

Indiana State University Researchers and Interest September 2008

The ISU faculty listed would like you to know about their research specialties and experiences.

Dawn Underwood

Director, Office of Sponsored Programs

Erickson Hall Room 511

Indiana State University

Terre Haute, IN 47809

dunderwood@indstate.edu

Ph: (812)237-3088

Fax: (812)237-3092



College of Arts and Sciences

Archaeology

Stafford, C. Russell
Archaeology, Geoarchaeology
cstafford@isugw.indstate.edu
(812)237-3989

Section 106 Cultural Resource Management evaluations, Prehistoric & Historic **Phase I site survey, Phase II testing and Phase III data recovery** projects, specialize in estimating buried site potential in alluvial/colluvial landscapes and other geoarchaeology projects, GIS, and geophysical survey.

Chemistry and Physics

Preston, Eric
Assistant Professor of Physics
epreston@indstate.edu
<http://physics.indstate.edu/presto>
(812)237-2043

Dr. Eric Preston is a computational physicist with specialties in **radiation transport, radiation effects**, plasma physics, and complex systems. He has worked on U. S. Army and Navy contracts through ITT Industries Advanced Engineering & Sciences, and has an active Top Secret clearance. He has authored parallelized PIC plasma codes and runs standard radiation transport codes on ISU's high performance computing facility.

Communications

Worley, David
Department of Communications
dworley@indstate.edu
(812)237-3657

Communication pedagogy: public speaking, small group communication, interpersonal communication.

Criminology (See Additional Info p. 8)

Huckabee, Robert
Department of Criminology
rhuckabee@indstate.edu
(812) 237-2195

Idea 1. We know that for quite some time now, **gang members have been infiltrating the different branches of the military.** They find someone (a member or new gang recruit) who does not have a criminal record and get them to enlist. The enlistee then goes through basic training and any additional training possible, learns military tactics, communications, weapons, explosives, etc., and eventually takes off, returning to the street to "educate" his fellow gang members. This is in addition to the disruption that some of these guys cause while in the military by their "usual" criminal/violent behavior.

Idea 2. **Biometrics**- the use of physical or behavioral characteristics for purposes of identification or identity verification. This includes fingerprints, voiceprints, retinal scans, facial geometry, etc. Data is collected and compared against previously created templates as a means of identifying persons, or verifying a person's claimed identity. The Army is doing this in Iraq now. It is also being used in some civilian law enforcement departments and by private corporations as security/access control to replace old fashioned locks and keys. If everything goes as planned over the next few weeks, I will be in Iraq working with the biometrics team there, on military leave from the university.

Criminology (cont'd)

Hamm, Mark
mhamm@indstate.edu
(812) 237-2197

Teaching assignments include: Research, Theory, Correctional Administration, Juvenile Delinquency, and Correctional Internships. Research and publication interests include **Correctional Policy** and Management, Drug Use, Domestic Violence, **Domestic and International Terrorism**.

Books published:

In Bad Company: **America's Terrorist Underground**. Boston: Northeastern University Press, 2002.

Terrorism as Crime: From the Order to Al-Qaeda and Beyond. New York: New York University Press, 2007.

Articles:

"**Terrorism, Hate Crime, and Anti-Government Violence**." In the Future of Terrorism: Violence in the New Millennium, edited by Harvey W. Kushner, Thousand Oaks: Sage, 1988 (Pp. 59-96).

"After September 11: **Terrorism Research** and the Crisis in Criminology." *Theoretical Criminology* (2005), 9: 237-51.

With Cecile Van de Voorde "Crimes Committed by Terrorist Groups: Theory, Research, and Prevention." *Trends in Organized Crime* (2005), 9:18-51.

Shon, Phillip Chong Ho
Criminology and Criminal Justice
pshon@isugw.indstate.edu
(812)237-9652

Shon's work specializes in discourse analysis of **police-citizen encounters** and homicide studies. He is currently working on parricides in 19th century America and discourse analysis of traffic encounters. He is originally trained as a linguist.

