

THE IUP GGEP ALUMNI NEWSLETTER

GEO TIDINGS



In this issue

Kevin Patrick Publishes Book on White's Woods
New Science Building Nears Completion
Regional Planning Accreditation Visit

Cover Photo: Geography students enter the mysterious confines of White's Woods. Photo by Kevin Patrick

Updates from the Chair

Hello alumni and friends of the Geography, Geology, and Regional Planning programs. This is our first newsletter since the Geoscience and Geography and Regional Planning departments merged into a single department of Geography, Geology, Environment, and Planning (GGEP). Since the restructuring of the university in 2020-2021, there have been many changes and adjustments, but our programs continue to be strong, providing high quality, hands-on learning experiences for our students who are well-prepared to enter the workforce upon graduating from IUP. Although almost two years into our merger, our programs and faculty are still learning about one another as we determine how to run each of our programs most efficiently. We have made significant progress and continue to do so. Our department will not feel so separated starting January, 2024 as all GGEP faculty will be moving into the new Kopchick Hall. Having all of our faculty within the same building will allow for additional conversations and collaborations and make the day-to-day operations significantly easier. Below are a few highlights from the last year.



The Kopchick College of Natural Sciences and Math has a new full-time dean. Steve Hovan took over as interim dean in Fall 2021, and in December, 2022 he was named the full-time, permanent Dean of KCNSM. We have enjoyed working with our colleague, Steve, to advance our department and the college.

The Institute for Mine Mapping, Archival Procedures, and Safety (IMAPS) has a new home. IMAPS has moved out of Eicher Hall (which will soon be demolished) and into Leonard Hall (the new name for the Humanities and Social Sciences building) on the fifth floor. IMAPS also has some space in Robertshaw, where the large format digital scanners are located. IMAPS focuses on archiving, digitally recording, and geographically referencing historical coal mine maps and employs many of our undergraduate and graduate students. IMAPS, through the efforts of the program manager, Bob Wilson, has been supported through a series of grants by the PA Department of Environmental Protection (DEP). The most recent DEP grant extension (\$1.1M) is set to expire in June 2023. Mr. Wilson has already submitted a proposal to the DEP to start a new project that would cover IMAPS operation for three additional years beginning in July 2023 (~\$1.6 million).

<https://www.iup.edu/energy/research-initiatives/minemaps/index.html>

Updates from the Chair

Regional Planning, BS Reaccreditation Site Visit. This spring our Regional Planning program underwent its reaccreditation site visit, required every 5-7 years, by the Planning Accreditation Board. The site visit team was quite complimentary and supportive of our program, providing only a few rather minor suggestions for changes. A big thank you goes to Dr. Rick Hoch, Regional Planning Program Director, for being the primary author on the self-assessment report and for being the guiding hand throughout this process, which has kept him quite busy over the last year or so. His efforts, and those of our Regional Planning and Geography faculty, have most likely led us to being reaccredited for an additional 5-7 years.

The Upward Bound Math & Science Program (UBMS) ends operation at IUP. The UBMS program, funded by the US Department of Education since 2007, and led by PI Dr. Calvin Masilela, Assistant Chair, to provide opportunities to Indiana County high school students with a desire to pursue post-secondary aspirations in STEM disciplines, unfortunately, lost its funding during the Fall 2022 Competition. While the program is currently being liquidated, the College remains committed to submitting another competitive grant in 4 years.

Our esteemed colleagues Dr. Bob Sechrist and Dr. Don Buckwalter retired in 2021. We are grateful for their years of service and wish them well in their current endeavors. Our beloved Dr. Karen Rose Cercone retired in May 2022. She has been sorely missed, but we thank her for her many years of dedicated service to the Geology program and IUP as a whole. I think it took about 10 people to fill her vacancy after her retirement. In more recent news, Dr. Sechrist is now Professor Emeritus and Dr. Cercone is Professor Emerita! We congratulate them on this much deserved honor.

Cheers,
Dr. Nick Deardorff
Geography, Geology, Environment, and Planning (Chairperson)

Geological Society of America Annual Meeting in Pittsburgh, Oct. 15-18, 2023

GGEP is planning a get-together at the GSA meeting. Watch our web page and Facebook for details.

Science Building Update: Kopchick Hall

An artist's rendering of Kopchick Hall bears a close resemblance to the nearly completed building on the IUP campus.



Science Building Update: Kopchick Hall

After many years of planning, design, and construction, our new science building is nearly complete. Construction of Kopchick Hall broke ground in September 2020 and will be completed at the end of this summer or early fall. This 142,536-square foot building will include more than 51,600 square feet of laboratory space. It will be sited facing the Oak Grove and will be part of the center of campus. There will be a number of common spaces in the building — including a new planetarium underwritten by Geoscience alumni Tim and Deb Cejka — designed to showcase science and math to the wider university and local communities. See link below for more details and images of the construction.

<https://www.iup.edu/natsciandmath/kopchick-hall/index.html>

With its focus on research-teaching labs and student-centered lectures and tutoring rooms, and inviting common areas designed for collaboration, Kopchick Hall will truly transform how IUP delivers science education. Faculty, staff, and facilities will start moving labs, offices, and classrooms November 2023 through January 2024 and classes will be taught for the first time in the new building during the spring 2024 semester. We are VERY excited about moving into the new building and hope you all come visit to check out our new home. The building looks impressive and we can't wait to move into our new space on campus.

Room 206 in Kopchick Hall will host hands-on Geology classes for majors and non-majors. Moveable storage carts for teaching materials will be parked along the walls.

MORE PHOTOS OF KOPCHICK HALL ON NEXT PAGE.



Kopchick Hall: More Photos

The lobby of Kopchick Hall faces the Oak Grove.



The framework that will support the dome in the Cejka Planetarium has been assembled and is ready to hoist into place for mounting of the dome surface.

