JANI MACARI PALLIS

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Professor, Mechanical Engineering Department, University of Bridgeport

SYNOPSIS:

Full professor at the University of Bridgeport and corporate officer of a small aerospace related engineering firm. Aerodynamicist specializing in experimental methods and design of high altitude payloads. Background in biomedical industrial, mechanical and aeronautical engineering, she specializes in fluid dynamics, with an emphasis on air, space and marine vehicles, and sport vehicles and equipment. Emphasis on authentic engineering experiences, scholarship and internship opportunities for undergraduate and graduate students through active grant engagement. Active engagement with underrepresented students in engineering.

EDUCATION

1996	Ph.D.	Mechanical and Aeronautical Engineering, University of California, Davis Dissertation: "The Parallelization and Enhancement of a Parabolized Navier-Stokes Solver"
1991	M.S.	Mechanical Engineering, University of California, Berkeley
1977	M.S.	Health Systems, Georgia Institute of Technology
1975	B.S.	Health Systems, Georgia Institute of Technology

INDUSTRY AND ACADEMIC APPOINTMENTS

• Professor, University of Bridgeport, School of Engineering, Department of Mechanical Engineering, (non-tenured position) August, 2023-Present
• Associate Professor, University of Bridgeport, School of Engineering, Department of Mechanical Engineering, December, 2009-August, 2023; (received tenure– 2014)
• Co-Director, University of Bridgeport Grand Challenges Scholars Program
• Associate Professor, University of Bridgeport, School of Engineering, Department of Technology Management, Sept., 2008-June, 2011
• Chairman, Mechanical Engineering, University of Bridgeport, Dec., 2009-Dec., 2011
• Chairman, Department of Technology Management, University of Bridgeport, July, 2009-June, 2011
• Founder and CEO – Cislunar Aerospace, Inc. (1995-Present)
• Senior Staff Analyst– United Airlines: Computer Services Division - Technical Support, Architecture Planning, Large Mainframe Performance and New Technology (1977-1989)

ACADEMIC EXPERIENCE

Courses Taught:

Mechanical Engineering:

Undergraduate Courses: Fluid Mechanics, Thermodynamics, Applied Thermodynamics, Engineering Mechanics II (Dynamics), Heat Transfer, Senior Design Project (two semester sequence, first class offered in Fall 2020), Mechanical Engineering Systems Lab: wind tunnels (first class offered in Fall , 2020, co-taught with Dr. J. Hu and Dr. Z. Li)

Graduate Courses (400 Level – open to seniors): Satellite Design and Technology, Aerodynamics and Hydrodynamics (vehicles), Management of Engineering Projects, Design

and Innovation, Aerodynamics and Hydrodynamics in Sports, Propulsion, Aircraft and Spacecraft Design, Advanced Fluid Dynamics, Advanced Heat Transfer, Advanced Dynamics, Physiological Fluid Mechanics (in both the Biomedical Engineering and Mechanical Engineering Departments), Finite Element Methods, Master's Project, Master's Thesis

School of Engineering:
Undergraduate (all disciplines "ENGR" classes): Introduction to the Field of Engineering, Engineering Economics and Management of Engineering Projects

Technology Management:
Graduate Courses: Total Quality Management (both traditional classroom and online), Global Program and Project Management, Product Innovation and Commercialization, Supply Chain Management, (in both the Technology Management and Mechanical Engineering Departments), Advanced Program and Project Management, Six Sigma (both traditional classroom and online), Survey of Technology, Technical Writing: Communications and Research in Engineering and Technology Management, Capstone, Master's Project

Other: EDUC-677- STEM for Educators, co-taught with Dr. Nelson Ngoh (education) and Dr. Ryan McCulloch (math)

Courses Developed: Aerodynamics and Hydrodynamics (vehicles), Aerodynamics and Hydrodynamics in Sports, Introduction to the Field of Engineering (specifically for students in the pre-engineering program), Aircraft and Spacecraft Design, Satellite Design and Technology, Propulsion, Physiological Fluid Mechanics (for both the Biomedical Engineering and Mechanical Engineering Departments), Advanced Program and Project Management, Six Sigma, Survey of Technology, Lean Manufacturing

Curriculum Developed: The following classes were developed as part of a grant for Fairchild Wheeler Aerospace Magnet High School, Bridgeport, CT: Aircraft Stability and Control, Ballooning- Tethered and Untethered, Propulsion, Satellite Design, Aircraft Structures and Design.

Accreditation:
ABET Coordinator for the BS Mechanical Engineering degree: Serving as the ABET coordinator for ME as of Fall 2020. Gather folders for courses and other required documents for ABET reporting and visit. This was the first ABET accreditation for the undergraduate program in Mechanical Engineering.
Accreditation for Technology Management: As the Technology Management department chair led the accreditation team in 2010. This was the first accreditation visit for the masters in Technology Management. UB was granted full accreditation (6 years) from Management of Technology Accreditation Board (MoTAB) through the International Association of for Management of Technology.

GRANTS/COOPERATIVE AGREEMENTS OR AGREEMENTS AWARDED OR PENDING

- Labcorp Charitable, $10,000, Stem on Wheels Program, Project Manager: Jani Macari Pallis, Awarded.
- ASCEND (Aerial Science, Collaboration, and Education Network for Discovery, NASA Science Mission Directorate Science Activation Program Integration, PI: Michael Walach (Montana State University), **Co-I: Jani Macari Pallis**, $126, 377, 2027-2029, **Notified of Award, July, 31, 2026.**
- Ives Bank, $1,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, July, 2026 – June 2027, **Awarded.**
- Elisha Leavenworth Foundation, Inc. $20,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, July, 2026 – June 2027, Pending.
- David, Helen and Marian Woodward Foundation, $20,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, July, 2026 – June 2027, Pending.
- Jack and Jill of America Foundation, $10,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, July, 2026 – June 2027, Pending.
- Elizabeth Pfriem Foundation, $30,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, April, 2026 – April, 2027**, Awarded.**
- Nationwide Eclipse Ballooning Project (NEBP) continuation project 2022-2026 in Iceland and Spain, Co-I **Jani Macari Pallis**, funding for high-altitude balloon eclipse project during the August 12, 2026. NASA Science Mission Directorate Single-Source by invitation only (2025), solicitation SMDSS25, PI: Angela Des Jardins, **Co-I Jani Macari Pallis** UB awarded $43,000. Second award to $54,000 **Awarded.** (Total: $97,000.)
- Nationwide Eclipse Ballooning Project (NEBP) continuation project 2022-2026 in Iceland and Spain, PI **Jani Macari Pallis**, funding for six internships from NASA CT Space Grant – June 2026 – August 2026: **awarded $25,200.**
- The Tinty Foundation, $25,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, Sept. 2025-2026, **Active, Awarded.**
- Elizabeth Carse Foundation, $5,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, Oct. 2025-2026, **Active, Awarded**
- Connecticut Space Grant Consortium, Observe the Moon Night, PI: David Mestre (Hall Neighborhood House), October 7, 2025.
- American Savings Foundation, $3,500, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, Dec. 2025-Sept., 2026, **Active, Awarded.**
- Les Paul Foundation, $2,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, Dec. 2025-Sept., 2026, **Active, Awarded.**
- Connecticut Community Foundation, $10,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, Dec. 2025-2026, **Active, Awarded**
- Ellen Knowles Harcourt Foundation, Inc. $4,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, Feb. 2026-2027, **Active, Awarded.**
- Elizabeth M. Pfriem Foundation, $25,000, STEM on Wheels Bus program, **Project Manager: Jani Macari Pallis**, February, 2025.
- Connecticut Community Foundation, $10,000, STEM on Wheels Bus programs for Waterbury, **PI: Jani Macari Pallis**, December, 2024.
- American Savings Foundation, $3,500, STEM on Wheels Bus programs for Waterbury, **PI: Jani Macari Pallis** December, 2024.
- Nationwide Eclipse Ballooning Project (NEBP) continuation project: Funding for Minnesota Ballooning Technology Workshop , **PI: Jani Macari Pallis**, funding for high-

altitude radiation monitoring during 2025 sunspot activity. Awarded, $6400 for 1 faculty and 4 students.

