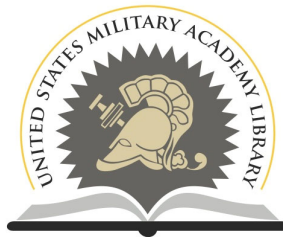




A CELEBRATION OF WEST POINT AUTHORS

Highlighting the 456 collected works of
scholarship published and presented between
July - December 2019.



Department of Behavioral Sciences and Leadership COL Everett Spain, Department Head

- Absalon, Jacob (MAJ), COL Brian Reed, and Dr. Morton Ender.** “The Military and Popular Culture.” Presented at the 2019 Inter-University Seminar on Armed Forces and Society Biennial Conference, Reston, Virginia, November 8, 2019.
- Boyce, Michael W. (Dr.),** Aaron Gardony, Paul Shorter, Carlene Horner, Cortnee Stainrod, Jeremy Flynn, Tad T. Brunye, and Charles Amburn. “Characterizing the Cognitive Impact of Tangible Augmented Reality.” Paper presented at the 21st International Conference on Human-Computer Interaction (HCI 2019), Orlando, Florida, July 26, 2019.
- Boyce, Michael W. (Dr.), Dr. Ericka Rovira, J. Rea, P. Rengel, J. Emezie, and C. Ackerman.** “Trust in synthetic training environments: Applications for military soldiers.” Paper presented at the 13th International Conference on Interfaces and Human Computer Interaction, Porto, Portugal, July 2019.
- Carroll, Marjorie H. (Dr.), Dr. Lisa M. Korenman, and Judith E. Rosenstein (USNA).** “Does Sex of the Victim Matter? A Comparison of Rape Scripts Involving a Male or Female Victim.” *Violence and Gender* 6:3 (September 2019): 175–186. <https://doi.org/10.1089/vio.2018.0040>.
- Cornwell, James F. M. (Dr.), and E. Tory Higgins.** “Beyond Value in Moral Phenomenology: The Role of Epistemic and Control Experiences.” *Frontiers in Psychology* 10 (October 2019): 2430. <https://doi.org/10.3389/fpsyg.2019.02430>.
- Cornwell, James F. M. (Dr.), and E. Tory Higgins.** “Sense of Personal Control Intensifies Moral Judgments of Others’ Actions.” *Frontiers in Psychology* 10 (October 4, 2019): 2261. <https://doi.org/10.3389/fpsyg.2019.02261>.
- Cornwell, James F. M. (Dr.), Carl P. Jago, and E. Tory Higgins.** “When Group Influence Is More or Less Likely: The Case of Moral Judgments.” *Basic and Applied Social Psychology* 41:6 (November 2019): 386–395. <https://doi.org/10.1080/01973533.2019.1666394>.
- Cornwell, James F. M. (Dr.), Abigail A. Scholer, and E. Tory Higgins.** “Approach and Avoidance Dynamics: How Expanding the Scope Informs Motivation Science.” *Psychological Inquiry* 30:3 (July 2019): 165–171. <https://doi.org/10.1080/1047840X.2019.1646059>.
- DeFalco, Jeanine (Dr.), and A. Sinatra.** “Adaptive Instructional Systems: The Evolution of Hybrid Cognitive Tools and Tutoring Systems.” Presented at the 21st International Conference on Human-Computer Interaction (HCI 2019) Orlando, Florida, July 2019.

