

## DEAN'S SIGNIFICANT ACTIVITIES REPORT



DEPARTMENT: G&EnE

POC Name: CPT Nathaniel Sheehan

POC Email: nathaniel.sheehan@westpoint.edu

DATE: 06 June 2019

Top 3-5 events, activities, and newsworthy happenings UPCOMING in the next 30 days.

1. On 11 June, G&EnE will have a department offsite at the Beacon Institute in Beacon, NY. This will allow senior faculty to provide an azimuth check on the mission and vision of G&EnE and the way ahead for the following year.
2. From 15-19 June, four faculty of G&EnE will attend and present papers at the American Society for Engineering Education (ASEE) National Conference & Exposition, in Tampa, FL.
3. During the month of June, G&EnE will begin New Instructor Training for the newest Geography, Environmental and GIS instructors.

Top 3 events, activities, and newsworthy happenings FROM THE PREVIOUS 7 days.

1. From 4-5 June, CDTs Mia Bean and Alex Tosi presented at Columbia Universities' European Institute Cold War Archives Research Annual Conference in Budapest, Hungary. Their presentation was well received and noted for excellence from amongst of pool of masters and PhD presenters.
2. On 5 June, Mr. Patrick Wolff from US Army Engineer Research and Development Center - Construction Engineering Research Laboratory (ERDC-CERL) briefed staff and faculty of G&ENE on his research team's work with threatened and endangered species on DoD installations. Mr. Wolff is at West Point this week to initiate a post-wide survey of bats on post and training areas in accordance with the Natural Resources Management Plan. The survey will run through the summer.
3. On 6 June, Dr. Patrick Baker (G&EnE), held two events with O'Neill High School Environmental Classes to trap and identify turtles in the local ponds. This allowed the students to get field work experience, learn about the turtles, as well as further Dr. Baker's research into the turtles in the area.

## DEAN'S SIGNIFICANT ACTIVITIES REPORT



DEPARTMENT: History

POC Name: CPT Denis Alfin

POC Email: [denis.alfin@westpoint.edu](mailto:denis.alfin@westpoint.edu)

DATE: 06 June 2019

Please limit each list item to three sentences. We will contact you if we require photographs, videos, or any additional information. Please do not include any media in this SigActs report.

Top 3-5 events, activities, and newsworthy happenings UPCOMING in the next 30 days.

1. Nothing Significant to Report.

Top 3 events, activities, and newsworthy happenings FROM THE PREVIOUS 7 days.

1. FRI 31 MAY: Cadets and instructors departed on Cold War Staff Ride (Germany, Czech, Hungary, Poland)
2. MON 03 JUN: Cadets and instructors departed on Vietnam Normalization Staff Ride (D.C., California, Hawaii, Vietnam)
3. MON 03 JUN: Cadets and instructors departed on Market Garden Staff Ride (Maastricht, Den Bosch, Leiden)

## DEAN'S SIGNIFICANT ACTIVITIES REPORT



DEPARTMENT: Physics and Nuclear Engineering

POC Name: Kim M. Lee

POC Email: [kim.lee@westpoint.edu](mailto:kim.lee@westpoint.edu)

DATE: 6 June 2019

Please limit each list item to three sentences. We will contact you if we require photographs, videos, or any additional information. Please do not include any media in this SigActs report.

Top 3-5 events, activities, and newsworthy happenings UPCOMING in the next 30 days.

The Department is conducting the Summer Leaders Experience and hosting approximately 36 candidates each day (3, 4, 5, 10, 11, and 12 June). While in the Department of Physics and Nuclear Engineering, the candidates levitate a magnet over a small sample of superconducting material cooled with liquid nitrogen, calculate what angle to fire a projectile launcher to hit a target and then test their calculation, and use different radiation detectors to identify an unknown radioactive isotope and measure the effectiveness of shielding materials. In addition, they learn how lasers work and how nuclear power is essential for meeting the world's growing energy needs.

Top 3 events, activities, and newsworthy happenings FROM THE PREVIOUS 7 days.