Decker, Lisa
ldecker@isugw.indstate.edu
(812)237-2200

Education/**Training in Law Enforcement**

Ecology and Organismal Biology

Hews, Diana
Behavioral Endocrinology
dhews@indstate.edu
(812)237-8352

Steroid hormones and sexual differentiation; steroid hormones and social behavior; territorial aggression, display behavior and color signals; sexual selection, hormones and alternative reproductive mating tactics; stress axis (hypothalamus-pituitary-adrenal glands) and antipredator tactics; immunocompetence, steroid hormones, and phenotypic traits; radioimmunoassay of steroid hormone concentrations in plasma; immunocytochemistry of brain tissues (e.g. androgen receptors); histological analysis of brain morphometry; digital image analysis (NIH Image-J) of tissue samples; environmental endocrine disruptors in reptile & amphibian populations.

Ecology and Organismal Biology (cont'd)

Lanno, Michael

Environmental Quality, conservation
threatened and endangered species
mlannoo@iupui.edu
(812)237-2059

Research centers on how **environmental health affects human health**. In particular, I'm interested in how accumulated toxins affect environmental quality and this relationship to human congenital anomalies. Land use effects on environmental health, human health, and environmental quality. Additionally, we investigate patterns of occurrence, distribution, and abundance of threatened and endangered species across the landscape.

Crawford, John

Environmental Quality, conservation
Threatened and endangered species
jcrawford10@mymail.indstate.edu
(812)237-3419

Land use effects on environmental health, human health, and environmental quality. Additionally, we investigate patterns of occurrence, distribution, and abundance of threatened and endangered species across the landscape.

Geography, Geology, and Anthropology

Berta, Susan

Dept. Chair
Geomorphology, Physical Geography
sberta@isugw.indstate.edu
(812)237-2261

Primary areas of research include **geomorphology, remote sensing, and landscape/environmental modeling**. Research activities in remote sensing have involved periglacial landform analyses (rock glacier identification); vertebrate habitat mapping; metadata development and implementation for Indiana; Nature Mapping for Indiana; and vegetation modeling for the Indiana Gap Analysis Project (IN GAP). Currently, she is involved with the Year 2000 biodiversity of Indiana inventory for the State of Indiana, Department of Natural Resources.

Bierly, Greg

Climatology and Physical Geography
gbierly@isugw.indstate.edu
(812)237-3225

Climatology. Mid-latitude circulation patterns, jet streaks and cyclone dynamics, linkages between cyclone airflow and intensity, synoptic climatology of arid environments.

Gomez, Basil

Geomorphology, Fluvial Sediment
Transport
bgomez@isugw.indstate.edu
(812)237-2249

Primary research interests are centered on the investigation of interactions between **surface-water flow, sediment transport** and channel floodplain morphology over a variety of spatial and temporal scales.

Mausel, Paul

pmausel@isugw.indstate.edu

A consortium was developed to establish Geospatial Technology Centers that focus on: 1) the development, evaluation, and implementation of geospatial technology for use in surveillance, monitoring, analysis, and planning strategies for security of areas critical to the DHS, 2) transfer of technology developed during the program to appropriate federal agencies involved in border, and some interior security, and 3) provide training in the use of geospatial technology for application to DHS issues.

The Geospatial Technology Consortium: has six partners.

- The University of Texas – Pan American
- Indiana State University
- The Institute for Technology Development
- The USDA-ARS in Weslaco, TX
- The Laboratory for Applications of Remote Sensing at Purdue University
- The University of Texas-Center for Space Research in Austin

Speer, James

Dendrochronology (Tree-Ring Research)
Disturbance Ecology and Climate
Change
jspeer3@indstate.edu
(812)237-2257

Military preserves are excellent locations for long-term environmental reconstructions that can provide information to the military on the **quality of their landholdings** and provide ecological information on the general forest type where their bases are located. Military bases are excellent locations for research into past disturbances such as fire and insect outbreaks. Many military bases have protected lands that were not logged in the early 1900s making them preserves of some of the oldest forest in the United States. These forests are a trove of long-term environmental information that can be preserved in the rings of the trees. By sampling these older trees, we can determine past fire occurrence, insect outbreaks, and climate variations in the past providing needed information on the variability of the natural environment for the military preserve and the surrounding lands.

