

# FACTORIAL!



Vincennes  University

Science and Mathematics Division News • Spring, 2003

## SWINE DESIGN



Chris Witte's mission is to help pork producers get as much pork as possible from pigs. Chris works in the field of animal science, specifically swine genetics. The broad field of animal science encompasses everything from the management and marketing of farm animals to the science of growing animals with the aim of producing high quality meats and other animal products for consumption. Chris's company provides producers with live breeding stock as well as genetic input via semen.

Chris Witte graduated from Vincennes University in 1992 with an Associate of Arts Degree in the Pre-Veterinary curriculum. Chris then transferred to Purdue University where he received a Bachelor of Science degree in Animal Science in December 1993. After graduation, Chris began his career in North Carolina working as a manager for Browns of Carolina, and later for Prestage Farms. In 1997 he went to work in Iowa for Heartland Pork Enterprises/Cotswolk Genetics. And a year later Chris went to work for his present company Tempel Genetics, in Gentryville, Indiana. Tempel Genetics is a regional swine genetic company that develops and sells breeding stock. Chris is responsible for customer relations and advertising. He is also involved with the evaluation and improvement of genetic lines using BLUP (Best Linear Unbiased Prediction) technology, and working with packers and universities on improving meat quality traits.

As Chris moved from company to company, he seized the opportunity for career advancement. Right out of High School Chris also seized the opportunity to come to Vincennes University. "Starting my college career at Vincennes University was a very important step in my college education. The Vincennes University faculty are excellent - they take time

to give every student the opportunity to learn and the personal attention that they need. I felt like they really cared about my success. The small class size and well-equipped facilities make Vincennes so successful. Starting at VU really prepared me to further my education at Purdue University. I had no trouble transferring any of my credits. The connections that I made at Vincennes

University will last forever," he comments.

Chris is pleasantly pleased working with pigs, and assures graduates that there is a plethora of placement possibilities. Career advancement is also in the plan, especially if one is willing to relocate. So, if working with the management, marketing, or science of growing animals for meat or products like milk or wool interests you, then

consider a career in Animal Science. Check out the General Science – Pre-Veterinary Program or General Science – Agriculture Program at [www.vinu.edu/mathsci](http://www.vinu.edu/mathsci).



Visit us on the Web at [www.vinu.edu/mathsci](http://www.vinu.edu/mathsci)

# RECENT OUTSTANDING ALUMNI OF THE SCIENCE-MATHEMATICS DIVISION

The alumni honored with this selection for 2002 were Dr. Kirby Hayes and Dr. Scott Renshaw. Both individuals progressed from Vincennes University to continue their education at Purdue University, both earning doctoral degrees. Dr. Hayes is currently on the faculty as an Assistant Professor at Purdue University and Dr. Scott Renshaw, after graduating from the Indiana University School of Medicine, is in family practice at Methodist Hospital in Indianapolis and expects to complete his residency requirement in June 2003.



After graduating from Vincennes University in 1994, with an Associate degree in Pre-Pharmacy, Dr. Hayes earned his Bachelor's degree from Purdue University in 1996 in Food Science. He then continued at Purdue University, earning a Master's degree in 1998 and a Ph.D. degree in 2002, both in Food Chemistry. During his academic career, Dr. Hayes has worked as a Graduate Instructor in the Food Science Department at Purdue University, a Food Scientist in the Betty Crocker Division at General Mills, and both as a Senior Honors Researcher and a Laboratory Technician in the Department of Food Science at Purdue. In addition, Dr. Hayes has received awards from Purdue University as an Outstanding Graduate Student Teaching Assistant, Betty's Breakthrough Results Award from General Mills, the Phi Tau Sigma Outstanding Senior in Food Science, and first place in the National Undergraduate Research Paper Competition from the Institute of Food Technologists.

In recent meetings with various groups of students from Vincennes University, Dr. Hayes credited Vincennes University with giving him a second chance, as he came out of high school very poorly prepared for college and very much of a "party animal". Vincennes University enabled him to turn his academic career around and he strongly felt that a great deal of his success is due to the assistance he received from Vincennes University. He is truly an example of how hard work and readily available assistance can allow someone to turn his or her life around!