- Nationwide Eclipse Ballooning Project (NEBP) continuation project: NBP Solar Max, **PI: Jani Macari Pallis**, funding for high-altitude radiation monitoring during 2025 sunspot activity, $5250, Dec., 2024.
- Connecticut Space Grant Consortium, Near Space Robotics Project, **PI: Jani Macari Pallis**, $3,406.50, funding for student support for the Sikorsky Prototyping Grant. Awarded
- Connecticut Space Grant Consortium, Observe the Moon Night, PI: David Mestre (Hall Neighborhood House), October, 2024.
- Sikorsky Prototyping Grant, Near Space Robotics Project, **PI: Jani Macari Pallis**, $2,982.08, August, 2024 – present.
- Serve as PI and/or Project Manager on the following grants for the STEM on Wheels bus developed and submitted by the UB Grant's Office: Glenn W. Bailey Foundation ($10,000, 2024 - active); United Way of Coastal and Western Connecticut ($20,000, 2023 – active); Elizabeth M. Pfriem Foundation ($25,000, 2023– active); Petit Family Foundation ($5,000, 2023 – active); Bedford Family Social Responsibility Fund ($5,000, 2024 – active); Les Paul Foundation ($2,000, 2023 – active); American Savings Foundation ($3,500, 2024 – active); Connecticut Community Foundation ($5,000, 2024 – active); Fairfield County's Community Foundation - Women and Girls Fund Small Grant ($5,000, 2022); Glenn W. Bailey Foundation ($10,000, 2023), Bedford Family Social Responsibility Fund ($5,000, 2023), AAUW ($10,000, 2023 – active; Elizabeth Carse Foundation($5,000, 2023).
- Connecticut Space Grant Consortium, Observe the Moon Night, PI: David Mestre (Hall Neighborhood House), UB hosted Observe the Moon night for 3 Bridgeport schools and the UB Community, J. Pallis, coordinator, November 2023.
- NASA Connecticut Space Grant Consortium, Summer Math Preparedness Program for Underrepresented Students in STEM, PI: Marco Bonett-Matiz, Junling Hu, Jani Macari Pallis, $2,000 with additional matching of $3,000 from the School of Engineering, April, 2023.
- CHEFA FY23 Client Grant Program Award: "UB STEM on Wheels Bus Enhancement Project", $75,000, **PI: Jani Macari Pallis, Ph.D**., Expand the seasonal use of the STEM bus with an independent heating/cooling system, solar panels; enhance programming with a trailer for submarine and water tank transport for uncrewed underwater vehicles and new educational equipment, Notification of award was made on Nov. 18, 2022
- Office of Naval Research (ONR) FOA N00014-21-S-F004 Science, Technology, Engineering & Mathematics (STEM), Education and Workforce Program, "Exploring Naval Underwater STEM (Exploring NUSTEM)", **PI: Jani Macari Pallis**, Ph.D., Co-PI: Jill McNitt-Gray, Ph.D. (USC), Co-PI, F. Carroll Dougherty, Ph.D., Co-Investigators: Khaled Elleithy, Ph.D., Ahmed El Sayed, Ph.D., Sarosh Patel, Ph.D.;($600,000: $200,000/year for 3 years), **Awarded July 1, 2022.**
- Summer Math Entrance Preparation Exam Workshop: UB School of Engineering (SOE) incoming freshmen typically place in MATH 106 College Algebra (instead of MATH 109 Pre-Calculus or MATH 110 Calculus). This generally positions the student a year behind in their engineering program of study leading to a longer timeframe to graduation, higher education costs and often retention loss. A virtual math-focused summer program, Math Entrance Exam Preparation Workshop (MEEPW), will be conducted weekdays over a 2-week period from July 5 – July 15 to support up to 25 incoming

freshmen, transfer engineering and computer science students and other UB students requiring the MATH 103, 106, 109, 110 sequence, Funded by School of Engineering: $2000 for Summer 2022- approved 5/25/22, Collaborators: Drs. Jani Macari Pallis, Marco Bonett-Matiz, Joyce Hu.

- NASA GLEE (Great Lunar Expedition for Everyone); UB is one of 213 worldwide teams selected for this 5 gram payload science and technology mission to the surface of the Moon expected to launch in 2023. Student Team Leader: Huy Huong, **Faculty Mentor/Advisor: Jani Macari Pallis, Ph.D**.; team attended workshop in summer 2022 and receive payload kit in fall 2022; **notified of selection May 6, 2022.**
- NASA – Montana Space Grant Consortium Lead Organization: Nationwide Eclipse Ballooning Project (NEBP) 2021-2025, PI: Angela Desjardins, Ph.D., Pod Lead Co-investigator: Jani Macari Pallis, Ph.D., UB subaward 2022-2024: $167,470. Montana Space Grant Consortium has proposed a large-scale coordinated nationwide project for observing the 2023 annular solar eclipse and 2024 total solar eclipse via a network of scientific balloon payloads. The University of Bridgeport, Dr. Jani Pallis will serve as a "Pod" team lead for the central northeast region. This is a multi-year effort with focus on developing and testing the systems, recruiting and training student teams, managing flights and science analysis, and reporting. Formed interdisciplinary student teams which conducted research at the October 14, 2023 annular solar eclipse and the April 8, 2024 total solar eclipse in Texas. Trained faculty and students from Drexel University, Olin College, University of Delaware, Penn State, University of Hartford, Gannon University, University of New Haven. Awarded. Active
- NASA – Montana Space Grant Consortium Lead Organization: Nationwide Eclipse Ballooning Project (NEBP) 2021-2025, PI: Angela Desjardins, Ph.D., Pod Lead Co-investigator: Jani Macari Pallis, Ph.D., UB subaward first year (2021) $23,342. Montana Space Grant Consortium has proposed a large-scale coordinated nationwide project for observing the 2023 annular solar eclipse and 2024 total solar eclipse via a network of scientific balloon payloads. The University of Bridgeport, Dr. Jani Pallis will serve as a "Pod" team lead for a region. This is a multi-year effort with focus on developing and testing the systems, recruiting and training student teams, managing flights and science analysis, and reporting.
- NASA CT Space Grant Consortium, PI: Jani Macari Pallis, Co-PI: Ryan McCulloch "Pilot Math-Based Bridge Program for Underrepresented Students in Engineering and Computer Science", awarded July 2020, $2,000.
- NASA CT Space Grant Consortium, PI: Lesley Frame (UConn), Co-PI Jani Macari Pallis, "Development and Characterization of Extraterrestrial Soils for Local Vehicle Test Beds". UConn awarded $10,000, UB subaward $1,000. Project develops a "test bed" at UB and smaller test bed at UConn with soils that emulate the Lunar, Martian and Venusian surfaces. Will be used for small planetary rovers including the "Exploring Hell" related projects for Venus.
- National Action Council for Minorities in Engineering (NACME - nacme.org), NACME Block Scholarship Grant ($120,000) and Bridge Program 2020 ($5,000); PI – Jani Macari Pallis, Ph.D., provides 24 $1,250/annual scholarships for 4 years for Black/African-American, Latinx/Hispanic, and Native American/American Indian engineering and computer science students awarded May, 2020; $125,000 (4 year grant); unfortunately, grant was rescinded by NACME due to pending changes at the University of Bridgeport as a degree conferring institution and ABET accreditation.