Weng, Qihao

Remote Sensing, GIS, Environmental
Modeling
Land Use and Land Cover Change
qweng@isugw.indstate.edu
(812)237-2255

Remote Sensing. Dr. Weng has worked in the United States and China on diverse research projects including such topics as: urban expansion, land use and land cover change, urban heat island, environmental sustainability, and human-environment interactions.

Geography, Geology, and Anthropology (cont'd)

Latimer, Jennifer

jlatimer@indstate.edu

(812)237-2254

Sediment/Soil Geochemistry and Environmental Geochemistry. Has studied heavy **metal distribution in soils**, as well as lake and ocean sediments.

Rathburn, Anthony

Geology/Marine Ecology

arathburn@indstate.edu

(812)237-2269

Ecological and biogeochemical adaptations to **extreme (toxic) environments**, aquatic trace metal contamination and ecological responses to pollution, ecosystem relationships with environment, sea floor geology and ecology, ecological responses to seasonality in extreme environments (Antarctic and deep sea). Ongoing projects:

Ecological and biogeochemical responses to sediment contamination in the Venice Lagoon, Italy

Biogeochemistry of methane seeps off California

Seasonality of marine ecosystems in the Antarctic

Department of Language, Literatures and Linguistics

Gerardo T. Cummings

Assistant Professor

gcummings1@isugw.indstate.edu

(812)237-2359

Area of expertise covers Spanish and Latin American politics, history, literature and culture. Currently preparing research that deals with topics that are relevant for the USA, the first of which deals with the critical and "**anti-American**" attitudes of Latin American and European countries. Secondly, he will research the past and current tendency and fascination of Latin American countries towards Communist philosophy. Dr. Cummings hopes to explain why dictators such as Fidel Castro, Daniel Ortega and Hugo Chávez express magnetic political rhetoric that mobilize the masses and cause disruption of the *status quo*.

College of Nursing, Health and Human Performance

Howk, Cherie

Baccalaureate and Higher Degree
Nursing

chowk@isugw.indstate.edu

(812)237-7919

ISU has one of the few accredited Distance Learning Programs for Higher Degree Nursing. Cherie Howk is researching primary care for **Post Traumatic Syndrome**.

Yeargin, Susan

Athletic Training, Specialty
Thermoregulation and Hydration

syeargin@indstate.edu

(812)237-3962

Hydration habits during activity,

Thermoregulation and heat acclimatization during activity, Prevention, Recognition, and Treatment of Exertional Heat Illnesses.

College of Nursing, Health and Human Performance (cont')

Boone-Ginter, Kathy
Sport Psychology and Activity
kziegler@isugw.indstate.edu
(812)237-4058

Army and sport comparison...the Army is a team: there is a coach, they have training camps, they have plays, they have cohesion, they compete with other units, battalions, they have specializations in their unit, i.e.; forward, rebounder, QB.

Nesser, Thomas
Human Athletic Performance
tnesser@indstate.edu
(812)237-2901

Core strength, training, recovery
I would be interested in research related to core strength and backpacks, and recovery (muscle damage) following training/hikes.

Stemmans, Catherine
Athletic Training
cstemmans@isugw.indstate.edu
(812)237-8336

Feedback and its relationship to the performance of learners; especially in the practical/clinical setting.