After graduating from Vincennes University with an Associates degree in Chemistry, Dr. Renshaw transferred to Purdue University where he graduated with a double major in Biochemistry and Food Process Engineering. From there, he was accepted into the Indiana University School of Medicine, and graduated with his M.D. He is currently at Methodist Hospital where he expects to complete his residency in Family Practice. During his academic career, Dr. Renshaw has worked as a substitute teacher in the Vincennes Community and South Knox schools, as a summer intern at the Community Health Center, also as a summer Service Representative for Burkhart Insurance, and as a summer Lab Technician for Sceptre Industries. Dr. Renshaw also tutored in the Math Lab during his career at Vincennes University.



# VINCENNES UNIVERSITY ALUMNUS NAMED EDITOR-IN-CHIEF

Newton Lee, an electrical engineering graduate from Vincennes University, has been named Editor-in-Chief by the Association for Computing Machinery (<http://www.acm.org/>) for its new online magazine *Computers in Entertainment*. Mr. Lee is a senior staff engineer at Disney Online in Burbank, California.

The magazine (<http://www.acm.org/pubs/cie.html>) covers a wide range of theoretical and practical computer applications in the field of entertainment such as online games, CD-ROM software, CGI movies, and interactive TV. It publishes high-quality papers on the latest development in software, hardware, and business policies that improve existing mainstream entertainment and that create new genres of entertainment. The first issue is slated for September of this year and upcoming special issues will be devoted to "Educating Children Through Entertainment," "Merging Virtual Reality and Live Performances," and "Music Composition and

Technology." The editorial board consists of more than 50 industry and academic leaders in media, communications, special effects, and R&D.

In addition to his A.S. degree from VU, Lee holds bachelors and masters degrees in computer science from Virginia Tech. Mr. Lee joined Disney Online in 1996 and has led the development of



over 100 games and activities for enhanced TV, set-top boxes, CD-ROMs, and award-winning web sites. Prior to Disney, Lee was an artificial intelligence researcher at AT&T Bell Labs and an antiterrorism scientist at the Institute for Defense Analyses. He has lectured at MIT, the Art Institute of California, and Woodbury University. Lee has served on numerous civic organizations involving young people and technology. Lee received an honorary doctorate in computer science from Vincennes University in 2000.

## SPOT LIGHT ON PRE-PHARMACY

When Dustin Bezy started the Pre-Pharmacy program at VU in 2000, he wasn't certain a career in Pharmacy was what he wanted. He chose it because he wanted to do something that involved medicine and that would help people, and pharmacy seemed a reasonable candidate. Now, after two years at VU, Dustin is in his second semester at Purdue's School of Pharmacy and feels certain he made the right choice, saying that the School of Pharmacy opened

his eyes to what can be done with a Doctorate in Pharmacy.

The School of Pharmacy has a challenging curriculum and Dustin stays busy, but he says that his time at VU prepared him well for the rigors of Purdue: "I was academically prepared for Purdue – better than most students I have met. There were things we were able to experience in labs or lecture (at VU) that some students up here

never even talked about in class. Anyone coming from VU to Purdue (at least in Pharmacy) should only worry about getting used to larger classes and the less one-on-one teaching style."

Interested in a career in pharmacy? VU's Pre-Pharmacy program is a good place to start. Contact Jay Bardole at [jbardole@vinu.edu](mailto:jbardole@vinu.edu) for details.



# SCIENCE OLYMPIAD

The 2003 Indiana Southwestern Regional Science Olympiad was held on the Vincennes University campus on February 22. Teams from eleven high schools and eight middle schools competed in forty-five events. Each team consisted of up to fifteen members and a coach, bringing over three hundred visitors to the VU campus. Indiana holds eight regional tournaments and one state tournament under the aegis of the National Science Olympiad headquartered in Rochester, Michigan ([www.soinc.org](http://www.soinc.org)). Indiana's state competition will be held March 29th on the Indiana University campus in Bloomington, and the national competition takes place May 9-10 at Ohio State University. The goal of the Science Olympiad organization is "To improve the quality of k-12 science education throughout the nation." This year's Southwestern Regional winners were Bloomington South High School and Sullivan Junior High School. For information about next year's Science Olympiad, contact Dr. Daryle Riegle, Dean of the Science and Mathematics Division, at [driegle@vinu.edu](mailto:driegle@vinu.edu).