- 21 Century Fox Community Grant, Current PI: Jani Macari Pallis, Ph.D., (Original PI: Ruba Deeb Bou-Chahine, Original Co-PI: Jani Macari Pallis), UB-Discovery STEM on Wheels, awarded $35,000.
- CHEFA Client Grant Program Award (2018-2019), PI and Director: Ruba Deeb Bou-Chahine, Co-Director: Jani Macari Pallis (one of several co-directors). Acquisition, retrofit and implementation of STEM on Wheels mobile lab, awarded $74, 870.
- Discover NASA, NASA NNH13ZHA001N Competitive Program for Science Museums, Planetariums and NASA Visitor Centers Plus Other Opportunities CP4SMP+, Discovery Museum awarded $500,000 (August, 2014 – September 2021), University of Bridgeport portion $50,000.
- NASA CubeSat Launch Initiative (CLI): NNH12SOMD001L, "DISCOvery Museum Satellite: Measurement of small-scale debris flux from orbit", David Mestre (PI), J.M. Pallis, Technical Advisor, (NASA launch opportunity in-kind $140,000). Discovery Museum and UB had a joint project for an orbiting satellite.
- CT Space Grant Consortium, 2020, Travel Grant, $5,000, Travel grant to present with four UB students at the 30 year Anniversary Exhibition of National Space Grant on Capitol Hill - US House of Representatives. USIP project was selected by CT Space Grant to represent the state. Students also met with CT legislators. (Twenty states were selected nation-wide.)
- NASA Undergraduate Student Instrument Program (USIP), CT Space Grant College Consortium awarded $199,999 Hisham Alnajjar PI, Jani Pallis – Project Manager, (UB portion $93,848). Project developed a robot which operates on a high altitude balloon and interacts in flight with children on the ground, completed Dec., 2019.
- NASA Connecticut Space Grant Consortium Program , Xingguo Xiong (PI), Jani Macari Pallis (Co-PI), "Balloon/Drone-based Aerial Platforms for Remote Particulate Matter Pollutant Monitoring", Faculty Research Grant, $10,000, PTE Federal Award No.: NNX15AI12H, funding period: 05/01/2017-08/21/2018.
- NASA MicroStrat Eclipse Ballooning Project, 2017 (Participation in NASA Astrobiology experiment (2017)).
- NASA CT Space Grant College Consortium, Total Solar Eclipse, Project Manager J. M. Pallis for consortium, project approximately $48,000 (equipment, travel, supplies), completed 2017.
- NASA CT Space Grant Consortium, NGSS K-12 Teacher's Workshop, Summer 2017-Fall 2017, R. McCulloch, PI; N. Ngoh, Co_PI, J. Badara, Co-PI, J. M. Pallis, Co-PI, $8,594.
- CT Space Grant, Travel Grant, $1000 for HASP travel to NASA's Columbia Scientific Balloon Facility for temperature and vacuum testing of payload and certification for flight on the HASP system, 2016.
- Acquisition of Explorer 1-person 1-atmosphere submarine: Negotiated long term agreement with submarine builder A. Winick and UB general counsel for loan of the Explorer submarine to UB (2016-2018). Submarine has been acquired by UB and is part of the Extreme Environments Laboratory
- High Altitude Student Platform, NASA Louisiana Space Grant, Near Space CubeSat Test, HASP usage (2016-2017), laspace.lsu.edu/hasp/groups/Payload.php?py=2017&pn=08
- Fairchild Wheeler, Curriculum Development (2014-2016): Stability and Control, Ballooning- Tethered and Untethered, Propulsion, Satellite Design. Aircraft Structures and Design and Aircraft Stability and Control as part of a grant for Fairchild Wheeler Aerospace Magnet High School, Bridgeport, CT.
- NASA CT Space Grant Consortium, NGSS K-12 Teacher's Workshop, Summer 2016-Fall 2016, R. McCulloch, PI; N. Ngoh, Co_PI, N. DeJarnette, Co-PI, J. M. Pallis, Co-PI, $8,900.

- High Altitude Student Platform, NASA Louisiana Space Grant, Servo-Test Bed, HASP usage (2015-2016), laspace.lsu.edu/hasp/groups/Payload.php?py=2016&pn=11
- University of Bridgeport Faculty Seed Money Grant, "Automatic Gait Balance Detection: Hardware/Software and Mobile Application Design", PI: J. M. Pallis, Ph.D., Co-PI, Miad Faezipour, Ph.D., $9,975. (2015-2016)
- Connecticut Space Grant College Consortium, PI: Neal Lewis, Co-PI's Jani Pallis, Sarosh Patel, Engaging Young Explorers in Ballooning, Seed Money Grant for high altitude robotics, $6000, October, 2014 (creation of robotics for high altitude balloon project).
- Discovery Museum and Planetarium, Development of Software for High Altitude Balloon Transmissions, $3500, PI: Jani M. Pallis, Ph.D., June 2014.
- Development of a Satellite Design, Fabrication, Integration and Testing Course, Connecticut Space Grant College Consortium, $7,500, PI: Jani M. Pallis, Ph.D., Co-PI: Hassan Bajwa, Ph.D., Christian Bach, Ph.D., awarded Feb., 25, 2014.
- Servo-Flap Rotor Blade Design and Wind Tunnel Test, Connecticut Space Grant College Consortium, $20,000, PI: Alfred Gates, Ph.D., Co-PI: F-S Wei, Co-PI: J.M. Pallis, Ph.D., awarded Oct., 2013; University of Bridgeport received $6,000.
- STEM-Related Professional Development and Curriculum Design: Collaboration between Fairchild Wheeler Interdistrict Magnet High School and University of Bridgeport (my part was to develop an Aircraft Structures and Design course for an aerospace magnet high school).
- Connecticut Space Grant Consortium, a 2013 Directed Scholarship is $5,000 and is being awarded to an undergraduate Computer Science student.
- Connecticut Space Grant Consortium, Faculty Grant ($11,000) awarded and "Directed Scholarship" ($5,000) awarded Dr. Jani Pallis (Requestor). For the 2012-2013 academic year, UB has been awarded $51,000. This includes an $11,000 faculty grant done with Dr. Hassan Bajwa – PI and Dr. Christian Bach and myself as Co-PIs and a "Directed Scholarship" that I coordinate with Dr. Christine Hempowicz. The Directed Scholarship is $5,000 and is being awarded to an undergraduate Computer Engineering student.
- National Collegiate Inventors and Innovators Alliance, "Commercialization with Interdisciplinary Student Teams at the University of Bridgeport" with Dr. Neal Lewis (PI), Dr. Jani Pallis, Dr. Navarun Gupta, Dr. Art McAdams and Richard Yelle, $35,000, submitted. Awarded $8,000.
- University of Bridgeport, Seed Money Grant "DNA Scaffold Based Nanoscale Antenna", Dr. Jani Pallis (PI) and Dr. Hassan Bajwa (Co-PI), $6,000, awarded.
- Connecticut Space Grant Consortium, "Directed Scholarships", UB awarded $10,000 for 2 student fellowships and "Student Organization Funds for the UB National Society of Black Engineers (NSBE) and the Society of Women Engineers (SWE)" awarded $500 each (total $1000), Dr. Jani Pallis (Requestor), January, 2012.
- National Collegiate Inventors and Innovators Alliance (NCIIA), "Develop a Center for Student Entrepreneurship and Innovation at the CTech IncUBator@University of Bridgeport", with Dr. Neal Lewis (PI), Dr. Jani Pallis and Dr. Navarun Gupta, $8000 awarded.
- Principal Investigator with Dr. Joyce Hu (Co-PI), Connecticut Space Grant Consortium, "Multiphysics Modeling of Gas Tungsten Arc Welding", $6,000 awarded, April 2011.
- Society of Women Engineers, "DR357- SWE UB International Coffee Hour", $500, awarded, Jani Pallis (Project Management/Requestor), Feb., 2011
- Principal Investigator, The Bridge Project, $20,000, Manufacturers Association of Southern Connecticut, 2010

- University of Bridgeport, Seed Money Grant, Establishing an Environmental Sustainability Program at the University of Bridgeport, $7,000, Elif Kongar (Pi), Jani Pallis (Co-PI), 2009
- NASA, Principal Investigator, Math To The Moon … And Beyond, 36 units (144 lesson plans) on the math behind the engineering and science of space flight and space operations, for NASA Explorer Schools; Grant with NASA Goddard, $271,444.
- Principal Investigator, Wright Again (www.wrightagain.com), K-12 web-based project commemorating the Centennial of Flight, Grant with National Business Aviation Association, $165,486. Collaboration with The Franklin Institute and High Performance Computing, Education, and Research Center at the University of New Mexico for CFD.
- Director and Founder: Get SSET – Sport Science, Engineering and Technology, Pre-College Residential Summer Academy at MIT (2003-2005), Stanford University (2005), University of San Diego (2006-2007), multiple grants and funding sources (including the Society of Women Engineers), $125,000 (approx.)
- Co-PI and Developer, SWE Internet Activities Center (www.swe.org/iac), 40 lesson plans (some interactive) and a guide for engineers on working with young students and educators, Grant with the Society of Women Engineers, $40,000 (approx.), project received multiple "outstanding project" awards.
- Principal Investigator, K-8 Aeronautics Internet Activity Center (wings.avkids.com - archived), $1.09 million (approx.), web-based lesson plans, curriculum bridges and online text in multiple reading levels in English and Spanish, animations of scientific American Sign Language terms. Additional $149,000 added for Aerodynamics in Sports.