- Ender, Morton (Dr.).** “Army Wives, War, and Media Coverage.” Paper presented at the 114th Annual Meeting of the American Sociological Association, New York City, New York, August 10, 2019.
- Ender, Morton (Dr.).** “Charlie Don’t Surf: The Military, War, Film, and Teaching.” *Journal of Military Learning*, October 2019. <https://www.armyupress.army.mil/Journals/Journal-of-Military-Learning/Journal-of-Military-Learning-Archives/October-2019/Ender-Charlie-Dont-Surf/>
- Ender, Morton (Dr.),** and Betsy Lucal. “Social Inequality and the United States Army: The (Un)lucky Seven.” In *Equality, More or Less*, edited by Robert Tully and Bruce Chilton, 3-18. Lanham, Maryland: Hamilton Books, December 2019.
- Erwin, Mike (MAJ).** “6 Reasons We Make Bad Decisions, and What to Do About Them.” *Harvard Business Review*, August 1, 2019. <https://hbr.org/2019/08/6-reasons-we-make-bad-decisions-and-what-to-do-about-them>.
- Foroughi, Cyrus K., Ciara Sibley, Noelle L. Brown, **Dr. Ericka Rovira**, Richard Pak, and Joseph T. Coyne. “Detecting Automation Failures in a Simulated Supervisory Control Environment.” *Ergonomics* 62:9 (September 2019): 1150–1161. <https://doi.org/10.1080/00140139.2019.1629639>.
- Foroughi, C. K., **Dr. Ericka Rovira**, K. Rose, D. Davis, J. Jurado, J. Chae, R. Pak, N. Brown, C. Sibley, and J. Coyne. “How do individual differences in attention control and working memory capacity relate to monitoring automation?” Paper presented at the 63rd International Annual Meeting of the Human Factors and Ergonomics Society (HFES), Seattle, Washington, October 28-November 1, 2019.
- Hajjar, Remi (COL).** “The Story of a Diverse Man’s Pursuit of the American Dream: From West Point Cadet to Army Officer and Professor.” Presented at the 2019 Inter-University Seminar on Armed Forces and Society Biennial Conference, Reston, Virginia, November 8, 2019.
- Kelly, D. R., **Dr. Michael D. Matthews**, and C. J. Kelly. “Lark or Owl, Affect, Hardiness, and Performance of West Point Cadets.” Poster presented at the Annual Meeting of the Association for Psychological Science, Washington, D.C., May 25, 2019.
- Lucas, Jeff, Paul Hanges, Karen DeAngelis (USAFA), James Dobbs (USAFA), Dave McCone (USAFA), **COL Todd Woodruff**, Michael Norton (USNA), and Kelly Beavan. “Organizational Culture and Climate, Leader Behavior, and Sexual Harassment in Military Context.” Presented at the 2019 Inter-University Seminar on Armed Forces and Society Biennial Conference, Reston, Virginia, November 8, 2019.
- Matthews, Michael (Dr.), Dr. Morton Ender,** and David Roball. “Attitudes Toward Women in Combat Pre- and Post-Combat Exclusion Policy.” Presented at the 2019 Inter-University Seminar on Armed Forces and Society Biennial Conference, Reston, Virginia, November 8, 2019.
- Matthews, Michael (Dr.).** “Predicting Success in a Challenging Institutional Context.” *Psychology Today*, November 4, 2019, www.psychologytoday.com/us/blog/head-strong/201911/predicting-success-in-challenging-institutional-context.
- Matthews, Michael (Dr.).** “Sports and Positive Youth Development.” *Psychology Today*, July 28, 2019, www.psychologytoday.com/us/blog/head-strong/201907/sports-and-positive-youth-development.
- Matthews, Michael (Dr.).** “Emerging Issues in military psychology.” Invited Address at Army Futures Study Group, Washington, D.C., May 1, 2019.
- Matthews, Michael (Dr.).** “Leadership in Dangerous Situations.” Invited Address at Strategic Intelligence Leadership Course, Defense Intelligence Agency. Washington, D.C., April 30, 2019.
- Matthews, Michael D. (Dr.),** Richard M. Lerner, and Hubert Annen. “Non-Cognitive Amplifiers of Human Performance: Unpacking the 25/75 Rule.” In *Human Performance Optimization: The Science and Ethics of Enhancing Human Capabilities*, edited by Dr. Michael D. Matthews and David M. Schnyer, 356–82. New York: Oxford University Press, 2019.
- Matthews, Michael D. (Dr.),** and David M. Schnyer, eds. *Human Performance Optimization: The Science and Ethics of Enhancing Human Capabilities*. New York: Oxford University Press, 2019.
- Matthews, Michael D. (Dr.),** and David M. Schnyer. “Optimizing Human Performance.” In *Human Performance Optimization: The Science and Ethics of Enhancing Human Capabilities*, edited by Dr. Michael D. Matthews and David M. Schnyer, 1–7. New York: Oxford University Press, 2019.
- Matthews, Michael D. (Dr.),** and David M. Schnyer. “Human Performance Optimization: Synthesis and Integration.” In *Human Performance Optimization: The Science and Ethics of Enhancing Human Capabilities*, edited by Dr. Michael D. Matthews and David M. Schnyer, 425–34. New York: Oxford University Press, 2019.
- Munion, Ascher K., Jeanine K. Stefanucci, **Dr. Ericka Rovira**, Peter Squire, and Michael Hendricks. “Gender Differences in Spatial Navigation: Characterizing Wayfinding Behaviors.” *Psychonomic Bulletin & Review* 26:6 (December 2019): 1933–1940. <https://doi.org/10.3758/s13423-019-01659-w>.