Once Kopchick Hall is open, come visit the Department at our new office!



Kopchick Hall: More Photos



(left to right)- Dean Steve Hovan, Dan Markey (class of '77), Glenn Granata (class of '81), and Tim Cejka (class of '73), seen here celebrating the naming by the Council of Trustees of the Dr. Walt Granata geology lab in the new building.

Regional Planning Program Accreditation Visit

On March 20 through 22, 2023, the Regional Planning Program hosted a Site Visit Team from the Planning Accreditation Board (PAB). The PAB is an affiliate of the American Planning Association (APA), and Association of the Collegiate Schools of Planning (ACSP), which accredits professional undergraduate and graduate programs in Urban and Regional planning. The Regional Planning Program is going through its third accreditation evaluation, which was initially granted in 2012. IUP's Bachelor of Science in Regional Planning is one of only 16 accredited programs in the country. As part of the process, the site team evaluators met with local and regional employers of program graduates, program alumni, and members of the PA-APA Southwest Section chapter pictured in this photo.



Faculty, Alumni, and Friends of the Regional Planning program visit IUP in March 2023

Honors

At the November 2021 Pennsylvania Geographical Society meeting, faculty member **Dr. John Benhart** was awarded the 2021 **Pennsylvania Geographical Society Distinguished Service Award** in acknowledgment of "... substantive and long-term service to both the discipline of Geography and to the Pennsylvania Geographical Society" and the 2021 **Distinguished Mentor Award** in recognition of "exceptional commitment and accomplishments in the mentoring of undergraduate or graduate students as well as fellow faculty members."

Two retired GGEP faculty were awarded **Professor Emeritus status** by the University in 2023: **Dr. Robert Sechrist** and **Dr. Karen Rose Cercone**. Congratulations to both.

Geology alumnus **Kalin McDannell (Geology, '08)**, who is currently at Dartmouth College, was **awarded the 2023 Charles and Nancy Naeser Prize**, along with Sarah Falkowski (University of Tuebingen). The award honors early career scientists who make an outstanding or innovative contribution in any area of the field of thermochronology. Kalin

Dr. John Benhart, Jr. honored at the Pennsylvania Geographical Society meeting for Distinguished Service and as Distinguished Mentor



was cited "for his role in the development of the controlled ramped heating (CRH) method to investigate excess dispersion in apatite (U-Th)/He ages, and for his work investigating methods to extract better thermal history information from apatite fission-track data sets showing evidence of multi-kinetic behavior."

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Lenore Slothower '69

I retired, June, 2009; Consultant-part time grant work for the City of Rahway from June, 2009 until January, 2013



Robert Turk M.S. '72

Retired from nearly 50 years in television (as a meteorologist), I am now in Florida in retirement mode!

Deborah Fleming '74

I retired from Tennessee Dept. of Transportation in November 2022 after working there for 19 years. I've been busy traveling, and have seen and experienced many of the sites I learned about in my various geography and city planning courses at IUP.

Patrick Imbrogno '78

I have been working on a regional project the last five years collecting depth registering logs while mining "old school" show data to map potential injectivity and productive indicators. I

anticipate completion this summer. The result has been a new unconventional oil and gas play that does not need to be fracked. Adjacent areas indicate good injectivity for future CO2 sequestration, EOR and wastewater disposal. I accomplished this in my spare time while spoiling my three grandkids. In addition, I also am participating member of the IUP Environmental Engineering Advisory Council and IUP Athletic Advisory Councils. I hope all is going well with the new combined department.

Mark Ios '81

I am currently managing and performing business development activities for the Site Investigation and Closure department at Skelly and Loy, Inc., A Terracon Company. I have always had a strong interest in geology, especially structural geology, petrology, and sedimentology. My recent interests include hydrogeology, performing/analyzing aquifer tests, and conducting groundwater studies to characterize DNAPLs in fractured bedrock aquifers. I enjoy sharing my experiences to help solve geologic and hydrogeologic problems, and working with other professionals in industry.

Jennifer Serafin '92

I supervise a team of regulators for the US Army Corps of Engineers' Regulatory Program, to include the implementation of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.

Robert Levrant '93 M.S. '99

I lead the University of Nevada-Las Vegas's

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Osher Lifelong Learning Institute, a learning community serving over 1,000 retired adults and I lead Young Rebels, an academic youth programming initiative intended to provide high quality learning opportunities across disciplines to K-12 students to expand and facilitate college readiness.

I recently published an article, Emerging Professionals in the Field of Learning in Retirement: A Multiple Case Study in the Journal of Ethnographic and Qualitative Research.

Steven Smith '01

My work at the United States Geological Survey continues with monitoring of the volcanoes among other duties. I was able to attend the Pecora 2022 conference in Denver, Colorado in October 2022 and presented on the Global Fiducials Library website. I will be attending the Geological Society of America Meeting in Pittsburgh, PA in October 2023. The family is doing well. Daughter, Aurora, is a Sophomore in high school and doing well. She is very interested in film related studies at this point. My wife, Kate, is still a teacher assistant for pre-school special education students. Always challenging, but rewarding at the same time.

Over the last year, the family's biggest trip was to the Northwest U.S.(photo). Had some glorious days while visiting Seattle, Mount Rainier, Mount St. Helens, Mount Hood, Crater Lake, Redwoods, Mount Lassen, before finishing with lava Beds National Monument. Many other cool places visited during the 3 week trip. Aurora also knocked out her 49th state. She now only needs



Hawai'i. Kate and I had already been to all 50 states back in 2011. The plan for 2023 is to visit the Grand Canyon and many other Native American sites and parks in the northern New Mexico and northern Arizona region. Various other stops along the way are planned as well.

