAIR
The EAS department made an impact at the state fair with shatter cones, rocks, and fossils of Indiana! We were well represented in the College of Science tent during Purdue Day at the state fair this year. As thousands of people visited the fair and enjoyed their gastrointestinal engulfing meals, many stopped by the EAS booth intrigued by the many unique specimens from Indiana on display. A huge THANK YOU goes out to EAS graduate students Stacy Story and Juli Bell for all of their hard work in the tent educating and entertaining the masses and the many Purdue persons visiting.

EAS TECHNOLOGY SUPPORT NEWS
Update Regarding Submission of IT Requests
This past spring, as presented in two EAS faculty meetings, College of Science IT began providing IT support for EAS. The previous agreement with ITaP for departmental IT support (Janet Lange and Randy Herban) ended June 30th. All IT requests are now managed by COS IT staff.

To clarify this transition, the email address for requesting IT support is being changed,

from: eas-itap@purdue.edu

to: eas-help@purdue.edu

Note: The eas-itap@purdue.edu email address will continue to forward to the appropriate ticket queue to ensure no IT requests will be lost. However, please use the new email address going forward.

PURDUE FORECAST GAME RETURNS
The Purdue Forecast Game begins its initial session of the 2010-11 season on Wednesday September 1.
As usual, forecasters will predict the weather Mon-Fri for two locations: Indianapolis, and the second city for this session, Baltimore, Maryland.

All are welcome to test their prediction skills against numerical guidance products and seasoned forecast veterans. If you have not already signed up and are interested in participating, or have any questions, please contact Prof. Baldwin (baldwin@purdue.edu) by 5 p.m. on Tuesday, August 31.
Good luck!

HOT BEVERAGE CLUB
Just a reminder that the EAS Hot Beverage Club $20 payments are due on the first of the month (or pay $1 per cup – cash only – to Dee).

EAS LIBRARY NEWS
New Books
To view a list of the NEW BOOKS received in the last two weeks, click here.

Reserves
If you are teaching a course this Fall, you should have received an email from the Library containing the attachment for the new forms for the RESERVE materials. Please include AUTHOR, TITLE, and edition on the new forms available at www.lib.purdue.edu/coursereserves. For questions, contact Terry Wade at 49-43264, twade2@purdue.edu, or stop by the EAS Library and ask for Terry.

Free Duplicates
The library is disposing duplicate and/or outdated materials. We are offering them free on a first come, first serve basis to the EAS faculty and grads. Click here for the list. The deadline for pickup is Sept. 7.

New Framed Posters
Have you noticed the reconfigured entryway into the EAS Library? Four large meteorology-oriented framed posters are mounted on the wall to the right. The first is a rainbow over Bryce Canyon; the second is of lightning strikes in clouds; the third is clouds at sunset; and the last is a satellite photo of Hurricane Katrina over the Gulf. The abstracts and indices that formerly filled that wall have been sent to storage as they are now available online. The shelving was removed, making room for the posters.
New Photocopier/Scanner
The Photocopy room and Study Room have been swapped, returning them back to their originally designed purposes. We returned to having one copier/scanner. The new copier/scanner has the option to scan and email a document for FREE. Paper copies remain at 5 cents a copy. Remember, the Kiosk takes only bills ($1, $5, $10, $20) and adds the amount to your account, up to $20. Login with your careername/careerpassword; the paper copy charges are deducted from your account. Needless to say, most users are using the free scans and emailing the files to themselves. Emailing files can be done only in small amounts. So, if you have a large document, it is necessary to break it up into smaller files.

Professional Librarian Hours
Carolyn Laffoon has assumed the position of Physics Librarian, in addition to the EAS Library. (Michael Fosmire is on sabbatical.) Carolyn’s hours are:
Mornings and Wed, Thurs afternoons: EAS Library
Mon, Tue, and Fri afternoons: Physics Library
The phone number remains the same as it transfers to Physics Library when she is there: 49-40201. Feel free to email her at carolyn@purdue.edu, call or stop by either office if you have any needs or questions.

INTERNATIONAL SYMPOSIUM ON BREAST CANCER PREVENTION:
Nutrition, Communication and Public Policy
Co-Chairs: Sophie A. Lelièvre and Connie M. Weaver
October 18 and 19, 2010
Purdue University, West Lafayette IN, USA
Read more

PURDUE GRADUATE STUDENT CALLOUT!!!
FREE FOOD!
Come and learn how you can get involved in your student government and make a difference. Even if your department already has a senator, WE STILL NEED YOU!! Come and talk with our committee heads at our PGSG open house
Thursday, September 2
6:00-8:00 p.m.
KRAN G002

It is time to polish up those resumes and gather transcripts. Oil companies are scheduling their interview dates.

Companies scheduled (as of 8/24/10)
ExxonMobil – September 20-21
Chevron – September 30-October 1
Shell – by appointment (read more)

Stay tuned for additional information on ExxonMobil and Chevron.

SMART Scholarships
SMART (Science, Mathematics, Research for Transformation) offers scholarships to undergraduate and graduate students who have demonstrated ability and special aptitude for excelling in STEM (Science, Technology, Engineering, Math) fields. Students are also provided opportunities to continue their research in civil service roles following graduation. For more information, please visit the website http://www.asee.org/smart.
Study Abroad Fair
Wednesday, September 1, from 10 a.m. – 3 p.m. on the Purdue Memorial Mall. Learn about the 200+ study abroad programs available with programs as short as a week and as long as a year. Talk with students who have studied abroad, program representatives, and the study abroad staff. More information about SA here: https://www.studyabroad.purdue.edu/.