Murray, E., B. Burkhard, H. Schaffer, D. Ryan, **LTC Andrew Farina**, Chaveso Cook, **CPT Jeremiah Powers, Dr. Michael D. Matthews**, and R. Lerner. "Toward a developmental approach to measuring the development of character: Perspectives from Project Arete." *The Journal of Character & Leadership Development* 6:2 (July 31, 2019): 22-33.

Murray, Elise D., Hillary S. Schaefer, Kristina S. Callina, **CPT Jeremiah J. Powers, Dr. Michael D. Matthews**, Brian M. Burkhard, Diane M. Ryan, and Richard M. Lerner. "Training Character: Character Attributes and Performance Profiles among Cadets at the United States Military Academy." *The Journal of Positive Psychology* (published online November 11, 2019): 1–11.
<https://doi.org/10.1080/17439760.2019.1689414>.

Rovira, Ericka (Dr.), MAJ Dominic Larkin (EECS), Dr. Michael Novitzky (EECS), 2LT Nikiay Comer '19, 2LT Kaley Rose '19, and 2LT Britany Van Lange '19. "Row Row Row Your Bot – Trust Me or Not: Investigating the Performance of Human-Robot Teams." Presented at the MOOS Development and Applications Working Group (MOOS-DAWG '19), Cambridge, Massachusetts, August 7, 2019. <https://oceanai.mit.edu/moos-dawg/pmwiki/pmwiki.php?n=Talk.18-Rovira>.

Rovira, Ericka (Dr.), Anne Collins McLaughlin, Richard Pak, and Luke High. "Looking for Age Differences in Self-Driving Vehicles: Examining the Effects of Automation Reliability, Driving Risk, and Physical Impairment on Trust." *Frontiers in Psychology* 10 (April 26, 2019): 800.
<https://doi.org/10.3389/fpsyg.2019.00800>.

Scholer, Abigail A., **Dr. James F. M. Cornwell**, and E. Tory Higgins. "Should We Approach Approach and Avoid Avoidance? An Inquiry from Different Levels." *Psychological Inquiry* 30:3 (July 2019): 111–124.
<https://doi.org/10.1080/1047840X.2019.1643667>.

Scholer, Abigail A., **Dr. James F. M. Cornwell**, and E. Tory Higgins. "Regulatory Focus Theory and Research: Catching Up and Looking Forward After 20 Years." In *The Oxford Handbook of Human Motivation*, 2nd Ed., edited by Richard M. Ryan, 47-66. New York: Oxford University Press, September 2019.

Young, Lissa V. (Dr.). "Leadings Teams to Optimize Performance." In *Human Performance Optimization: The Science and Ethics of Enhancing Human Capabilities*, edited by Dr. Michael D. Matthews and David M. Schnyer, 383–402. New York: Oxford University Press, 2019.

Department of Chemistry and Life Science COL F. John Burpo, Department Head

Akhvlediani, Tamar, Nazibrola Chitadze, Rusudan Chlikadze, Nino Rostiashevili, Medea Betashvili, Paata Imnadze, Robert G. Rivard, Mikeljon P. Nikolich, **MAJ Michael A. Washington**, and Christian T. Bautista. "Multivariate Relationships between Epidemiologic Risk Factors and Zoonotic Infections among Military Personnel in the Country of Georgia: A Non-Linear Canonical Correlation Analysis." *Zoonoses and Public Health* 66:7 (November 2019): 835–841.
<https://doi.org/10.1111/zph.12632>.