Thomas Lavanga '07

[Writing in Spring, 2022] All is well with me and my family these days. Teaching is returning to something like it was. Though I can't quite pinpoint what it is, 12th graders this year had their last uninterrupted year of education when they were only freshman, I do see some negative side effects as far as accountability and expectations go. On a positive note, we do have a new set of digital learning tools, virtual labs and such things, though my students are very happy to use a piece of paper and a pencil more now than before! I guess we're all working on finding common ground again.

This year, I'm teaching 2 sections of AP Physics 1 and 2 sections of College Prep

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Physics, each with a lab period, as well as Astronomy as an upper level elective. Keeping busy and looking forward to further return to whatever Normal means anymore!

Jeff Dereume '08

After 11 years in the oil and gas industry, I transitioned to small business consulting in 2019. I spent several years in consulting roles where I helped small businesses on buying, selling, and valuation. While my consulting role had very little geology aspects, I did work with several clients who were starting businesses focused on rare earth elements. More recently, I've joined CRU Group in Pittsburgh, which is a global mining, metals and fertilizers consultancy offering market analysis, business analysis, news, data, and



conferences.

Its been a great experience learning a new industry and certainly a lot of carryover from the geology fundamentals learned at IUP. A lot of my current work has focused around decarbonization of the steel industry, battery metals market entry, and the ferrous and nonferrous scrap processing market. On a personal level, my wife Kathryn and I live in the north hills of Pittsburgh with our two daughters Evie (6) and Maeve (2, photo), and our recently added old english sheepdog Lou. We spent a lot of time skiing in New York this winter, and more recently have been doing a lot of mountain biking as a family in North Park.

Caleb McCombie '14

I sell natural stone and engineered quartz countertops for a small and growing company, C&S Granite & Marble. Between customer relations, buying slabs from distributors, and helping with fabrication, there is a lot to cover. Having a background in geology helps communicate more effectively with our clients. It's mostly basic principles, but I'm still glad to inform from a deeper understanding of the material we use on a daily basis.

My wife and I took a trip to Italy this past fall for our anniversary. I had hoped to see some marble quarries when we were there. While driving down the western coast, I saw exposed stone along the mountains and figured they must be quarrying nearby. Then I saw the exit for Carrara, Italy. We learned a lot about the area geologically and historically. Carrara marble has a much cleaner white than any other natural stone. The figuring of its veins and patterns is a highly sought after

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design, which man-made alternatives still fail to replicate. Despite it being a relatively soft stone and susceptible to staining and etching, people all over the world pay premiums to have it in their homes. Artists travel long distances to personally visit the particular gallery we toured. Blocks are removed specifically by request of individual sculptors, and then shipped whole to their studios. Carrara marble has been used for thousands of years for this purpose; the Statue of David, the Pieta, and countless other priceless pieces have been hewn from it. I sold two slabs of it just a week before our trip. Really fun to see the starting and ending point of a timeless stone!



Evan Tobin '13, M.S. '15

Last year I started my new job as GIS Director for a regional construction company. I was also appointed to the Aspinwall Borough Planning Commission. But my biggest accomplishment was getting engaged to the love of my life, Carly (photo taken at Fallingwater).



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Samantha Cooper '16

I got married and had a baby boy in 2021. It was a busy year full of laughter, love, and a lot of dirty diapers!

Cara Mehalek '18



After graduating from IUP in 2018, I spent some time working for an engineering company that was involved in oil and gas operations in northern Iraq (unofficially Kurdistan). I acquired my GPR certification, flew to Erbil, and spent all of March 2019 in the field, thoroughly scanning an area (photo) that would later hold massive oil storage tanks. I discovered a large void that had to be completely filled with grout before the construction began. This was by far the most fulfilling time of my career, and the experience opened my eyes to the reality of a third world country. After my overseas adventure, I

moved to Missouri, became a mom, and am engaged to be married this year to my fiancé who I met while attending IUP. I've settled down quite a bit and now work in insurance.

Nate Zlockie '18

[Writing during the 2021-22 school year.]
Good morning, I hope all is well for you and everyone! I wanted to give you an update since things became official. I've accepted an earth and space science job at North Star High School in Boswell, PA. I'm excited to finally have full time teaching in Pennsylvania!

Kayla Kroczyński '19

I work mainly on land development projects: making plats for boundary and topographic surveys and ALTA/NSPS land title surveys. I also fly photogrammetric and LIDAR drone flights to get survey information



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Ryann Knowles '20

After graduation from IUP, like many others during COVID, I got a dog! His name is Archie Lou and he is the best travel buddy! We moved to North Carolina after graduation where I completed my master's degree and since then we have been traveling along the east coast between Pennsylvania and Florida



for the past year. I got a remote Junior GIS Consultant job for six months in the summer/fall of 2022 and the company liked me enough to hire me full time! I am moving to Juno Beach, FL at the end of April this year o start as a GIS Development Tech Specialist. I am excited to experience this new work/beach life balance!

Nolan Grimes '21

I manage the archives of the facilities management department [at Carnegie Mellon University]. I maintain the online library of construction and renovation documentation, and serve as the archival point of contact for the entire university community.

In January 2022, I self-published a book on

the history of the buildings at IUP. It is available in the Stapleton Library and the IUP Archives, as well as Amazon.com. In March 2023, I submitted a manuscript entitled "Abandoned Beaver County," which will be published by Fonthill Media in October 2023.