◀ First Place Division C: Bloomington South High School

First Place Division B: Sullivan Middle School  
▼



## ALUMNI IN THE NEWS

*(If you have additional news about our alumni, please email us at [rshippee@vinu.edu](mailto:rshippee@vinu.edu).)*

**Dr. Susan (Johanningsmeier) Olesik** (North Knox HS), VU'75, Professor of Chemistry at Ohio State, developed parts of the instrument package on NASA's Cassini probe, scheduled to arrive at Saturn in 2004.

**Dr. David Miller**, VU'76, is a Vice President for General Electric in GE's Jet Propulsion Division.

**Dr. M. Kent Smith**, (Lincoln HS), VU'78, is director of dental operations for the Marion County Health Department.

**Dr. John Gallagher**, (Barr Reeve HS), VU'79, is Director of St. Mary's Senior Health Center in Evansville, IN.

**Brian West** (Shakamak HS), VU'82, is Assistant Professor of Electrical Engineering Technology at the University of Southern Indiana in Evansville.

**Dr. Michael Worrell** (Washington HS), VU'82, is Assistant Professor of Biology at Grand Canyon University in Phoenix, Arizona.

**Dr. Jeff Johnson**, VU'83, is a geologist with the Kansas City office of the EPA.

**Chetta (Wilson) Owens**, (Lincoln HS), VU'85, has been elected President of the Texas Aquatic Plant Management Society. Mrs. Owens is working on a doctorate at the University of North Texas.

**Dr. Shawn Riegle** (South Knox HS), VU'85, is an anesthesiologist with St. Mary's Hospital in Evansville, Indiana. Shawn's wife, Julie, is also a graduate of VU ('86 Biology).

**Bekky Nickless** (North Knox HS), VU'86, is a forensic chemist with the Indiana State Police.

**Dr. Shannon Riegle** (South Knox HS), VU'86, is a family practice physician in Upland, Indiana.

**Larry Barchett** (Lincoln HS), VU'88, is a programmer for IBM in Burlington, Vermont.

**Max Bales** (Bloomington North HS), VU'84, is Assistant Director of Development in the Purdue School of Agriculture.

**Gene Martindale** (South Knox HS), VU'90, is a design engineer with Daimler-Chrysler Corporation.

**Chris Parsons** (South Knox HS), VU'90, is a petroleum engineer with Mobil-Exxon.

**Dr. John Fye** (Lawrenceville IL HS), VU'91, is a resident at Ball Memorial Hospital in Muncie, IN.

**Scott Monroe** (Sullivan HS), VU'91, teaches horticulture at VU and is a research horticulturist for Melon Acres in Oaktown, IN.

**Dr. Eric Hein** (Bloomington South HS), VU'92, is a dentist practicing in Valparaiso, Indiana.

**Heather (Bardole) Hubert** (Lincoln HS), VU'92, is a project engineer with General Motors in Detroit.

**Erik Blemker** (Lincoln HS), VU'93, is a pharmacist and store manager with Williams Brothers Health Care in Bloomington, Indiana.

**Jason Huff** (Lincoln HS) VU '93, is a veterinarian with a large animal practice in Greencastle, IN.

*(Continued on page 8)*

# ONLINE SCIENCE PUZZLES, QUIZZES, TUTORIALS AND MORE ... A REVIEW

Several web sites make it easy for students to find research and reference resources, tutorial services, learning puzzles and games, college information, AP test prep questions and more. These same sites offer lesson plans, warm-up activities, cartoons, reference materials and free printable materials for teachers. The following sites have extensive resources and links: <http://highschoolhub.org>, <http://homeworkplanet.com> and <http://about.com/biology>. A brief review of each site follows.

## HIGH SCHOOL HUB

**High School Hub** (<http://highschoolhub.org>) is noted as being “a noncommercial learning portal to high-quality free online educational resources for high school students.” It features excellent tutorial materials or homework help on topics in the areas of biology, chemistry, earth science, mathematics and physics. Featured topics include “colleges and careers”, “study skills and tips”, and “teen health”. Reference resources include an atlas, calculator, conversions dictionary, medical info, research help, translator, weather, world facts and zip codes. There are many detailed articles on numerous topics in the sciences. Pop-up advertising is absent as is onscreen advertising. The navigation is easy and the illustrations, images and graphics are excellent.