Armstrong, Matthew (LTC), CDT Michael Deegan '20, Charles Keith, Jeff Horner, Norman Wagner, and Anthony Beris. "Large Amplitude Oscillatory Shear (LAOS) Flow as a Metric of Comparison for Contemporary Human Blood Rheological Models." Poster presented at the Society of Rheology Annual Meeting, Raleigh, North Carolina, October 2019.

Armstrong, Matthew (LTC), CDT Michael Deegan '20, CDT Wes Pulles '21, CDT Katlyn Rook '22, Dr. James Reilly, Dr. Jesse Trump, Dr. J. Kenneth Wickiser (FLICR), LTC Jason Barnhill, Jeff Baker, and LTC Nicholas Clark (D/Math). "Determination of Statistically Significant Correlations Between Physiological and Rheological Model Parameters of Human Blood." Poster presented at the Society of Rheology Annual Meeting, Raleigh, North Carolina, October 2019.

Armstrong, Matthew (LTC), LTC Corey James, Dr. Andrew Biaglow, Dr. Enoch Nagelli, and LTC Andrew Pfluger (GENE). "Chemical Engineering Lab for Seniors at United States Military Academy." Poster presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.

Balboni, Armand (MAJ), Wayne Conlan, Rob Cobb, Shelby L. Steele, Kevin Sullivan, and Carl Gelhaus. "ATI-1701, a Live Attenuated Francisella Tularensis Vaccine for the Prevention of Pneumonic Tularemia in the Warfighter." Invited Seminar presented at the Defense Threat Reduction Agency Seminar Series, Fort Belvoir, Virginia, August 2019.

Balboni, Armand (MAJ), Wayne Conlan, Ron Cobb, Shelby Steele, Kevin Sullivan, and Carl Gelhaus. "ATI-1701, A Live Attenuated Francisella Tularensis Vaccine For The Prevention Of Pneumonic Tularemia In The Warfighter." Poster presented at the Military Health System Research Symposium (MHSRS), Kissimmee, Florida, August 2019.

Balboni, Armand (MAJ), Wayne Conlan, Ron Cobb, Shelby Steele, and Carl Gelhaus. "A Live Attenuated Francisella Tularensis Vaccine For The Prevention Of Pneumonic Tularemia: 60 Day Challenge Data." Poster presented at the ARL-USMA Technical Symposium, West Point, New York, October 2019.