Tutors
If you interested in tutoring and earned a B or higher in that subject, please contact me. The Dean of Students office is looking to hire tutors for nontraditional, adult students.

Grants to Students for Service Projects
Funds are available to provide grants to students or student organizations for work on community service learning projects. Read more... Deadline to apply is September 16.

Academic Workshops
The workshops are free and open to all Purdue students and held 4:30-5:30 Wednesdays in STEW Room 318. Dates and topics are:

Sept 1: TIME MANAGEMENT (PRIORITIZE and SCHEDULE YOUR TIME) in STEW 318
Sept 8: "ACING" YOUR EXAMS in STEW 318

Video clips on these and similar topics available here:
http://www.cla.purdue.edu/students/asc/studentsupport/videoclips.html

Student-Run Farm
Organizers of Purdue’s new student-run farm are hosting a callout on Tuesday, August 31 at 6:30 p.m. in Room G-126, Lilly Hall. The College of Agriculture and the Department of Hospitality and Tourism Management established the student-run operation which will give students the opportunity to grow food on campus and learn about sustainable agriculture.

“Our Future in Space”
This is the title of the talk by Charles F. Bolden, Jr. 12th Administrator of NASA on Tuesday, September 7 at 7 p.m. in Fowler Hall in Stewart Center.

Nancy

IMPORTANT NOTICE ABOUT THIS NEWSLETTER
This newsletter will now be used as the primary information source for current and upcoming events, announcements, awards, grant opportunities, and other happenings in our department and around campus. Active links to additional information will be provided as needed. Individual email announcements will no longer be sent unless the content is time-sensitive. We will continue to include our publications, presentations and other recent news items as well. Those using paper copies of the newsletter should go to our newsletter archive on the EAS website at www.purdue.edu/eas/ and Click on News to access active links as needed. Material for inclusion in the newsletter should be submitted to Gina Richey (grichey@purdue.edu) by Friday noon of each week for inclusion in the Monday issue. If it is in the newsletter, we assume you know about it and no other reminders are needed.

For answers to common technology questions and the latest updates from the EAS Technology Support staff, please visit http://www.purdue.edu/eas/resources/it.

Also, as an additional resource for information about departmental events, seminars, deadlines, etc., see our departmental calendar at http://calendar.science.purdue.edu/eas/seminars.
Introduction to XPS:
What should you know about X-ray photoelectron spectroscopy?
September 22-23, 2010 (2-day course) with optional 3rd Day (9/24)
8 a.m. - 5 p.m. in Burton D. Morgan Center Room 129
Registration at: nano.purdue.edu/XPS/

Course Objectives
- Learn physics principles of X-ray Photoelectron Spectroscopy (XPS).
- Learn about the analysis of surfaces with XPS and limitations of the technique.
- Learn approaches for qualitative and quantitative analysis of XPS data.
- Learn the types of problems that can be solved with XPS: examples.
- Some advance data analysis (coverage calculation, thin film thickness calculation, etc.) will be covered.

Course Description
XPS, which is also known as Electron Spectroscopy for Chemical Analysis (ESCA), is used to determine the elements present at a surface and their concentrations, chemical states, and lateral and depth distributions.

Instructor:
Dmitry Zemlyanov, Surface Science Application Scientist, Birck Nanotechnology Center, Purdue University.

Day 1 - September 22

Introduction: terminology, surfaces, types of surfaces.
The Principles of XPS: production of photoelectrons, electronic configuration of atoms and molecules, energy, spectra, peak labeling, Auger process, valence spectra, handbooks, books, surface sensitivity, information depth and attenuation length, spin-orbit splitting, chemical shift, plasmons, multiplet splitting, shake-up. Handbooks and helpful references will be recommended.

Instrumentation: X-ray anodes, monochromatic radiation, electron energy analyzers, energy resolution, spectrum acquisition, energy scale calibration, electron detectors, small area analysis, imaging XPS, vacuum system, samples and sample handling.

Artifacts: radioactive and thermal damage, charging, methods for charge control, ghost peaks.

2-day Cost is $700
Special Student Price - Inquire for Details

Questions? Contact Monica Allain at: mallain@purdue.edu.

Day 2 - September 23

Examples of qualitative/quantitative analysis and data processing will be done using CasaXPS software.

Qualitative Analysis: identification of elements, changing x-ray sources, charging correction and reference lines, interpretation of chemical shift, relaxation effects, Auger parameter, peak widths, lineshapes.

Quantitative Analysis and Data Processing: sensitivity factors, ionization cross section, asymmetry parameter, analyzer transmission, intensities, background subtraction, satellite subtraction, detection limit, effect of thin overlayers, peak area, lineshapes, curve fitting, deconvolution.

Depth Profiling: non-destructive and destructive methods, angle resolved XPS, elastic and inelastic scattering, thickogram, sputtering, sputtering depth calibration.

Applications: some further examples of applications of XPS.
Advance Data Processing (upon request): coverage calculation, thin film thickness calculation.
You’re Invited To a Very Special Event
Our Alumni, Friends, and Student Reception
and a Celebration of Bill Hinze’s 80th Birthday
at the SEG Annual Meeting
Grand Hyatt-Denver
Crystal Peak, Pinnacle Club, 38th floor (1750 Welton Street)
Monday, October 18, 2010
6:30-8:30pm
(you don’t need to be registered for the meeting to attend)

Do you have a special story, photo, or something else you would like to share at the event?
If so, please contact Mark Longacre at:
Mark.Longacre@mbl-inc.com