ACADEMIC, PROFESSIONAL AND FRATERNAL ACTIVITIES

- Continuing to pursue a project with Dept. of Energy Pacific Northwest National Laboratory on Spent Nuclear Waste Containment System. Have facilitated the establishment on an LLC in Connecticut with the principal researcher, Max Runyan and Prof. Nicolas Zoghb. Have met with Sherri Dente from the Bauer Innovation Center on this proposal.
- Current Director (past co-director) UB STEM on Wheels mobile laboratory (bus), volunteer time for content development, logistics, business planning, student educator training, school and community visits, grant and donation development. 2018-**present**. Serviced over 3000 individuals this year.
- Reestablish the Model Shop within the ABC Building for use by the School of Engineering for Senior Design and projects/grants. Worked to consolidate space, identify machinery needing repair or maintenance.
- Supported the graduate engineering colloquium (ENGR 400) series by recruiting colleagues for presentations: Dr. Angela Des Jardins (Montana State University) on Oct. 2, 2025 on *Teaching Space Science in Zambia: One Professor's Fulbright Adventure*, Dr. Jim Sherwood (dean emeritus University of Massachusetts, Lowell) on Oct. 9, 2025 on *The Sweet Spot of Engineering: Modeling Baseball Bats, Helmets, and Parachutes* and Dr. Cameron Tracy (University of California, Berkeley) on November 13, 2025 on *Hypersonic Hype: The Performance and Security Implications of Hypersonic Glide Missiles.* I also presented on November 6, 2025 on Application of Aerospace and Hydrospace Engineering and Student Projects at the University of Bridgeport.
- AAUW NCCWSL (National Conference for College Women Student Leaders) worked with the local AAUW Bridgeport branch and Associate Provost Jaria Aljoe (2023-2025) and Stephanie Staffey and Christina Gaspar (2026) to identify and select 4 UB students

in 2023, 3 students in 2024, 4 students in 2025 and 4 students in 2026 to attend this conference. (expenses paid) https://www.aauw.org/resources/events/nccwsl/

- National Coalition of 100 Black Women – New Haven Metropolitan Chapter – facilitated their usage of the Engineering Interdisciplinary Makerspace for their monthly Girl's STEM days. Provided student assistants, Fall 2023-Spring-2026.
- Co-Director, University of Bridgeport National Academy of Engineering Grand Challenges Scholars Program, developed the operating guide for UB with Co-Director Abhilasha Tibrewal, annual cohort selection, instruction of scholars on a biweekly basis, assist with advisors for final projects. Current cohort is beginning work with the "Exploring Hell" mechanical clockwork rover for Venus, 2016 – **present**.
- NASA Connecticut Space Grant Consortium Director for the University of Bridgeport (2011-**present**) Support faculty and students in obtaining grants, scholarships, fellowships and project funding and NASA opportunities.
- Society of Women Engineers (senior member): at UB: Society of Women Engineers: Faculty Advisor and/or counselor - established collegiate interest group (2013- 2024) (precursor to establishing a SWE section); Work at National Level: Program Development Grant Committee - Grant Evaluator: 2015 – **present**; Scholarship Evaluator: upperclassmen – 2018 and **2023**,freshmen 2018-2020 and **2022**; National Chair (past) for the International Participation Committee; Society of Women Engineers Connecticut Section: Alternate Section Representative SWE Connecticut Professional Section 2012-2014. Previously a member of the SWE Golden Gate Section (San Francisco Bay Area), Membership Chair.
- Editorial Board Member, Journal of Sports Engineering and Technology 2013-**present,** Editor: James Sherwood, http://pip.sagepub.com/, Institution of Mechanical Engineers (IMechE), SAGE Journals.
- Board of Trustees, The Discovery Museum, Inc. (now Sacred Heart University Discovery Science Center and Planetarium) Bridgeport, CT (2017 – **present**), Advancement Committee (2023), Fundraising Committee Chair (2018 to 2020), member of the Executive Committee (to 2020). Also coordinate UB student participation in Space Day, Aerospace Day, Black History Day, Women in STEM Day and other volunteer opportunities at the museum.
- Faculty Advisor – UB Aerospace Club 2014-**present** (club established in 2014)
- American Institute of Aeronautics and Astronautics (AIAA) Balloon Systems Technical Committee, official as of May, 1, 2023 -**present**
- American Association of University Women (AAUW) Bridgeport Area Branch, Scholarship Committee, January, 2023 – **present**
- Appointed by the Provost Manyul Im to UB's joint Institutional Biosafety and Laboratory Safety Committee (IBLSC), January, 2023 – **present**
- University Disciplinary Committee, (now Student Conduct Hearing Board) (2011-**present**)
- American Society of Mechanical Engineers – member – **present.**
- American Institute of Aeronautics and Astronautics (senior member) **present**.
- AAUW – American Association of University Women – member and UB liaison, strategic planning.
- American Society for Engineering Education (member), **present.**
- Nautical Archaeology Society (member), **present.**
- Institute of Nautical Archaeology (member), **present.**
- Delta Kappa Gamma International – (member) - professional honorary society of women educators, **present.**

- Connecticut Technology Council, Women in Innovation, Evaluation Committee, **2019 – present.**
- Phi Kappa Phi – elected by UB 2019 - academic excellence in all fields of higher education, member (2019 – **present**)
- Alpha Gamma Delta Foundation, Foundation Scholarship Committee: Evaluator 2015 – **present**
- Faculty Mini Session, International Admissions, created and made an hour long presentation (webinar) for International Admissions on research for 27 students in India. to help students prepare for their visa interview, May 20, 2024.
- STEMfem– Supported the Connecticut Women's Hall of Fame at their STEMfem program on the UB campus by providing the STEM on Wheels Mobile Lab to 88 young ladies–May 17, 2024.
- Accepted Students Day– Supported Admissions Accepted Student Day by providing the STEM on Wheels Mobile Lab – April 6, 2024
- Chair, School of Education Director Search Committee – appointed by dean, October, 2023 – June, 2024
- Bridgeport community and UB solar eclipse eyeglass distribution: Coordinated outreach efforts to visit the following Bridgeport groups and distribute solar eyeglasses at Mercy Learning Center, Bridgeport Hope School, Homes for the Brave, McGivney Community Center, Hall Neighborhood House. Worked with UB's Director of Community Outreach, Melanie Strout. UB's student solar eclipse team visit these groups, distributed eyeglasses and answered questions about the April 8, 2024 total solar eclipse.
- Accepted Students Day– Supported Admissions Accepted Student Day by providing the STEM on Wheels Mobile Lab – April 6, 2024.
- American Institute of Aeronautics and Astronautics (AIAA) Balloon Systems Technical Committee, appointed Chair of the Education Subcommittee, Dec., 2023 – present
- EDRising Fall Professional Development – Support the School of Educations EDRising program by providing the STEM on Wheels Mobile Lab – December 5, 2023.
- UB ME Faculty Member Search Committee, September-November, 2023.
- Established and director of the Extreme Environments Lab: Equipment (antennas and satellite dishes, ham radio/ground station, high altitude ballooning equipment, i.e. parachutes, weather balloon instrumentation) supports satellite, air and spacecraft systems, high altitude balloon systems and the Explorer 8-foot, 2,300 pound, one-person, one-atmosphere submarine. Focus of the lab is to provide students an opportunity to study, research and develop projects for space, high altitude and underwater environments. Developing an infrastructure such that engineering can offer non-engineering students (biology, chemistry, etc.) the ability to define experiments for these extreme environments (Tech 110) 2021-present. Support UB initiatives through video presentations and tours which showcase the labs and UB student capabilities- present
- Selected for SOE Personnel Committee 2022-2023 academic year
- Tenure and Promotion Review Committee for faculty member at the University of Hartford, June – August, 2023
- Developed and conducted a week long workshop (May 21-May 26, 2023)on high-altitude ballooning and the technology developed for the 2023/2024 annular and total solar eclipses for approximately 25 faculty and students from Drexel University, Olin College, Gannon University, University of Delaware, Penn State, Lincoln University, University of Hartford and Tunxis CC.