- Bartolucci, Stephen F., **COL John Burpo**, and Joshua A. Maurer. "Self-Assembled Monolayers on Gold Nanoparticles for Orientation Control in Surface Enhanced Raman Spectroscopy." Poster presented at the Materials Research Society (MRS) Fall Meeting, Boston, Massachusetts, November 2019.
- Boylston, Payton (CDT, '20), CDT Bailey Schieve '21, CDT Alexa Zammit '22, CDT Tae Kim '21, CDT Christian Mitchell '22, LTC Matthew Armstrong, and LTC April D. Miller.** "Using Rheology to Optimize the Chocolate Process." Poster presented at the Society of Rheology Annual Meeting, Raleigh, North Carolina, October 2019.
- Burpo, John (COL), Dr. Enoch Nagelli, CDT Anchor Losch '20, 2LT Jack Bui '19, Gregory Forcherio (U.S. Army Research Lab, Sensors & Electron Devices Directorate), David Baker (U.S. Army Research Lab, Sensors & Electron Devices Directorate), Joshua McClure (U.S. Army Research Lab, Sensors & Electron Devices Directorate), Stephen Bartolucci (U.S. Army CCDC Armaments Ctr), and Deryn Chu (U.S. Army Research Lab, Sensors & Electron Devices Directorate).** "Salt-Templated Platinum-Copper Porous Macrobeams for Ethanol Oxidation." *Catalysts* 9:8 (August 2019): 622. <https://doi.org/10.3390/catal9080662>.
- Burpo, John (COL), Dr. Enoch Nagelli, CDT Anchor Losch '20, 2LT Jack Bui '19, CDT Felita Zhang '22, CDT Veronica Lucian '22, CDT Brittany Aikin '21, and Epiphany Dongkeng.** "Salt-Templated Metal and Metal Oxide Porous Materials." Oral presentation at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.
- Cameron, K. L., **Dr. Jesse R. Trump**, S. E. Prebihalo, S. J. Svoboda, **Dr. J. Kenneth Wickiser**, and R. E. Synovec. "Metabolite Profiles Discriminate Between Acl Injured Cases and Uninjured Controls Within the First Year Following Injury and Surgery." *Osteoarthritis and Cartilage*, 27:S1 (April 2019): 288–289. Toronto, Canada. <https://doi.org/10.1016/j.joca.2019.02.676>.
- Caridha, Diana, Mark Hickman, Lisa Xie, Franklyn Ngundam, **MAJ Erin Milner**, Amanda Schenk, Kirk Butler, et al. "Updating the Modified Thompson Test by Using Whole-Body Bioluminescence Imaging to Replace Traditional Efficacy Testing in Experimental Models of Murine Malaria." *Malaria Journal* 18:1 (December 2019): 38. <https://doi.org/10.1186/s12936-019-2661-x>.
- Chua, Adeline C.Y., Abhishek Ananthanarayanan, Jessica Jie Ying Ong, Jen Yi Wong, Andy Yip, Nisha Hari Singh, Yinghua Qu, **LTC Silas Davidson**, et al. "Hepatic Spheroids Used as an in Vitro Model to Study Malaria Relapse." *Biomaterials* 216 (September 2019): 119221. <https://doi.org/10.1016/j.biomaterials.2019.05.032>.
- David, Brian T., **Dr. Jessica J. Curtin**, David C. Goldberg, Kerri Scorpio, Veena Kandaswamy, and Caitlin E. Hill. "Hypoxia Inducible Factor 1 Alpha (HIF-1 α) Counteracts the Acute Death of Cells Transplanted into the Injured Spinal Cord." *ENeuro* (September 5, 2019). <https://doi.org/10.1523/ENEURO.0092-19.2019>.
- DiBiase, Matthew A. (CDT, '20), CDT Thomas R. Gascoigne '20, Dr. Enoch Nagelli**, Jiangtian Li, Rongzhong Jiang, and Deryn D. Chu. "Ni-Based Catalysts for Electrocatalysis in Proton Exchange Membrane Fuel Cells." Poster presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.
- Duffy, Brigit (CDT, '20), CDT Jordan Davis '20, CDT Gabrielle Huggins '21, CDT Taylor Vessel '21, Jisoo Kim, Preston Haney, Pamela Sheehan, Harry L. Moore, and Dr. Enoch Nagelli.** "Field Expedient High Energy Density Batteries." Poster presented at the ARL-USMA Technical Symposium (AUTS), West Point, New York, October 2019.
- Eslinger, Melissa (LTC), MAJ Ryan Rodriguez (Former C&LS), and Dr. Elizabeth Mentis.** "Microbial Diversity: An Interdisciplinary Approach to Identifying the Microbiome." Presentation at the Research Experiences Introductory Laboratory Biology (REIL-Bio) Meeting at the Society for the Advancement of Biology Education Research, Minneapolis, Minnesota, July 2019.
- Gonzales, Grant M., Janet Ward, John Song, Kathleen Swana, Steve Fossey, **2LT Jesse L. Palmer '19, CDT Felita Zhang '22, CDT Veronica Lucian '22, Luca Cera, CDT John F. Zimmerman '21, COL John Burpo**, and Kevin K. Parker. "Para-Aramid Nanofiber Sheets: Overcoming the Trade-Off Between Mechanical and Thermal Protection." Poster presented at the Materials Research Society (MRS) Fall Meeting, Boston, Massachusetts, November 2019.
- Gouin, Christopher (CDT, '20), COL John Burpo, LTC Matthew J. Armstrong, and Dr. Enoch A. Nagelli.** "Electrochemical and Rheological Properties of Nanomaterials in Suspension." Oral presentation at the ARL-USMA Technical Symposium, West Point, New York, October 2019.
- Hamilton, Alexander J. (CDT, '20), LTC H. Daniel Bahaghighat, Dr. Kamil Woronowicz, and Dr. Enoch A. Nagelli.** "Layer-By-Layer 3D Construction of Bacterial Photoreaction Centers with Graphene Oxide for Enhanced Photocurrent Generation in Organic Photovoltaics." Poster presented at the American Institute of Chemical Engineers Battery & Energy Storage Workshop, New York City, New York, October 2019.