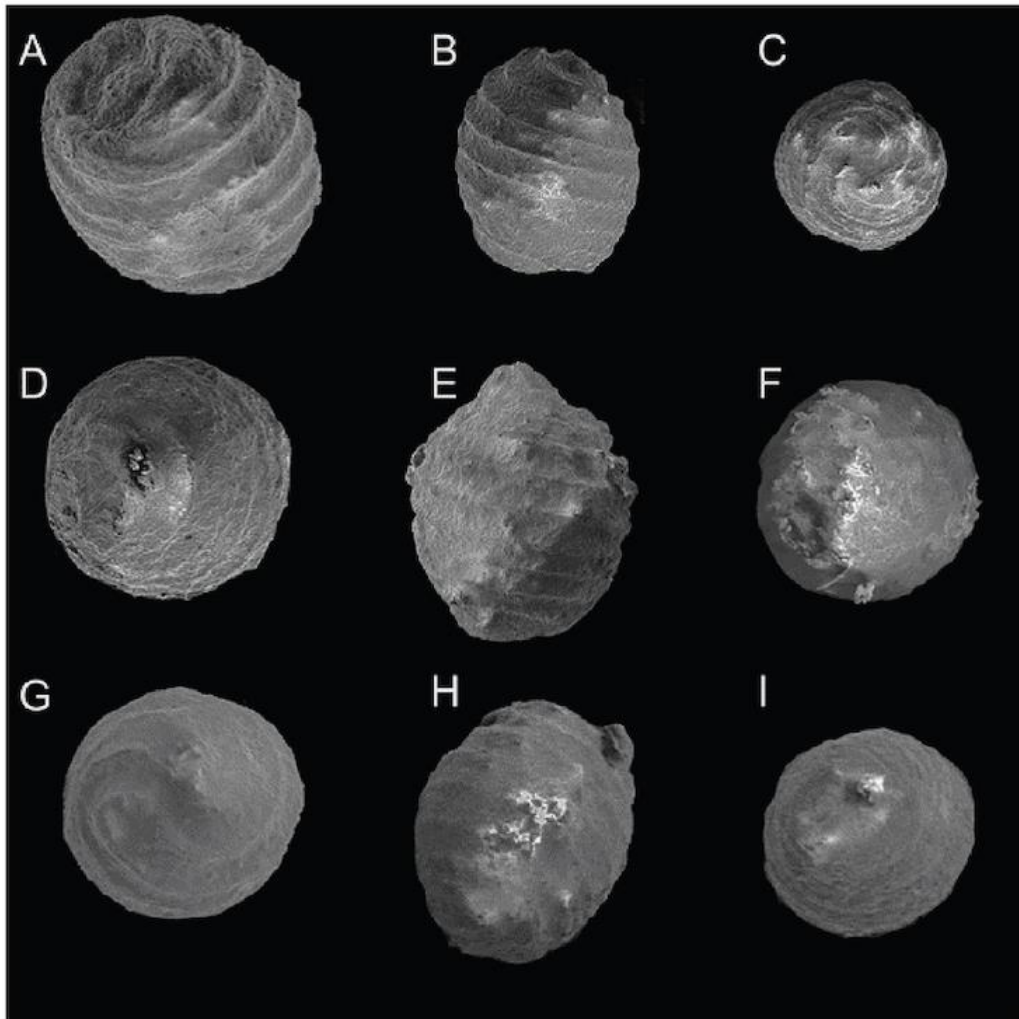
Brian Tollini '21

I conduct inspections [for PA DEP] of facilities holding NPDES (National Pollution Discharge Elimination System) permits for Jefferson and Indiana Counties, respond/investigate citizen complaints, and water sampling among other tasks.



Faculty News

We invited the GGEP faculty to share their recent news and several were able to do so. You'll find these contributions on the following pages. We hope to include additional faculty updates, including news from our retired faculty, in the next issue of Geo-Tidings.



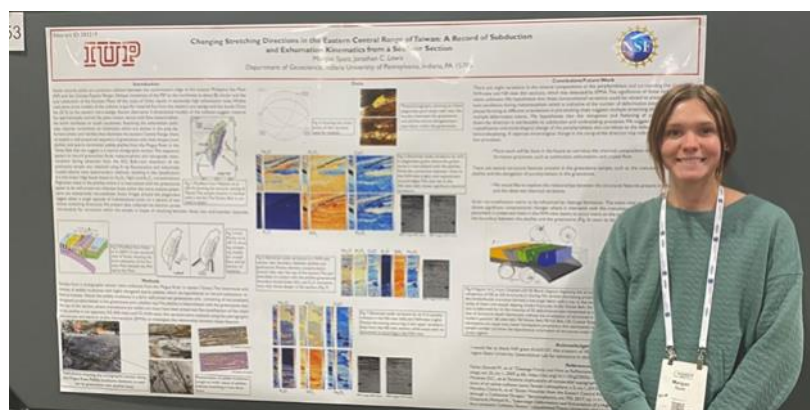
*Charophytes (fossil algae) from the Cleveland-Lloyd Dinosaur Quarry at Jurassic National Monument in Utah, which indicate the environmental conditions at the time a large number of *Allosaurus* bones were deposited (from GGEP Prof. Jonathan Warnock).*

Faculty News — Jon Lewis

I continue my Taiwan research efforts with students using data and samples we amassed prior to the pandemic. Sadly, the NSF funds have dried up for now, I've got my fingers crossed there will be more funds in the coming years! Currently I have two students working with me, Morgan Spatz and Ben Falvo. Results from our efforts in the eastern Central Range were shared by Morgan at the October 2022 GSA Meeting (photo; <https://gsa.confex.com/gsa/2022AM/meetingapp.cgi/Paper/383219>). Our graduate student colleague Wei-Hao Hsu also published an open-access paper (<https://doi.org/10.1016/j.tecto.2022.229562>) that includes data collected by alumni Chaz Cavallotti (recently doing environmental work in Allegheny County), Allie Berry (PhD student at U. Maine), Lauren Donati (MS student at U. Delaware) and Lindsey Aman Cromwell (PhD student at U. Florida). My other recent graduate Susie Adams is happily tackling her MS at UNC Wilmington where she's already managed one trip to sea and has more on her agenda.