- Sikorsky Day: UB Coordinator; coordinate UB involvement for Sikorsky Day at the STEM Village (hands-on activities and demonstrations and the STEM on Wheels bus), 3000+ people are expected**,** (Sikorsky cancelled the event), March 2023 – August 2023.
- University of Bridgeport School of Education Advisory Board, April 2023
- University of Bridgeport Budget Committee, Oct. 2022 – 2024
- Presented at the graduate engineering colloquia (ENGR 400) series on March 16, 2023 and November 10, 2022 on "Application of Aerospace and Hydrospace Engineering and Student Projects at the University of Bridgeport". For Spring 2023 335 graduate students were registered in the class.
- UB First Generation Committee, March, 2023 – 2025
- Reviewer, textbook on turbomachinery, Cambridge University Press, Dec. 2022-January, 2023.
- UB Research Strategic Planning Committee, October, 2022
- Tenure and Promotion Review Committee for faculty member at the University of Hartford, June – August, 2022
- Reviewer, International Journal of Thermofluids (1 paper), sciencedirect.com, August, 2022
- NASA October Upper Class E Traffic Management (ETM), February, 2022 – 2023
- School of Education Director Search Committee – appointed by dean as College of Engineering, Business and Education non-School of Education member, February 2022 – July, 2022
- UB Diversity, Equity and Inclusion Council - Student Engagement Subcommittee (Foster undergrad and grad involvement and leadership), newly formed 2021 – 2023
- UB Diversity, Equity and Inclusion: Reading Group, March 2022 – June, 2022
- One Brooklyn Mobile Technology Coalition (formerly Brooklyn Drone Bus) project member and Summer Rising Planning Committee. An exploratory investigation to determine potential cross utilization of curriculum and resources between the UB STEM on Wheels bus and a multi-bus program in NYC**.**
- UB ME Faculty Member Search Committee, February-May, 2022.
- UB Community Day Presentation, January 7, 2022, "Engaging Undergraduates in Authentic Research".
- Selected for SOE Personnel Committee 2021-2022 academic year.
- Reviewer, textbook on heat transfer for Cambridge University Press, July, 2021.
- Faculty Advisor, National Action Council for Minorities in Engineering: Annually work with Admissions and Financial Aid to select cohort of underrepresented students as NACME scholars. Reporting and monitoring of student activity in fulfillment of NACME requirements. (2012-2020)
- Stamford Museum & Nature Center Science Advisory Council "To enhance the reputation and visibility of the SM&NC Astronomy & Physical Science Center".
- Faculty Coordinator for School of Engineering (SOE) student organization leaders: established a forum for SOE student organization leaders (NSBE, NACME, SWE, Aerospace Club, IEEE, Robotics Club, Coding Club, etc.) to meet and coordinate joint activities and outreach events and share common concerns, 2021-2023.
- Faculty Advisor – UB Catholic Group 2018 – 2021. Co-advise with Julie Demers (staff member), activities such as special masses and services with diocese priest assigned to UB Father Elio Albano Sosa (holy days, Way of the Cross), also Father Joe Farias from Sacred Heart University.
- University of Bridgeport Committee on Strategic Academic Planning: Elected by the general faculty to serve to establish a long-range plan and vision consistent with the

University's mission statement as an accredited post-secondary institution of higher education (committee established in April, 2020).

- CT ACE Women's Network – Coordinator for 2020 CTAWN Fall Conference at the University of Bridgeport (not conducted due to COVID-19); University of Bridgeport representative.
- Engineers Week: Coordinated an "Engineers Day" at UB in 2018 and 2019. Also coordinated UB students visits to local Bridgeport K-12 schools in 2019.
- Coordinated UB involvement in Sikorsky Family Day October 2018; coordinated faculty, staff and student volunteers to participate in Sikorsky Family Day. UB personnel conducted STEM "make-and-takes" with Sikorsky families. Coordinated for Fall 2020 (postponed).
- SSEP (Student Spaceflight Experiments Program), NCESSE, UB Community Co-Director with Fairchild Wheeler Interdistrict Magnet Campus and the Discovery Museum and Planetarium (2017-2018), Ruba Deeb, Ph.D. (PI)
- Lecturer – 2017 Helicopter/UAV Program at CCSU – Wind Tunnel Aerodynamics
- SSEP (Student Spaceflight Experiments Program), NCESSE, UB Community Co-Director with Fairchild Wheeler Interdistrict Magnet Campus and the Discovery Museum and Planetarium (2016-2017)
- Homecoming Coordinator School of Engineering – 2015-2019, 2021, 2022 (Welcome Weekend); Coordinated engineering activities under a large tent for alumni families or on the STEM bus; coordinated with student engineering and math clubs for student volunteers to showcase School of Engineering projects and conduct hands-on activities with children. Ribbon cutting for the Bauer Innovation Center during 2019 Homecoming – coordinated School of Engineering involvement. Faculty and student set up innovative projects for display.
- Lecturer – 2015 Helicopter/UAV Program at CCSU – Wind Tunnel Testing
- Faculty Advisor – CanSat Competition 2013-2017
- Advisory Council – Discovery Museum and Planetarium (2012-2017)
- Search Committee for Executive Director - Discovery Museum and Planetarium (2014)
- Lecturer – 2013 Helicopter/UAV Program at CCSU – Wind Tunnel Testing
- Review Committee – SAGE Best Paper Prize for Journal of Sports Engineering and Technology, 2014.
- Reviewer, Journal of Fluid Mechanics (2013)
- Reviewer, American Association Of Engineering Educators (ASEE) for the 2013 ASEE Annual (national) Conference for the Aerospace Division, (2021 and 2022).
- Undergraduate Student Academic Separation Appeals Committee (2014)
- University of Bridgeport School of Engineering - Curriculum Committee – Mechanical Engineering
- Alpha Gamma Delta Fraternity (women's fraternity) – Charter (founding) member of Gamma Phi chapter at the Georgia Institute of Technology (1971), co-chair steering committee capital campaign (2008-2011 – funds raised for new sorority house – houses
- 42 sisters).
- Reviewer, Engineering of Sports 9 Conference for the International Sports Engineering Assoc.
- National Task Force – Women in Academia Society of Women Engineers 2010-2011
- Served as "Co-Chair, best paper award" in American Society for Engineering Education (ASEE).
- Served as Co-Chair Remote Engineering and Virtual Instrumentation (REV) 2009 conference.

- Co-Chair, 5th Engineering of Sports Conference, International Sports Engineering Association, University of California, Davis, Davis, California, Sept. 13-16, 2004, Chair: Mont Hubbard, Ph.D. (UC Davis), Co-Chairs: Rabindra Mehta, Ph.D. and Jani Macari Pallis, Ph.D.
- Member (past), Society and Aerospace Technical Committee, American Institute of Aeronautics and Astronautics.
- International Sports Engineering Association (past officer, board member and trustee and member)
- Editorial Board (past), Sports Engineering, Sheffield, UK.
- National Task Force: Guidelines for Writing System Software and Tool Requirements for Parallel and Clustered Computers (1995)

AWARDS

- Outstanding UB Faculty Member, awarded at the Homecoming Gala, October 7, 2022 (First time the award was ever made)
- Honored by The Discovery Museum at its October, 2019 Gala for outstanding service.
- Elected to UB Phi Kappa Phi – academic excellence in all fields of higher education (2019)
- UB Student Organization Faculty Advisor of the Year (2016)
- Connecticut Technology Council, Women in Innovation, Awardee Academic Innovation and Leadership (2016).
- Connecticut Space Grant Consortium Campus Director of the Year 2013
- Alpha Gamma Delta Fraternity, Gamma Phi Chapter Georgia Institute of Technology, received Arc of Epsilon Pi for continued service, October, 2012.
- Distinguished Citizen (first individual in the field of Engineering), Alpha Gamma Delta Fraternity, July, 2010, Notable Alumnae: Jani Macari Pallis, Alpha Gamma Delta, Wikipedia, http://en.wikipedia.org/wiki/Alpha_Gamma_Delta
- Connecticut Technology Council, Women in Innovation, Finalist, 2009.
- Georgia Institute of Technology, Distinguished Alumni Department of Industrial Engineering
- Franklin Institute and Science Museum, Philadelphia, PA, plaque installed at the Franklin Aviation Hall as a woman engineer involved in aerodynamics (in recognition of work done with the Franklin for the centennial of flight).
- NASA Ames Research Center – Excellence in Education
- United Airlines – Technical Award of Merit
- California Association For Aerospace Education – Special Recognition