**Homework Planet** (<http://homeworkplanet.com>) is a student web guide support-



ed by advertising. Numerous resource materials are available to teachers and students through links to science and math sites. On the homepage, the heading notes that you can “search 100,000+ top educational sites, lessons, supplies and more.” This site has much to offer.



**About.com** (<http://about.com/biology>) is a search engine. It has advertising and pop-ups but is a terrific resource. Select biology in the search field or use the address above and you will have access to extensive links to multiple science disciplines. There are also numerous helps for teachers in the “secondary school educator” site (<http://7-12educators.about.com>) Teachers will find clip art, assessments, discipline, critical thinking, grant writing, learning styles, motivation and national certification information on this site.

It is impossible to adequately describe all of the information available to students and teachers using these web sites. The best thing to do is to get into the sites and explore them. But be warned! You may find yourself hours later deep in the adventure of finding exciting resources for teaching and learning or playing learning games and puzzles.

## SEE YOU AT PRE-VU!

Vincennes University’s Admissions office has announced a new look for campus visitations, called “Pre-VU Days.” Students and parents will have the opportunity to visit with representatives from all the University’s Divisions at a “one stop” format in the Beckes Student Union. Division representatives will staff information tables and answer questions about their Division’s programs. Admissions and Financial Aid representatives will also be available. The Pre-VU program includes campus tours and visits to the Divisions for a closer look at their classrooms and facilities. For more information, contact VU Admissions at (812) 888-4313 or email them at [vuadmit@indian.viu.edu](mailto:vuadmit@indian.viu.edu).

# VU ALUM PARTICIPATES IN NASA STUDY

Last spring, hundreds of students and teachers from nine states prepared three hundred biological samples for an experiment astronauts delivered to the International Space Station. Included for the first time in the experiment were high school students from Indiana, including students from VU grad, Neil Rapp's AP Chemistry class at Bloomington South High School. These students represented Indiana in an ongoing study sponsored by NASA's Biotechnology Program at the Marshall Space Flight Center in Huntsville, Alabama.



In November, 2001 Mr. Rapp and his students worked with NASA scientists visiting the Indiana University campus to prepare a protein crystal growth experiment. Protein crystals are used to determine the proteins' precise three-dimensional molecular structure and are an important tool for biochemists designing medicines. Only about 5% of all possible proteins so far have been crystallized in this manner in order to determine their structure. "They got a feel for what NASA does and what they might choose as a career," Rapp said. "Our studies and discussions of crystal structure in the classroom were transformed from just being another section in the textbook to being a project they literally got their hands on."

Many of the students, including twenty-four from Bloomington, were at Kennedy Space Center in Florida to watch as Atlantis prepared to lift off with their experiments. A fuel leak delayed the launch several days, so the group had to settle for watching the launch in Bloomington on NASA TV. The trip was still very upbeat, and included tours of Kennedy Space Center and a banquet given in their honor by NASA. Addressing the group, Ray French, program manager for the experiment, said "With this upcoming space mission, more students across America are learning how the Space Station can help us understand the biochemistry of plants and animals on Earth."

Neil Rapp is a graduate of Vincennes Lincoln High School and Vincennes University. In addition to teaching chemistry, Mr. Rapp is an amateur radio and computer enthusiast, and is working on a doctoral degree in Instructional Design Systems from the University of Kentucky.

## SCIENCE AND MATH DEAN'S LIST

*Congratulations to the forty-two Science and Math students named to the fall semester 2002 Dean's List. To qualify for the honor, a student must receive a grade point average of 3.5 while carrying at least twelve credit hours. The students and their home high schools are:*

**Barr Reeve High School:** Justin Lashley, Pre-Civil Engineering; Ryan Wagler, Pre-Pharmacy.

**Ben Davis High School:** Tina Klinge, Pre-Medicine.

**Boonville High School:** Joshua Seiler, Pre-Chiropractic.

**Gibson Southern High School:** Allen Knapp, Lab Assistant, Engineering.

**Jean Francois Rivet High School:** Laura Stephenson, Biology.

**Lawrenceville (IL) High School:** Nathan Sweazy, Pre-Mechanical Engineering; Karen Shields, Lab Assistant, Biology.

**Lebanon High School:** Garth Hayes, Pre-Civil Engineering.

**Lincoln High School (Vincennes):** Nicholas

Crowley, Agriculture; Danielle Patterson, Chemistry; Gretchen Blemker, Pre-Dentistry; Neil Ackerman, Pre-Chemical Engineering; Jessica Martinson, Pre-Mechanical Engineering; John Foley, Lab Assistant, Engineering; Megan Hendrix, Pre-Occupational Therapy; Valerie Richardville, Pre-Pharmacy.