(IODP) IMPACT workshops (<https://serc.carleton.edu/iodp/2022-impact/index.html>) which closed out with an in-person meeting at the headquarters of the American Geophysical Union (AGU) in DC. The IMPACT workshops focused on the future of Education and Outreach for IODP. I was also honored to be on the planning committee for the AGU Chapman Conference: The Second National Conference on Justice in Geoscience (<https://www.agu.org/Chapmans-SNC-Justice-in-Geoscience>). It was an incredibly powerful in-person meeting that was also held at AGU headquarters.

A different sort of service effort that I've been busy with is a self-styled community of practice that I'm a co-founder – the Coastal and Ocean STEM Equity Alliance (COSEA). We organized COSEA following a session I was part of at the Ocean Sciences Meeting in February 2020, one of the very last geoscience meetings held before the pandemic took hold of us all. Since then COSEA has published two commentaries (<https://doi.org/10.5670/oceanog.2021.307>; <https://doi.org/10.1029/2022AV000772>) and we have plans for more. Also in the realm of the oceans, I helped co-organize a STEMSEAS expedition for faculty at Historically Black Colleges and Universities (HBCUs) in January of 2023. Check out the blog posts at Wordpress (<https://stemseas.wordpress.com/blog/>).



I've stayed busy in the service domain with the two biggest contributions coming to fruition in Summer 2022. I was honored to be on the organizing committee for the International Ocean Discovery Program

Faculty News — Kevin Patrick

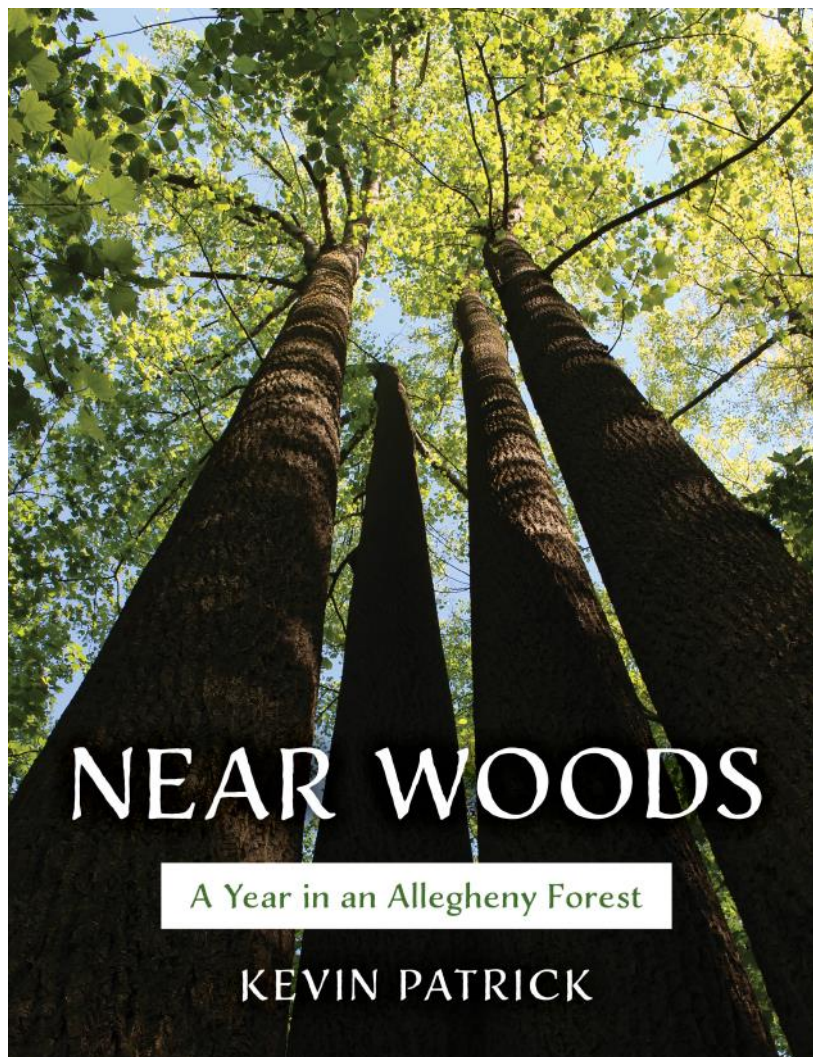
Kevin Patrick's book, *Near Woods: A Year in an Allegheny Forest*, was released in May 2023. Inspired by Henry David Thoreau's *Walden; Life in the Woods*, Patrick's *Near Woods* explores a 500-acre tract of Allegheny forest known as White's Woods (including the adjoining IUP Coop Park) relative to life and historical evolution of the adjacent town of Indiana, Pennsylvania. As a geographer, Patrick examines White's Woods as a place, telling the story of its natural and human history over a year's worth of seasonal change. Using White's Woods and Indiana as an example, Patrick develops his concept of the near-woods, the local patch of sullied wilderness where residents of the adjacent community go to find nature, recreation, and escape from the social structure of the community.

Many IUP students taking Patrick's Geography of Pennsylvania course have accompanied him into White's Woods to experience the nature of Indiana's near-woods. Members

of the Fall 2022 Geography of Pennsylvania class entered White's Woods from 12th Street and climbed to the top of Overlook Hill stuffing samples of leaf litter into baggies as a way of recognizing geographic changes in the structure of this small piece of Appalachian Mixed Mesophytic Forest. Tulip trees dominated the thicker soils of the lower slopes, shifting to oaks and hickories on the thinner, drier soils of the saddled ridge's sandstone caprock. The curious works of humans were also recognized by the disturbed earth and physical evidence of the quarrying that once

took place in the woods. Dr. Patrick has done *Near Woods* presentations for the Friends of White's Woods and the IUP University Museum, and he will be doing more throughout 2023.

Near Woods: A Year in an Allegheny Forest is available from the IUP Co-op Bookstore, through [amazon.com](https://www.amazon.com), or from the publisher at [rowman.com](https://www.rowman.com).