PUBLICATIONS – Books and Journals

1. Hung, G., **Pallis, J.M.,** McNitt-Gray, J. (editors), *Biomedical Engineering Principles In Sports*, *Second Edition*, Springer Publishing, 978-1-0716-5479-8, August, 2026 (in production).
2. **Pallis, J. M.,** "A Tale of Three Engineers", in Chapter 17 – Accounting and Engineering Economy, in Engineering Economic Analysis 15th Edition, Newman, D., Eschenbach, T. G., and Lewis, N., Oxford University Press, 2027, (manuscript in production).
3. Zoghb, N. and **Pallis, J.M.,** Using High-Altitude Ballooning to Detect Cosmic Rays – A Solar Max Project, 2026 American Society for Engineering Education Northeast Section Conference, Southern New Hampshire University, Manchester, NH, March 28, 2026.
4. Covitt, B.A., Des Jardins, A.C., Agrimson, E.P., Ash, J.T., Bailey, S.C.C., Barber, K.A., Bastidas, M.J., Bering, E.A., Bernards, M.T., Choi,.A., Conklin, N.B., Do, J.K.Q., Etten-Bohm, M., Finney,

W.F., Flaten, J.A., Freedman, J.M., Humphrey, R.H., Kelsey, E.P., Kim, H., Lee, C.L., Lee, W., Marquis, J.W., Minder, J.R., **Pallis, J.M.**, Pawlowski, D.J., Qiu, C., Rivers, J.H., Ruszkowski, J.A., Schmidt, J.B., Sharp, T.G., Slaboch, P.E., Smith, S.W., Snowden, D.S. and Sperling, A.R. (2026), Insights from and future directions for a nationwide science and engineering education collaboration in stratospheric ballooning. Front. Astron. Space Sci. 12:1659329. doi: 10.3389/fspas.2025.1659329.

5. **Pallis, J. M.,** Burton, D. and Drawer, S., editors, special edition of the Journal of Sport Engineering and Technology: Fluid Mechanics and Sport, published December 2021, Volume 235 Issue 4, Sage Publications, https://journals.sagepub.com/toc/pipa/235/4.
6. DeJarnette, N.K., Deeb, R.S., and **Pallis, J.M.** (2021). Impact of a STEM Mobile Laboratory Initiative on K-12 Students in High Needs Schools. 2021 ASEE Northeast Section Conference Proceedings, (October 22, 2021).
7. DeJarnette, N.K., Deeb, R.S., & **Pallis, J.** (2021). Academic collaborative efforts to promote STEM equity in high needs schools. Education, Society and Human Studies. Vol 2, No 3, 2021.
8. **Pallis, J. M.,** McNitt-Gray, J., Hung, G., Biomechanical Principles and Applications in Sports, Springer, 2019, ISBN: 978-3-030-134567-9.
9. **Pallis, J. M.,** "A Tale of Three Engineers", in Chapter 17 – Accounting and Engineering Economy, in Engineering Economic Analysis 14th Edition, Newman, D., Eschenbach, T. G., Lavelle, J. P., and Lewis, N., Oxford University Press, 2019, ISBN 978-0190931919.
10. Soumil Shah, Xingguo Xiong, **Jani Pallis**, "Balloon/Drone-based Aerial Platforms for Remote Particulate Matter Pollutant Monitoring", Poster in 2019 ASEE (The American Society for Engineering Education) Zone 1 Conference, April 11-13, 2019, University of Buffalo, Niagara Falls, NY.
11. Soumil Nitin Shah, Zhaopeng Xu, Diya Peng, Tong Zuo, Xiaoliang Li, **Jani Pallis**, Xingguo Xiong, "Balluino: High Altitude Balloon-based Arduino Real Time Air Quality Monitoring System", Poster in 2018 ASEE (The American Society for Engineering Education) Northeast Section Conference, April 27-28, 2018, University of Hartford, Connecticut, USA.
12. Diya Peng, Zhaopeng Xu, **Jani Pallis**, Xingguo Xiong, "Visualization and Analysis of Air Pollution in US East Coast Cities", Poster in 2018 ASEE (The American Society for Engineering Education) Northeast Section Conference, April 27-28, 2018, University of Hartford, Connecticut, USA.
13. Manquan Fang, **Jani Pallis**, Xingguo Xiong, "COMSOL Simulation of Air Pollutant Particle Transmission in a Building", Poster in 2018 ASEE (The American Society for Engineering Education) Northeast Section Conference, April 27-28, 2018, University of Hartford, Connecticut, USA.
14. **Pallis, J. M.,** "A Tale of Three Engineers", in Chapter 17 – Accounting and Engineering Economy, in Engineering Economic Analysis 13th Edition, Newman, D., Eschenbach, T. G., and Lavelle, J. P., Oxford University Press, 2017. ISBN 978-0190296902.
15. **Pallis, J. M.,** "A Tale of Three Engineers", in Chapter 17 – Accounting and Engineering Economy, in Engineering Economic Analysis 12th Edition, Newman, D., Lavelle, J. P., and Eschenbach, T. G., Oxford University Press, 2014. ISBN 978-0-19-933927-3.
16. Bach C, Patra P, **Pallis J,** Sherman W, and Bajwa H (2013) Strategy for Naturelike Designer Transcription Factors with Reduced Toxicity. IEEE Transactions on Computational Biology and Bioinformatics, http://doi.ieeecomputersociety.org/10.1109/TCBB.2013.107 (Impact Factor: 2.25)

17. Bach, C., Sherman, W., **Pallis, J. M.,** Patra, P., & Bajwa, H. (2014). Evaluation of Novel Design Strategies for Developing Zinc Finger Nucleases (ZFNs) Tools for Treating Human Diseases. Biotechnology Research International.
18. **Pallis, J.M.,** Closing Thought: "A License to Play … And Not Get It Right", University of Bridgeport, Knightlines, Spring 2012, page 37.
19. **Pallis, J.M.,** Licata, J., Hunter, G, "Math To The Moon … And Beyond", Cislunar Aerospace, Inc., copyright 2013.
20. Kongar, E., **Pallis, J.M.,** Sobh, T., "Non-Parametric Approach for Evaluating the Performance of Engineering Schools", in the International Journal of Engineering Education (IJEE), Volume 26, Number 5, pp 1210-1219, September 2010,
21. Sobh, T.M., **Pallis, J.,** Gupta, N., "Recent Directions in Remote Engineering and Virtual Instrumentation", International Journal of Online Engineering, August 2009, 5(S1):4-7. DOI:10.3991/ijoe.v5s1.1032
22. **Pallis, J.M. "**Synopsis of Current Developments: Water Sports", in E. Moritz and S. Haake *The Engineering of Sport 6*, New York: Springer, 2006.
23. Safran, M., **Pallis, J.**, Workman, K., "Validation of Questionnaire for the Epidemiology of Sports Injuries in Wheelchair Athletes", Medicine and Science in Tennis, April, 2005.
24. Hubbard, M., Mehta, R., **Pallis, J.M.** (editors), *5th Engineering of Sports*, International Sports Engineering Association, 2004.
25. Hung, G., **Pallis, J.M.** (editors), *Biomedical Engineering Principles In Sports*, Kluwer/Plenum Academic Publishers, 2004.
26. Mehta, R., **Pallis, J.**, "Tennis Ball Aerodynamics and Dynamics", in G. Hung and J. Pallis (eds) *Biomedical Engineering Principles In Sports*, New York: Kluwer/Plenum Academic Publishers, 2004.
27. **Pallis, J. M.**, "Aerodynamics of Sails", "Hydrodynamics of Boat Hulls", "Hydrodynamics of Oars", in R. Bartlett, C. Gratton and C. Rolf (eds) *Encyclopedia Of International Sports Studies*, London: Taylor and Francis, 2004.
28. Dougherty, F. C., **Pallis, J.M.**, Reaching Out to Girls and Boys – Engineering Outreach for K-12, Society of Women Engineers National Conference 2003.
29. **Pallis, J.M.** and Mehta, R., "Balls and Ballistics", in M. Jenkins (ed.) *Materials in Sports Equipment*, Cambridge: Woodhead Publishing, 2003.
30. **Pallis, J.M.,** "Materials in Paralympic Sports", in M. Jenkins (ed.) *Materials in Sports Equipment*, Cambridge: Woodhead Publishing, 2003.
31. Cooke, A., Pankhurst, A. and **Pallis, J.M.**, "Sports engineering in education: an interactive computer-based tool for educating tennis coaches on the science of tennis", in S. Miller (ed) Tennis Science and Technology 2, London: International Tennis Federation, 2003.
32. Safran, M., **Pallis, J.**, and Workman, K., The Epidemiology of Sports Injuries in Wheelchair Athletes Validation of Questionnaire - Final Report to United States Tennis Association, 2003.
33. **Pallis, J.M.**, "Kites" and "Boomerangs", In Encyclopedia of Flight, Salem Press, 2002.
34. **Pallis, J.M.** and Mehta, R., (2002) "Aerodynamics and Hydrodynamics in Sports", in S. Ujihashi and S. Haake *4th Engineering of Sports*, Sheffield: Blackwell, 2002.
35. Cooke, A., Roussopoulos, K., **Pallis, J.M**. and Haake, S.J., "Correlation between racquet design and arm injuries", in S. Ujihashi and S. Haake *4th Engineering of Sports*, Sheffield: Blackwell, 2002.
36. **Pallis, J.M.** http://www.wrightagain.com, "Wright Again", Cislunar Aerospace, Inc., 2001-2008.
37. **Pallis, J.M.,** http://www.tennnisserver.com/set, "Tennis Science, Engineering and Technology" (series of 49 monthly articles), editor C. Kurtzman and The Tennis Server, 2001-2007.