**Linton-Stockton High School:** Nathaniel Ellis, Pre-Civil Engineering.

**Loogootee High School:** Amy Lents, Pharmacy Technician.

**Martinsville High School:** Randy Cunningham, Pre-Civil Engineering.

**Newton Community High School:** Lindsey Ochs, Pre-Pharmacy.

**Noblesville High School:** Shane Lowery, Pre-Medicine.

**North Decatur High School:** Craig Spangler, Computer Engineering.

**North Knox High School:** Jay Deweese and Andrea Schroeder, Agriculture; Jessica Dellinger, Pre-Dental Hygiene; Jayton Patterson, Computer Engineering; Jessica Malone, Pre-Mechanical Engineering.

**Pike Central High School:** Lindsay Cunningham, Chemistry.

**Plymouth High School:** Jennifer Davis, Natural Resources & Environmental Science.

**Rensselaer Central High School:** Daniel Amsler, Forestry and Conservation.

**Robinson High School:** Christopher Wakefield and Brittney Wesner, Pre-Pharmacy.

**South Knox High School:** Anna Alsmann, Pre-Chemical Engineering, Food Process Option; Trevor Shepard, Pre-Civil Engineering; Chad Carrie, Pre-Electrical Engineering; Julie Johnson, Pre-Occupational Therapy; Charles Claycomb, Jessica Fields, and Laura Lane, Pre-Pharmacy.

**Sullivan High School:** Richard Holbert, Pre-Mechanical Engineering.

**Washington High School:** Jennifer Mead and Natalie Lawyer, Agriculture; Aaron Aldred, Geology.

**International Students:** Yau, Kwun Fung, Computer Engineering; Bei-Bei Li and Adam Maina Ari, Pre-Electrical Engineering; Suk Han Lee, Pre-Medicine.

## Coffee, Computers, and Comradery

# SCIENCE AND MATHEMATICS TUTORING CENTERS



Whether you need help with Anatomy and Physiology or Finite Mathematics, computer-assisted instruction or lecture support, there is a spot for you with friendly tutors and fellow students. Grab a cup of coffee and take advantage of Brew Shop Tutoring in the Shake Learning Resources Center, or log onto a computer in a tutoring lab. Professional and student tutors are available during daytime hours, evenings, and weekends to provide one-on-one help. Groups of students gather to study, creating bonds and a sense of community as they help each other and interact with tutors.

The McCormick Science Center houses both a Mathematics and a Science Learning Resource Center. The Science Center is a complete study area for the science taught at Vincennes University. All areas have supplemental materials available, including rock and mineral collections for earth science classes, bones for anatomy, geographic survey maps for geography and molecular modeling kits for chemistry. The Center features areas where students may do homework, study, and take quizzes and exams. It also has a large computer area where students can access the Internet and use software programs applicable to their class work. Several classes have specific programs used frequently by students. Examples include engineering calculations programs and C programming for physics and engineering classes, presentation software for biology, molecular drawing programs for chemistry, crop management software for agriculture, and multimedia programs for anatomy. Two full-time staff members with expertise in chemistry, mathematics, physics, chem-

ical engineering, and elementary biology support all aspects of the learning experience in the Science Center.

In addition to this hub of activity, McCormick houses a complex devoted to mathematics support for students. The Mathematics Learning Resource Center is composed of three areas. The central area contains study tables, individual carrels, and computers loaded with mathematics software. It is flanked by two state-of-the-art computer classrooms, each containing approximately twenty-five computers. The Math Center is staffed by three full-time professional tutors and fifteen student tutors. It is open seventy hours per week: Monday through Thursday from 7:30 a.m. to 9:30 p.m.; Friday from 7:30 a.m. to 2:00 p.m.; and Sunday from 2:00 p.m. to 9:30p.m. The help provided includes computer tutorials, practice test questions, make-up testing, videotapes and resource books. The tutoring services are available on a walk-in basis, and the instruction is individual. The Center's staff also administers advanced-placement testing at the beginning of each semester.