Faculty News — Kevin Patrick



Above: A talus boulder rests on the slope of Overlook Hill having been dislodged from the sandstone caprock.

Below: The long abandoned foundation to a rock crusher survives from the sandstone quarry that operated in White's Woods more than a century ago.



Faculty News — Nick Deardorff

Over the last year I have been rather busy, both professionally and privately. I continue to be Chair of the Department of Geography, Geology, Environment and Planning, having been recently re-elected for another three-year term. While this position is challenging at times, I have enjoyed continuing to learn about our Geography and Regional Planning programs and working with my faculty colleagues to continue to merge our programs into a single department and culture, where each program runs as efficiently as possible.

Over the last several years I have worked with geology colleagues from across the state system to build a PASSHE-wide geology field course that would include faculty and students from all state system universities. This project, funded by the National Science Foundation, ran the first summer cohort during summer 2022 consisting of a 5-week, 6-credit course taught by faculty from four universities, with student participants from six universities (17 students enrolled). The group traveled across the state, utilizing three PASSHE campuses as ‘hubs’, exploring world-class geology, identifying, analyzing and interpreting modern and anthropogenic problems, networking with professional geologists and learning about career opportunities. At the writing of this update, we have 25 students from six universities signed up for the 2023 field course.

During the fall semester I enjoyed my first sabbatical, during which I completed first drafts on two manuscripts, ran some crystallization experiments (until my furnace broke), and collected volcanic tephra in the Central Oregon High Cascades. I made my trip to Oregon an

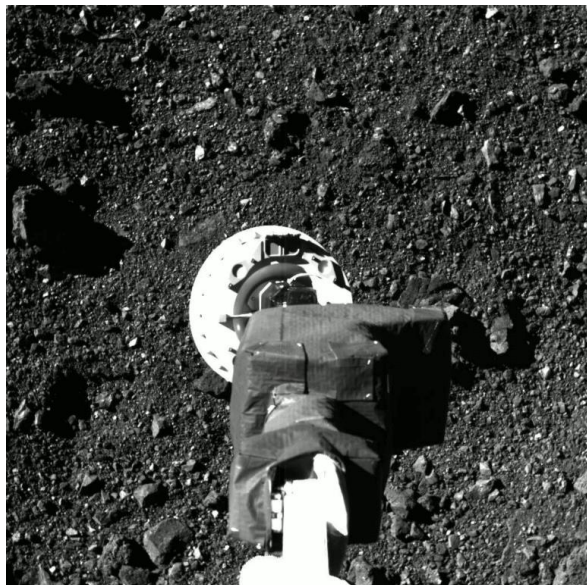
adventure and took my family and our Australia Shepherd, Rocky, on a three-week camping trip from Pennsylvania to the Grand Canyon, Bryce Canyon, up to Oregon for field work, to Craters of the Moon National Park, and over to Yellowstone, before heading back home. It was quite an adventure with highs and lows, but my two boys (Colin - age 6 and Braden - age 9) had a great time and have asked to do it again this summer. We will do no such thing. But I did finally get to the Grand Canyon (as the photo demonstrates) and I gave many lectures about the geologic environments and the rocks we observed throughout the trip, which were mostly tolerated by my wife and kids. Rocky just enjoyed the walks and all the new smells.



Faculty News — Ken Coles

The reorganization of academic programs at IUP means changes in our teaching duties. Since the pandemic began, I have found myself teaching a mostly-online field course with Prof. Lewis, Dynamic Earth labs, and most recently Oceans and Atmospheres labs. Last Fall I taught Geophysics for the first time in five years and look forward to getting back to astronomy courses in 2023-24 in both the old and new planetariums. This spring two student teachers were in local schools, Joellen Nelson at Greater Johnstown H.S. and Allison Bergeron at Armstrong H.S. in Kittanning. Joellen is the last to earn the B.S.Ed. degree and Allison is our first certificate in Secondary Science Teaching. The teaching program has been integrated into the Geology major. A one-year program to certify students like Allison who already have a geology degree has long been needed. We hope it attracts more students.

A major activity this past year has been



The sampling arm of the OSIRIS-Rex mission moments before contact with asteroid Bennu

writing and rewriting various sections of a book to be published in the summer of 2023: *Bennu 3-D: NASA's OSIRIS-REx mission*. This atlas is an initiative of the Lunar and Planetary Lab at the University of Arizona, where NASA's OSIRIS-Rex mission was first proposed and has been directed. The Principal Investigator for the mission, Dr. Dante Lauretta, invited me to help with the book, which is based in part on the format of *The Atlas of Mars* I published in 2019.

Dr. Lauretta and his staff have completed the survey and sampling of the near-Earth asteroid Bennu (photo). I helped early in the book project by writing a sample chapter and a book proposal sent to several publishers. While the staff in Tucson have since taken the lead in writing and illustrating the book, it has been great learning so much about one of the oldest objects ever studied in the solar system. I continue to serve as an outside pair of eyes and have done a lot of editing. Once again I was responsible for the Glossary and Index of Features. *Bennu 3-D* will be published jointly by the London Stereoscopic Company and University of Arizona Press; we'll have a report on the finished book in the next issue of *Geotidings*.

As we prepare for the move from Weyandt Hall to Kopchick Hall at the end of 2023, plans include upkeep of the department's telescopes. Since we will continue to use portable instruments outdoors, there is a storage and display area by the east door of Kopchick Hall at ground level, a great improvement over the present scattered storage. A current project is to make repairs and test each telescope to ensure it is ready to use with classes, research projects, and the public.