38. Klems, J.H., Finlayson, E.U., **Pallis, J. M**., Banks, D.W. and Olsen, T.H., "Toward a Virtual Building Laboratory", Department of Energy, 2001.
39. Mehta, R. and **Pallis, J.M.**, "Sports Ball Aerodynamics: Effects of Velocity, Spin and Surface Roughness", Materials and Science in Sports Symposium. San Diego, April, 2001.
40. Mehta, R. D. and **Pallis, J. M.** The aerodynamics of a tennis ball, *Sports Engineering*, 4: 177-189, 2001.
41. **Pallis, J.M**. and Mehta, R., 'Tennis Science Collaboration Between NASA and Cislunar Aerospace', in A. Coe and S. Haake (eds) *Tennis Science and Technology*, Sheffield: Blackwell Science, 2000.
42. Dougherty, F. C., **Pallis, J.M**., "SWE Internet Activities Center", Society of Women Engineers, 2000-2008.
43. **Pallis, J.M.,** Banks, D.W. and Okamoto, K.K., "3D Computational Fluid Dynamics in Competitive Sail, Yacht and Windsurf Design, in A. Subic and S, Haake, *Engineering of Sport 3*, Sheffield: Blackwell, 2000.
44. **Pallis, J.M.,** Editor, *The Big Book of Air and Space Flight Activities*, McGraw-Hill, January, 2000.
45. Pallis, J.M. and Burns, I., "Numerical Simulations For An America's Cup Challenger", Maui High Performance Computing Center 1999 Application Briefs, 1999.
46. **Pallis, J.M**., Editor, (no longer active) http://wings.ucdavis.edu/Tennis, "Tennis Sport Science" and Aerodynamics in Sports", 1996-2001
47. **Pallis, J.M**., Editor, (no longer active) http://wings.avkids.com, "The K-8 Aeronautics Internet Textbook", 1996-2008.
48. **Pallis, J**.M., Chattot, J.J. and Lawrence, S. L., "Parallelization of a Parabolized Navier-Stokes Solver with a Design Optimizer", 34th Aerospace Sciences Meeting & Exhibit, AIAA 96-0549, January, 1996, Reno, NV.
49. **Pallis, J.M.** and Chattot, J.J., "A Parallel Implementation of a PNS Flow Solver with a Design Optimizer", 6th International Conference on CFD, September, 1995.
50. **Pallis, J.M.** and Chattot, J.J., "Parallel Implementation of a Chemical Nonequilibrium Flow Solver" Proceedings of CERCA Conference, John Wiley & Co., 1995.
51. **Pallis, J.M.** and Chattot, J.J., "Implementation of a Nonequilibrium Flow Solver on a Massively Parallel Processor", 14th International Conference on Numerical Methods in Fluid Dynamics, July, 1994.
52. Smith, M.H. and **Pallis, J.M**., "Medusa - An Overset Grid Flow Solver for Network-Based Parallel Computer Systems", AIAA-93-3312, July, 1993.

CONFERENCE PARTICIPATION

1.Blackmon, N., Johnson, K., "The Physics of a Skateboard Trick Execution: SmartSkate, **Pallis, J.M.** and Obeid, S – Advisors, UB RISE, University of Bridgeport, April 17, 2026. **Awarded the Alumni Award.**

2.Sripada, V., Urrea-Vargas, J. D., Suarez, P., Al-Torzi, M., Huong, H., **Pallis, J. M.,** Zogbh, N. "Transforming a One-Person, One-Atmosphere Submarine into an Autonomous Underwater Vehicle", UB RISE, University of Bridgeport, April 17, 2026.

3.Goodman, S., Bird, K., Al Sulaim, A., Zoghb, N., **Pallis, J. M.,** "STEM on Wheels Mobile Laboratory", UB RISE, University of Bridgeport, April 17, 2026.

4.Sripada, V., Urrea-Vargas, J. D., Suarez, P., Al-Torzi, M., Huong, H., **Pallis, J. M.,** Zogbh, N. "Transforming a One-Person, One-Atmosphere Submarine into an Autonomous Underwater Vehicle", 2026 American Society for Engineering Education (ASEE) Northeast Section Conference, March 28, 2026, Southern New Hampshire University (SNHU), Manchester, NH.