During 27-31 May, Dr. David O. Kashinski traveled to Milwaukee WI to attend the 50th annual meeting of the American Physical Society's Division of Atomic Molecular and Optical Physics (APS-DAMOP). Dr. Kashinski presented three peer-reviewed posters summarizing progress made two collaborative research projects as well as the new "Experimental Methods" course (PH486) piloted in AY2019-2. The project titled "DFT Calculation of the Renner Coefficient for the Renner-Teller Splitting in the NCO radical: Assessing the accuracy of functional families and basis sets" is a part of an on-going collaboration with ARL-WMRD. CDTs M. G. Suarez, 2LT C. C. Stephens and Dr. E. F. C. Byrd (ARL-WMRD) are co-authors on this collaboration. The project titled "Theoretical Studies of Dissociative Recombination of SH<sup>+</sup> Ions with Electrons" detailed recent progress towards determining the accurate reaction rate

## DEAN'S SIGNIFICANT ACTIVITIES REPORT



constants for the titled reaction. This collaboration includes co-authors from Lehigh University (USA), Le Harve Universite (La Harve, France), Universite Montpellier (Montpellier, France) and CDT J. Bohnemann ('21). CDT Bohnemann was an integral part of this work in AY2019-1. His contributions allowed Dr. Kashinski to achieve the presented results. Also presented was the results of our pilot PH486 course, taught in AY19-2, titled "Using a Magneto-Optical Trap (MOT) to teach Experimental and Computational Methods in Undergraduate Physics". Co-authors on this presentation include faculty from PNE as well as CDT M. C. Cassidy ('20) and faculty from EECS. This work was very well received by the AMO community, and I received very good advice and feedback on how to improve the course in the future. Dr. Kashinski acknowledges and graciously thanks the DoD-HPCMP for continued computer time, travel support, and resources.

The Department of Physics and Nuclear Engineering hosted two instructors from Space & Missile Defense Command (SMDC) for Phase I of the 2<sup>nd</sup> Annual Army Space Cadre Basic Course (ASCBC) conducted as a MIAD for at West Point, 28-31 May 2019. Thirty-one cadets and two faculty (GENE and EECS) were immersed in training focused on the operational aspects of Army's Space Forces by attending briefings, conducting practical exercises, and completing exams on the fundamental knowledge associated with the application of Space-based capabilities across the warfighting domains. Coordination and execution support for the MIAD were completed by LTC Diana Loucks. Instructors Charles Ogden (USMA 92) and Kenneth Graw were provided by SMDC's Directorate of Training & Doctrine, Future Warfare Center, Colorado Springs, Colorado. Phase II of the ASCBC will be completed 03-07 June 2019.

MAJ James Bowen and Dr. David Kashinski, D/PNE, have been awarded the Adam Award Grant (linked below) for to expand the use of iPads in the classroom, allowing them, and others, to continue leveraging modern technology and pedagogies. The \$5,000 grant will be used to purchase four new iPad Pro's and associated peripherals empowering four more of our 38-person faculty to begin exploring effective use or continue effectively using technology as an integral part of their teaching paradigm. D/PNE has a goal to put an iPad pro in the hands of any instructor willing to employ or experiment with this technology in his or her classroom. These iPad Pros will be connected through the already in-place AppleTVs in each of our classrooms and will complement the Advanced Physic Program's initiative to "flip" the Modern Physics (PH365) course. MAJ Bowen, Dr. Kashinski, and everyone in D/PNE would like to graciously thank the Center for Teaching Excellence (CTE) for their continued guidance and support as we continue to explore and grow into 21st-century teaching paradigms. Adam Award:

<https://westpoint.edu/centers-and-research/center-for-teaching-excellence/teaching-awards>

## DEAN'S SIGNIFICANT ACTIVITIES REPORT



On 2 June, Dr. Ken Allen raced in the Inaugural Ironman 70.3 Connecticut triathlon. The event was held in Middlebury, CT. He finished the 70.3-mile race in 12<sup>th</sup> place out of 240 athletes in his division with the 5<sup>th</sup> fastest bike split – just over 21 miles-per-hour for the 56-mile loop which included over 4000 feet of climbing.

The Space Engineering and Applied Research Team (SPEAR) in support of Operation Space and Princeton University conducted four two-stage rocket launches at Space Port America (near White Sands Missile Range), in an attempt to reach the Karmen Line (100 km) – the internationally recognized boundary between the upper atmosphere and space. The second stage ignition systems used were designed and tested at West Point during AY19, a project that tested their ability to collect thrust profile data and high-speed infrared imagery. The apogee (maximum altitude) of the first rockets launch with Princeton is pending data analysis. Once confirmed, this will be a record for student built amateur sounding rockets. Members of SPEAR in attendance include: CDT Hannah Boubel, CDT Brandon Cea, and CDT Chase Lewis, with faculty advisors Dr. Dave Hutchinson and MAJ Jill Rahon. Faculty support during the academic year was provided by MAJ Jake Capps and other PaNE, CME, and CLS faculty.