Faculty News — Calvin Masilela

The past few years have presented an opportune moment for reflection. I assumed the role of Assistant Chair in Fall 2021 and continue in this capacity following reelection of departmental leadership positions institutionally in May 2023. Our merged department continues to evolve, integrating uniquely different but interrelated disciplinary programs with a positive trajectory. Two personally impactful events included the loss of US Department of Education funded grant programs that support low income, first generation, and underrepresented minority

students pursuing educational opportunities in higher education, including post-baccalaureate studies – the McNair Scholars program in 2017 and recently the Upward Bound Math and Science (UBMS) program in 2022. The legacy of these programs at IUP and the Indiana community cannot be overestimated. The McNair Scholars Program which had been funded since 2003 counts luminaries that include Drs Kalin McDannell (Geology '08; see page 9), Daniel O'Hara (Geology '14), Adam Crain (Chemistry '07), and many others across IUP for a total of 27 doctoral



Calvin Masilela at the American Planning Association 2023 national conference.

Faculty News — Calvin Masilela

degree recipients to date. On the other hand, the UBMS program, funded since 2007, had served over 200 high school students from Indiana County and 165 who completed the program graduated from high school. At the time of defunding 60 had graduated from college, 43 were enrolled in college degree programs, 6 were enrolled in MA/PhD programs, 1 earned a doctorate, 3 received DELL scholarships and 1 a Maguire Foundation scholarship as well as 3 PA TRIO scholarships. Sadly, when the curtain closed, we also lost two colleagues who had been tremendous mentors to our student participants --- Dr Hilary Staples who had a phenomenal impact on McNair Scholars and still continues informally to provide guidance to those on the pipeline, and Jacque Benhart who was an academic counselor for the UBMS program. The two programs netted \$7 million in grant funding to IUP, and I hope to seek refunding in the next competition in 2025.

In the midst of this change and chaos, yes, I did find some intellectual spark, thank you to Dr. Sudeshna Ghosh's energy and persistence we have collaborated on three scholarly chapter contributions that reflect our research interest on global cities, urban restructuring and smart city growth formation, and work that enriches our students in the classroom. Our collaborative work with another colleague at Auburn University include:

- (1) Ghosh, S., Sweta, B. and Masilela, C. O., (2021). An Overview of Climate Protection and Resiliency Planning in the New York Megacity Region. In T. M. Vinod Kumar (ed.) *Smart Global Megacities: Collaborative Tokyo, Delhi, Mumbai, Lagos, New York, Hong Kong-*

Shenzhen, Calcutta, and Bangalore, Singapore: Springer.

- (2) Sweta, B., Ghosh, S. and Masilela, C.O, (2020). Urban Transformation for Sustainable Growth and Smart Living: The Case of the Atlanta Beltline. In T. M. Vinod Kumar (ed.) *Smart Living for Smart Cities*, Singapore: Springer.
- (3) Ghosh, S., Sweta, B. and Masilela, C. O., (2019). Metropolitan Regional Scale Smart City Approaches in a Shrinking City in the American Rust Belt – Case of Pittsburgh, Pennsylvania. In T. M. Vinod Kumar (ed.) *Smart Metropolitan Regional Development*, Singapore: Springer.

In 2021, Dr. Ghosh and I received the Indiana University of Pennsylvania Certificate of Appreciation in recognition of achievements in Scholarship. Additionally, I found time to share my observations and interests by publishing an article "Urban Agriculture," in *The Wiley Blackwell Encyclopedia of Urban and Regional Studies*, 2019.

Faculty News — John Benhart

As a result of IUP's restructuring and reorganization over the last few years, my role in our new merged department has changed and I am presently the director of the Geospatial Intelligence and Uncrewed Aircraft Systems certificate programs. There have been exciting developments for both programs, as the Uncrewed Aircraft Systems certificates were recently received Unmanned Aircraft System – Certified Training Initiative (UAS-CTI) designation by the Federal Aviation Administration (FAA),



and the Geospatial Intelligence programs remain accredited by the United States Geospatial Intelligence Foundation (USGIF). Changes in staffing and curriculum at IUP also have brought about some changes to my teaching responsibilities, so in addition to teaching courses in geographic information science and geospatial techniques, over the last two years I have also taught Sustainability and Transportation Planning, and in Fall 2023 I will teach GIS Applications Development.

In terms of recent research and academic endeavors, I am a co-investigator on a project funded by the United States Economic Development Administration (*The Southwestern Pennsylvania New Economy Collaborative*). \$1,119,000, funding began in

January 2023) designed to push forward research and workforce development in the areas of artificial intelligence, robotics and machine learning. My role in the project mainly involves research regarding the use of uncrewed aircraft systems (drones) in high accuracy mapping / surveying, and land use / land cover and built environment analysis. As part of this effort, over the last six months I have been reviewing specifications of drones and sensors, calibrating and testing the aircraft and sensors and beginning to conduct experiments on horizontal accuracies that can be obtained through methodologies using combinations of aircraft, sensors, ground control, and onboard real-time kinematic global positioning systems (GPS) receivers. In addition, I am working (with Bob Wilson, director of the Institute for Mine Mapping Archival Procedures and Safety (IMAPS)) on a pilot project to identify and build a spatial database of abandoned and orphaned gas wells in the Commonwealth of Pennsylvania. Pennsylvania has recently received significant federal funding to identify the location and characteristics of orphaned/abandoned gas wells drilled over



RUAI College students and Dr. Benhart.

Faculty News — John Benhart



RUIA College students at Kopchick Hall.

the last century-plus, and we are well positioned at IUP to undertake this massive project since we have been scanning and geographically-recording coal mine maps containing information regarding gas wells for the last 15 years as the database supporting the Pennsylvania Department of Environmental Protection's (PADEP) Mine Subsidence Insurance Program. We should find out about the prospects and timing of funding for this project by the end of 2023. I have also spent time during Summer 2023 working with the RUIA College (University of Mumbai) summer program (directed by Dr. Bharathan of the Biology Department), attending the Aerium Summit at John Murtha Johnstown Airport (where our Uncrewed



Aerium Summit at Johnstown airport.