- Horner, Jeffrey S., **LTC Matthew J. Armstrong**, Norman J. Wagner, and Antony N. Beris. "Measurements of Human Blood Viscoelasticity and Thixotropy under Steady and Transient Shear and Constitutive Modeling Thereof." *Journal of Rheology* 63:5 (September 2019): 799–813. <https://doi.org/10.1122/1.5108737>.
- Jaskot, Mark H. (CDT, '21), CDT Joshua M. Musiol '21, COL John Burpo, and Dr. Enoch Nagelli.** "Layer-by-Layer 3D Self-Assembly of Carbon Nanomaterials for Thin Film Electrodes." Oral presentation presented at the ARL-USMA Technical Symposium, West Point, New York, October 2019.
- Jaskot, Mark H. (CDT, '21), CDT Joshua M. Musiol '21, Pamela Sheehan, Preston Haney, Harry L. Moore, COL John Burpo, and Dr. Enoch Nagelli.** "3D Layer-by-Layer Electrostatic Assembly of Graphene-Noble Metal Thin Films for Energy Storage and Conversion." Oral presentation presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.
- Jaskot, Mark H. (CDT, '21), CDT Joshua M. Musiol '21, Dr. Kamil Woronowicz, Pamela Sheehan, Preston Haney, Harry L. Moore, LTC H. Daniel Bahaghighat, and Dr. Enoch Nagelli.** "3D Layer-by-Layer Electrostatic Assembly of Graphene-Noble Metal Thin Films for Electrocatalysis in PEM Fuel Cells." Poster presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.
- Jaskot, Mark H. (CDT, '21), CDT Joshua M. Musiol '21, Dr. Kamil Woronowicz, Pamela Sheehan, Harry L. Moore, COL John Burpo, and Dr. Enoch Nagelli.** "3D Layer-By-Layer Electrostatic Assembly of Graphene-Noble Metal Thin Films for Energy Storage and Conversion Applications." Oral presentation presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.
- Kovacs, Christopher (Dr.),** Roberta C. Faustoferri, Andrew P. Bischer, and Robert G. Quivey. "*Streptococcus Mutans* Requires Mature Rhamnoglucose Polysaccharides for Proper Pathophysiology, Morphogenesis and Cellular Division." *Molecular Microbiology* 112:3 (September 2019): 944–959. <https://doi.org/10.1111/mmi.14330>.
- Kovacs, Christopher (Dr.), and CDT John-Paul Torre '21.** "A Novel Lytic Bacteriophage Against Multi-Drug Resistant *Acinetobacter Baumannii* Is Highly Efficacious and Restores Antibiotic Sensitivity." Poster presented at the Chem/Bio Defense Science and Technology (CBDS&T) Conference, Cincinnati, Ohio, November 2019.
- Kovacs, Christopher (Dr.), CDT John-Paul Torre '21, and LTC Jason Barnhill.** "A Novel Lytic Bacteriophage Against Multi-Drug Resistant *Acinetobacterbaummannii* Is Highly Efficacious and Restores Antibiotic Sensitivity." Poster presented at the Evergreen International Phage Biology Meeting, Olympia, Washington, August 2019.
- Limbocker, Ryan A (Dr.).** "Oligomers, Neurodegeneration, and Toxicity in Military Populations." Presentation presented at the Centre for Misfolding Diseases International Conference, Cambridge, United Kingdom, October 2019.
- Madsen, Sawyer J. (CDT, '20),** Evan Ousley, Blake T. Koppel, **CDT Conner P. Beckman '22, LTC H. Daniel Bahaghighat, and Dr. Enoch Nagelli.** "Synthesis of Poly (Vinyl Alcohol)/Multi-Walled Carbon Nanotube Composite Fibers for Energy Storage Applications." Poster presented at the 2019 Battery and Energy Storage Workshop, New York City, New York, October 2019.
- Madsen, Sawyer J. (CDT, '20),** Evan W. Ousley, Blake T. Koppel, **COL John Burpo, LTC H. Daniel Bahaghighat, LTC Matthew J. Armstrong, and Dr. Enoch A. Nagelli.** "Poly(Vinyl Alcohol)/MWNT Nanocomposite Fibers for Flexible and Light-Weight Energy Storage Devices for Field Expedient Applications." Poster presented at the American Institute of Chemical Engineers Battery & Energy Storage Workshop, New York City, New York, October 21, 2019.
- Mahoney, Luther, Laleh Emdadi, Asher C. Leff, Dat T. Tran, Wei Wu, Sichao Cheng, Dongxia Liu, **COL Chi K. Nguyen**, and Ivan C. Lee. "Influences of Metal-Modification and Lamellar Zeolite Structure on Ethylene to Liquid Aromatics Conversion Reaction Using MFI Catalysts." *Fuel* 256 (November 2019): 115953. <https://doi.org/10.1016/j.fuel.2019.115953>.
- Marbach, Delaney (CDT, '20),** Dan Rabbia, Hugh Mahr, Jack Bui, **COL John Burpo, and Dr. Enoch A. Nagelli.** "3D CNT/Platinum Nanotube Composites for Electrocatalysis in PEM Fuel Cells." Poster presented at the ARL-USMA Technical Symposium, West Point, New York, October 2019.
- Marbach, Delaney (CDT, '20), CDT Aaron N. Romero '20,** Dan Rabbia, Hugh Mahr, Deryn D. Chu, **COL John Burpo, and Dr. Enoch A. Nagelli.** "Carbon Nanotube/Platinum Nanoparticle Composite Inks for Enhanced Oxygen Reduction." Poster presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.
- Melanson, Vanessa (Dr.), CDT Kaile Herring '21, CDT Suzanna Del Rio '21, Dr. James Reilly, and LTC Jason C. Barnhill.** "Analysis of Lyme Disease in Class Cohort (2013-17) Of United States Military Academy Cadets And Tips On Exposure Prevention." Poster presented at the Military Health System Research Symposium, Kissimmee, Florida, August 2019.