College of Technology

W. Tad Foster
Dean, College of Technology
w-foster@indstate.edu
(812)237-3166

- Individual and organization **change dynamics**
- How humans learn and develop skill
- Quality enhancement methodology

Department of Manufacturing and Construction Technology

Jeff McNabb
Interim Asst. Dean, College of
Technology
Associate Professor of Manufacturing
and Construction Technology
jmcnabb@isugw.indstate.edu
(812)237-2987/3347

Microwave curing of carbon fiber composites. New methods for controlling the growth of voids in the microwave curing process of carbon fiber composites must be developed: (a) alternate configurations of the microwave applicator include cylindrical, hexagonal, and pentagonal shapes, (b) algorithms for controlling the dispersion and reflectivity of the electromagnetic field in the applicator and load, and (c) positive pressure tooling for reducing the rapid dispersion of water vapor in the carbon fiber prepreg matrix.

Balzer, Brian
Researcher

Faculty Research Interests



David T. Skelton, J.D., Ed.D. (Indiana University)

Chair, Professor, and Director of the Institute of Criminology, 1975.

Research and publication interests include Legal Aspects of Alcohol and Drug Abuse, Tort Liability of Public Safety Agencies, Legal Issues in Private Security, Legal Aspects of Correctional Administration, Law and Traffic Safety Administration, Police Use of Force, and Criminal Justice Education.

HH214; (812) 237-2196; dskelton@indstate.edu



Shannon M. Barton-Bellessa, Ph.D. (University of Cincinnati)

Associate Professor, 2002.

Research and publication interests include Issues in Juvenile Justice and Delinquency, Correctional Programming, Correctional Officer Job Satisfaction, Court Improvement, Intermediate Sanctions, Gangs, and Homicides.

HH240; (812) 237-8332; sbarton1@indstate.edu



Lisa K Decker, J.D. (Indiana University)

Associate Professor, 1995.

Research and publication interests include Criminal Law, Decision making processes in the Courts, Police Personnel Selection and Education/Training in Law Enforcement.

HH212; (812) 237-2200; ldecker@indstate.edu



Jennifer N. Grimes, Ph.D. (Arizona State University)

Assistant Professor, 2006.

Research and publication interests include Corrections and Sentencing, Media & Justice, and Punishment & Social Control.

HH237; (812) 237-2168; jgrimes4@indstate.edu



Mark S. Hamm, Ph.D. (Arizona State University)
Professor, 1985.

Research and publication interests include Terrorism, Prison
Subcultures, Human Rights, Cultural Criminology.

HH238; (812) 237-2197; mhamm@indstate.edu



Faculty Research Interests



Robert G. Huckabee, Ph.D. (Sam Houston State University)
Associate Professor, 1986.

Research and publication interests include Victimization and History of Criminal Justice.

HH219; (812) 237-2195; rhuckabee@indstate.edu



David Polizzi, Ph.D. (Duquesne University)
Assistant Professor, 2005.

Research and publication interests include Correctional Counseling and Rehabilitation and Social Construction of Race and the Offender.

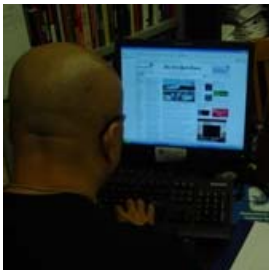
HH239; (812) 237-3437; dpolizzi@indstate.edu



Sudipto Roy, Ph.D. (Western Michigan University)
Professor, 1994.

Research and publication interests include Intermediate Sanctions (Electronic Monitoring, Day Reporting, Restitution, etc.) and Victimology.

HH228; (812) 237-2198; sroy@indstate.edu



Phillip Chong Ho Shon, Ph.D. (University of Illinois at Chicago)
Assistant Professor, 2003

Research and publication interests include Police-Citizen Encounters, Discourse Analysis, Psychoanalysis, and Homicide.

HH242; (812) 237-9652; pshon@indstate.edu



DeVere D. Woods, Jr. Ph.D. (Michigan State University)
Associate Professor, 1999

Research and publication interests include Community Policing,
Police Management and Administration, and Policy Implementation.

HH241; (812) 237-8832; dwoods4@indstate.edu