Vincennes University Science and Mathematics Division assistance is provided at many other campus locations including the Shake Learning Resource Center, where students also have access to computers. Learning support is accessible throughout the day, throughout campus, and is free of charge.



# FACTORIAL!

McCormick Science Center  
Vincennes University  
Vincennes, IN 47591

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## ALUMNI IN THE NEWS - CONTINUED

*(Continued from page 4)*

**Rhett Baker** (South Knox HS), VU'94, is an optometrist with Eyeworks in Vincennes, IN.

**Brian Duke** (North Knox HS), VU'94, an agricultural economist with Northern Trust Bank in Chicago.

**Ron Lemond** (Pike Central HS), VU'94, and Larry Kerns (South Knox HS), VU'96, are an occupational therapists with Good Samaritan Hospital in Vincennes.

**Stephanie (Keyes) Siewers** (North Knox HS), VU'94, is a pharmacist in Bicknell, Indiana.

**Patricia Hickox** (Casey-Westfield IL HS), VU'95, has opened a chiropractic practice in Vincennes.

**David Holt** (North Knox HS), VU'95, is an engineer at Crane Naval Surface Warfare Center.

**Michael Marcroft** (Lincoln HS), VU'95, is an engineer with Rockwell, Inc., in South Carolina.

**Eric Renshaw** (South Knox HS), VU'95, is a veterinarian in Brownsburg, IN.

**Aaron Atkinson** (Washington HS), VU'96, is a chemist with Great Lakes Chemical in Lafayette, IN.

**Dan Dillon** (North Knox HS), VU'96, is an electrical engineer working for Caterpillar Corporation.

**Veronica (Brown) Eagleson** (Lawrenceville, IL, HS), VU'96, teaches mathematics at Lawrenceville High School in Lawrenceville, IL.

**Jennifer Hohn** (Lincoln HS), VU'96, a food technologist with SafeWay Foods, supervises dairy equipment sanitation at SafeWay's milk production plant in Bellevue, Washington.

**Holly Lynch** (Linton-Stockton HS), VU'96, is a food scientist with Perdue Farms in Washington, IN.

**Keith Parsons** (Lincoln HS), VU'96, is a chemist with Simalabs, an environmental testing firm

located in Indianapolis, Indiana.

**Thomas Noah** (Lawrenceville IL HS), VU'96, is a chemical engineer with ADM in Peoria, IL.

**Mike Baut** (Northwood HS), VU'97, is an Industrial Hygienist with Clayton Environmental Consulting in Seattle, WA.

**Joni (Goodman) Henry** (Linton-Stockton HS), VU'97, is a Research Scientist with Roche Diagnostics Corporation in Indianapolis.

**Jesse Uebelhor** (Forest Park HS), VU'97, received a BS in Agricultural Economics from Purdue in 1999 and is currently working for Dubois County Coop in Huntingburg, IN.

**Sara Mauck** (Boonville HS), VU'98, is a student in Purdue's School of Veterinary Medicine.

**Teresa Necrelli**, (Sullivan HS), VU'98, is a dental hygienist in Terre Haute, IN.

**James Bloebaum** (North Knox HS), VU'98, teaches agriculture at Eastern Greene High School.

**Carrie and Phillip Coleman**, VU'99, are both students at Logan College of Chiropractic in Chesterfield, MO.

**Eric Holman**, (South Knox HS), VU'99, received his masters degree in cell biology from Indiana State University in December and has been teaching biology, genetics and molecular biology at VU this semester.

**Jennifer Mersinger** (Loogootee HS), VU'99, is a pharmaceutical chemist with Eli Lilly in Indianapolis.

**Amanda Persinger** (Lawrenceville IL HS), VU'99, is an Associate Microbiologist with Eli Lilly in Indianapolis.

**Jennifer (Elliott) Woods** (Lincoln HS), VU'99, is Global Information Systems Coordinator for LaSalle County, IL.