Melanson, Vanessa (Dr.), 2LT Madeline Ryu '19, 2LT Megan Gagnon '19, 2LT Grant Hall '19, CDT Kristina Mackey '22, CDT Jessica Min '22, CDT Michael Turner '20, COL John Burpo, and LTC Jason Barnhill. "Combating Dengue: A US Military Perspective." *Virology & Retrovirology Journal* 2:2 (August 2019): 123.

Milanesa, Gabrielle (CDT, '20), Dr. Kamil Woronowicz, COL John Burpo, and Dr. Enoch Nagelli. "Bottom-up Assembly of 3D Graphene/Noble Metal Composite Electrode Materials." Poster presented at the ARL-USMA Technical Symposium, West Point, New York, October 2019.

Miller, April (LTC), LTC Matthew Armstrong, and Dr. Enoch Nagelli. "Developing Chemical Engineering Acumen and Analytical Science through Optimization of the Chocolate Process." Poster presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.

Miller, April (LTC), LTC Corey James, and LTC Matthew Armstrong. "Comparison of Global, Stochastic Optimization Algorithms Using Toy Problems and Multi-Parameter Models of Kinetic Fermentation and Rheological Data." Poster presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.

Pfluger, Andrew R. (LTC), LTC Matthew Armstrong, Dr. Andrew Biaglow, LTC Corey James, Dr. Enoch Nagelli, and LTC April Miller. "Framework for Conducting a Technical Communication Crosswalk of a Chemical Engineering Curriculum." Poster presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.

Pfluger, Andrew (LTC), Pamela Sheehan, Dr. Enoch Nagelli, LTC Corey James, Harry L. Moore, and Preston Haney. "A Framework for Assessing Solid Waste Energy Recovery Systems for Small-Scale on-Site Applications." Poster presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.