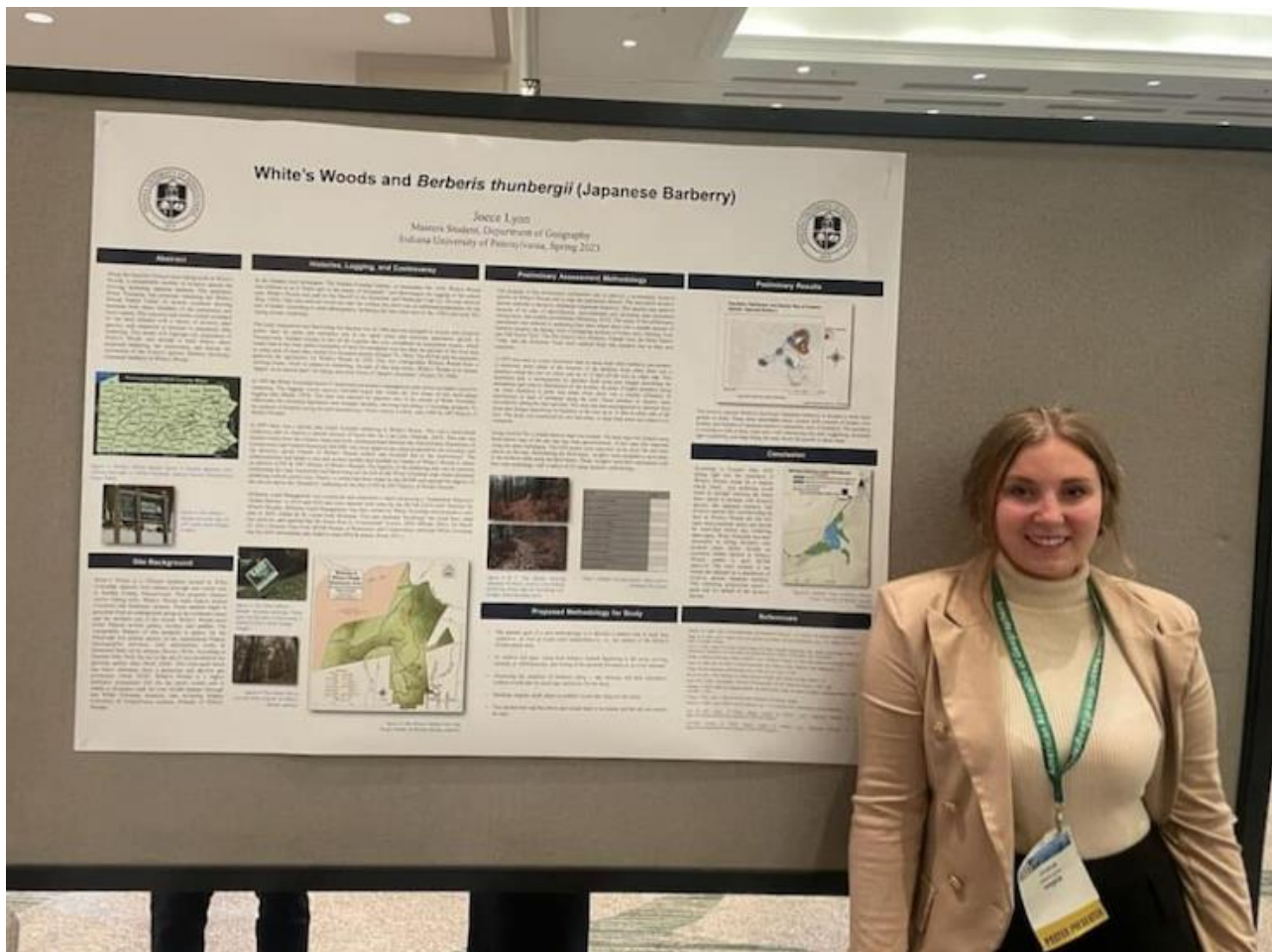
Aircraft Systems programs were recognized by the FAA) and the IUP STEM Camp, where I will work in conjunction with colleagues from the Math and Computer Science and Safety Science Departments to teach local middle and high school students. Finally, I was honored to receive the Pennsylvania Geographical Society's (PGS) Distinguished Mentor and Service Awards in November 2021. The PGS is an excellent organization that has forwarded geography research and education in Pennsylvania for over 50 years, and I was humbled to be recognized by such an organization.

Personally, my two children Carlee and Jake respectively have finished and begun academic programs. Carlee (IUP Regional Planning 2019) completed her Masters degree in Public Management from Carnegie Mellon University in December 2022 and she is now a planner working for the Bloomfield-Garfield Corporation in Pittsburgh; my son Jake began a PhD program in Operations Research at North Carolina State University in August 2022. Both were fortunate enough to be awarded fellowships to undertake their graduate programs. Carlee was married the first time to her husband Joe Kukula in October 2020 during the COVID pandemic in Mellon Park in Pittsburgh (with about 12 people in attendance), and again in October 2021 with about 200 guests who helped us celebrate in Indiana, PA. My wife of 32 years Jacque, who had worked for the Upward Bound Math Science program at IUP for 16 years, lost her job in August 2022 when that program was not re-funded but she is now excited to be working at the Indiana Free Library (IFL), returning to her first profession as a librarian directing IFL programs for teenagers.

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In these times of tight budgets, the GGEP Department is deeply grateful for continuing financial support from our alumni and friends. Generous supporters like you have helped current students do research, attend professional conferences, and cover educational expenses. To learn about the funds and how to make your donation to the fund of your choice, please visit

<https://www.iup.edu/geoplanning/support-the-department.html>



IUP Geography graduate student Joece Ann Lynn presents her poster on “Mapping Invasive Species Berberis Thunbergii in White’s Woods” at the 2023 American Association of Geographers Annual Meeting in Denver, Colorado.

PLEASE STAY IN TOUCH

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