Phasomkusolsil, S., O. Wongnet, K. Pantuwatana, J. Tawong, N. Monkanna, T. Kornkan, **LTC Silas A. Davidson**, B.K. Poole-Smith, and P.W. Mccardle. "Comparison of Anopheles Cracens (Stenogamous) and Anopheles Dirus (Eurygamous) Blood-Feeding Behaviors, Survival Rates and Fecundity after First and Second Blood Meals." *International Journal of Mosquito Research* 6:6 (October 2019): 14–21.

Sahu, Neety, **LTC April Miller**, Hendrik J. Viljoen, and Anuradha Subramanian. "Continuous Low-Intensity Ultrasound Promotes Native-to-Native Cartilage Integration." *Tissue Engineering Part A* 25:21–22 (November 2019): 1538–1549. <https://doi.org/10.1089/ten.tea.2018.0355>.

Shanks, G. Dennis, and **LTC Melissa Eslinger.** "Influenza Before the 1890 and 1918 Pandemics in the US Army and at the US Military Academy." *Open Forum Infectious Diseases* 6:7 (July 2019): ofz207. <https://doi.org/10.1093/ofid/ofz207>.

Sims, R. Kenneth, **CDT Jenny Wang '20, Kenneth Brinson, CDT Thomas Alvermann '21, Dr. Alexander Mitropoulos (Former C&LS), Dr. Kamil Woronowicz, Pamela Sheehan, Preston Haney, Harry L. Moore, COL John Burpo, and Dr. Enoch Nagelli.** "Graphene-Silk Fibroin and Noble Metal Nanocomposites for Biosensing Applications." Oral presentation presented at the American Institute for Chemical Engineers (AIChE) Annual Meeting, Orlando, Florida, November 2019.

Tantow, Jeffery (CDT, '21), CDT Kade Kurita '21, CDT John Holeman '20, Harry L. Moore, Preston Haney, Pamela Sheehan, and Dr. Enoch Nagelli. "Synthesis and Characterization of Nanomaterials and Polymers to Form Composite Fibers for Countermeasures to Swarming Unmanned Aerial Systems (SUAS)." Poster presented at the ARL-USMA Technical Symposium, West Point, New York, October 2019.

Weiss, Thomas (2LT, '19), 2LT Peter Zhu '19, CDT Hannah White '20, LTC Matthew Posner, Dr. J. Kenneth Wickiser, LTC Michael A. Washington, and LTC Jason Barnhill. "Latent Lyme Disease Resulting in Chronic Arthritis and Early Career Termination in a United States Army Officer." *Military Medicine* 184:7–8 (July 2019): e368–370. <https://doi.org/10.1093/milmed/usz026>.

Yanagihara, Angel, **CDT Jaqueline Hamrick '20, CDT James Albright '20, CDT Suzanna Del Rio '21, LTC Jason C. Barnhill,** and Catherine Uyehara. "Lethal Box Jellyfish Envenomation Syndromes: Murine- And Porcine- In Vitro And Human Blood Based Model Approaches." Poster presented at the Military Health System Research Symposium, Kissimmee, Florida, August 2019.

Department of Civil and Mechanical Engineering COL Karl F. Meyer, Department Head

Arnold, Ross (CCDC Armaments Center), **Dr. Andrew Kopeikin**, Benjamin Abruzzo (Army Armament Center), and **COL Christopher Korpela (EECS)**. “Towards a General-Purpose, Replicable, Swarm-Capable Unmanned Aircraft System.” Paper presented at the IEEE International Symposium on Technologies for Homeland Security, Woburn, Massachusetts, November 5, 2019.

Ball, Isaiah (CDT, ‘20), D. Goss (KACH Sports PT Fellowship), E. Miller (KACH Sports PT Fellowship), A. Weart (KACH Sports PT Fellowship), and **Dr. Greg Freisinger**. Correlating Kinetic Output Variables and Ground Reaction Forces from Wireless Sensors and Instrumented Treadmills. Paper presented at the XXVII Congress of the International Society of Biomechanics (ISB2019), Calgary, Canada, August 31, 2019.

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COL Gail Yoshitani, Department Head

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COL Tina Hartley, Department Head

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The Office of the Dean and the USMA Library continue to seek the submission of scholarship published by cadets, faculty, and staff in order to better promote and celebrate the contribution by USMA personnel to scholarly communication across all disciplines.

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