5.Goodman, S., Bird, K., Al Sulaim, A., Zoghb, N., **Pallis, J. M.,** "STEM on Wheels Mobile Laboratory", 2026 American Society for Engineering Education (ASEE) Northeast Section Conference, March 28, 2026, Southern New Hampshire University (SNHU), Manchester, NH.
6.Huong, H, Gudi, S,Mitra, R., Urrea-Vargas, J., Al-Torzi, M., Howard, D., Sfegoli, U., Goodman, S., Bird, K., Edward, A., Belfiore, N., Zoghb, N., **Pallis, J.M.,** "Nationwide Ballooning Project - Solar Max Radiation Project", 2026 American Society for Engineering Education (ASEE) Northeast Section Conference, March 28, 2026, Southern New Hampshire University (SNHU), Manchester, NH.
7.**Pallis, J.M.,** Sripada, V. and Huong, H., "Modification of a 1-person Submarine for Remote Control Operation", 2025 ASEE Annual Conference & Exposition, June 22-25, 2025, Montreal, Quebec, Canada.
8. Huong, H. and **Pallis, J.M.,** "High Altitude Monkey Project", 2025 ASEE Annual Conference & Exposition, June 22-25, 2025, Montreal, Quebec, Canada.
9. Huong, H., Urrea Vargas, J., Sripada, V., et. al. **Pallis, J.** Faculty Advisor, "University of Bridgeport High Altitude Ballooning During the 2023 Annular Solar Eclipse", Between-Eclipses Remote Conference, January 20, 2024.
10. Huong, H., Urrea Vargas, J., Sripada, V., et. al. **Pallis, J**. Faculty Advisor, "High Altitude Robotic Monkey 2.0", Between-Eclipses Remote Conference, January 20, 2024.
11. Badara, J. P., **J. M. Pallis** Faculty Advisor, HVAC Personal Garment, UB RISE, University of Bridgeport, March 24, 2023, (winner of $2,500 Commercial Poster Prize).
12. Barkana, B, **Pallis, J. M**., Afolabi, M., Huong, H, Garza, K, Flores Garcia, T., Panel: UB Federal Grants Foster Student Achievement and Experiences of a Lifetime, UB RISE, University of Bridgeport, March 24, 2023.
13. Alkhaldi, M, Alkhaldi, A, Alhudaif, M, Alkhaldi, A; **J.M. Pallis** Faculty Advisor, Pneumatic Solar Panel Cleaning Robot, UB RISE, University of Bridgeport, March 24, 2023.
14. Alnahedh, A., Alharbi, R. and Alhathal, M.; **J. M. Pallis** Faculty Advisor, Renewable Energy Based Solar Desalinator, Poster Session: ASEE 2022 Northeastern Section Conference, Wentworth Institute of Technology, April 22-23, 2022.
15. DeJarnette, N.K., Deeb, R.S. & **Pallis, J.** (2021). Impact of a STEM Mobile Laboratory Initiative on K-12 Students in High Needs Schools. Published in the *ASEE Regional Conference Proceedings*. (October, 2021)
16. Shah, S., Xiong, X., and **Pallis, J.** , "Balloon/Drone-based Aerial Platforms for Remote Particulate Matter Pollutant Monitoring", Poster in 2019 ASEE (The American Society for Engineering Education) Zone 1 Conference, April 11-13, 2019, University of Buffalo, Niagara Falls, NY.
17. Shah, S. N., Xu, Z. Peng, D., Zuo,T, Li, X., **Pallis**, J., and Xiong, X, "Balluino: High Altitude Balloon-based Arduino Real Time Air Quality Monitoring System", Poster in 2018 ASEE (The American Society for Engineering Education) Northeast Section Conference, April 27-28, 2018, University of Hartford, Connecticut, USA.
18. Peng, D., Xu, Z., **Pallis**, **J.,** and Xiong, X., "Visualization and Analysis of Air Pollution in US East Coast Cities", Poster in 2018 ASEE (The American Society for Engineering Education) Northeast Section Conference, April 27-28, 2018, University of Hartford, Connecticut, USA.
19. Fang, M., **Pallis**, J. and Xiong, X., "COMSOL Simulation of Air Pollutant Particle Transmission in a Building", Poster in 2018 ASEE (The American Society for Engineering Education) Northeast Section Conference, April 27-28, 2018, University of Hartford, Connecticut, USA.
20. Shah, P., **Pallis, J.** M., and Faezipour, M.*, "Automatic Gait Balance Detection System", IEEE Conference on Industrial Electronics, Technology & Automation (CT-IETA 2016) Poster Session, Oct. 2016, (Received 1st Place Best Masters Student Poster Award)

21. Vuligonda, L., Donthula, P., **Pallis, J.M.** and Faezipour, M, "Gait Balance Detection and Analysis Using Smart-phone Application", *ASEE Northeast Regional Conference, Apr. 2016, and Faculty Research Day*, Apr. 2016.
22. Zaferiou, A., Wagner, E.V., Peterson, T.P., **Macari Pallis, J**, & McNitt-Gray, J.L. (2015). Bringing mechanics to life, American Society of Biomechanics, Columbus, OH.
23. Lewis, N. and **Pallis, J.M.** "Interdisciplinary Course in New Product Commercialization", Proceedings of the American Society of Engineering Management 2014 International Annual Conference, S. Long, E-H. Ng and C. Downing editors, October 15-18, 2014, Virginia Beach, Virginia.
24. Bach. C., Kotkar, N., Patra, P., Bajwa, H. and **Pallis, J**., "Statistical Analysis System in Clinical Trials: Incorporation of Visual Statistical Analysis", 2014 ASEE Zone 1 Conference, University of Bridgeport, Bridgeport, CT, April 3-5, 2014.
25. Eschenbach, T., Lewis, N., Nicholls, G. and **Pallis, J.**, "The Impact of Clickers on Your Classroom and Career", 2013 ASEE Annual Conference, June 23-26, 2013, Atlanta, Georgia.
26. **Pallis, J.M.** and McNitt-Gray, J., "Using Sports to Attract Young Women into Engineering", 2013 ASEE Annual Conference, June 23-26, 2013, Atlanta, Georgia.
27. Bach, C., Bajwa, H., **Pallis, J**., and Patra, P., "Electrophoretic Mobility Shift Assay (EMSA) for 1st, 2nd, and 3rd Finger of the Zinc Finger Protein Domain SP1", ASEE Northeast Section Conference 2013, March 14-16, 2013, Norwich University, Northfield, VT.
28. Bach, C., Desai, S., Patra, P., Bajwa, H. and **Pallis**, J., "Usefulness of Cisplatin as an Anticancer Drug: An Evolutionary Approach to Enhance the Use of Cisplatin in Treatment of Cancer", ASEE Northeast Section Conference 2013, March 14-16, 2013, Norwich University, Northfield, VT.
29. Bach, C., Sebastian, W., Patra, P., Bajwa, H. and **Pallis, J**., "Value Based Drug Pricing", ASEE Northeast Section Conference 2013, March 14-16, 2013, Norwich University, Northfield, VT.
30. Bach, C., Joshi, K., Patra, P, Bajwa, H., and **Pallis, J.**, "Magnetically Targeted Drug Delivery System: An Evolutionary Approach to Reduce Doxorubicin Induced Cardiac Toxicity", ASEE Northeast Section Conference 2013, March 14-16, 2013, Norwich University, Northfield, VT.
31. Yang, X., Hu, J., and **Pallis, J.,** "Modeling of Transport Phenomena in Gas Tungsten Arc Welding", Proceedings of IMECE2012, 2012 ASME International Mechanical Engineering Congress and Exposition, Nov., 9-15, 2012, Houston, TX.
32. Shah, S., and **Pallis, J**., "Energy Management of Four Story Hotel Building", 2011 ASEE Northeastern Conference, University of Hartford, April 29-30, 2011.
33. **Pallis, J.,** Lewis, N., Mishra, R and Gupta, N., "Strategy for Student Inclusion within a University-Based Business Incubator", 2012 ASEE Northeastern Conference, University of Massachusetts, April 27-28, 2012.
34. Gautam, Anuj, Advisor: **Jani Pallis**, Sun Tracking Solar Home Power System, 2009 ASEE Northeastern Conference, University of Bridgeport, April 2009.
35. Dahal, Shiva, Advisor: **Jani Pallis**, Installing an Automatic Vehicle Location System in Greater Bridgeport Transit, 2009 ASEE Northeastern Conference, University of Bridgeport, April 2009.

LICENSES:
Amateur Radio License, FCC Registration Number: 0029046927, Technical Operator Privileges, Call Sign/Number: KC1MHU.

OTHER MEDIA:
1. "University of Bridgeport students head to Texas for nationwide NASA science project for upcoming eclipse", CT Insider, Vincent Gabrielle, March 23, 2024,

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UB NECHE Self-Study December, 2024 – Standard 6 Teaching, Learning and Scholarship, "Appraisal: Faculty and Academic Staff: Many UB faculty are renown experts in their fields with significant contributions to scholarship including published books, peer-review journals, and national/international conferences. For example, Dr. Khaled Elleithy was listed as one of the world's top 2% career-long cited scientists across all fields. This distinction is based on more than 400 research papers published in national and international journals or presented at conferences, with more than 5,500 Google Scholar citations. He is known as an expert in microstrip antenna design, steganography, quantum cryptography, and applications of artificial intelligence. Another prime example is Dr. Randy Laist, from the English department within the College of Science and Society. He is the author of several books focused on cinema, has authored several book chapters, and most recently published *Rethinking Writing Instruction in the Age of AI: A Universal Design for Learning Approach* (Cast Publishing, 2024). *Additionally, Dr. Jani Pallis is a trailblazer for women in Engineering, with many accolades including founding and serving as CEO of an aerospace engineering company that has secured millions of dollars in grants from NASA to develop educational materials for American children. Dr. Pallis also helped provide children with disabilities access to STEM educational materials by developing materials and bringing the Internet to historic buildings when this technology was still in its infancy. She also works with NASA and the US Navy on research projects, bringing related educational opportunities and relationships to her students."*

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INDUSTRY EXPERIENCE

January 1995 - Present Cislunar Aerospace, Inc: CEO. Founded and incorporated Cislunar Aerospace while a doctoral graduate student. Responsible or lead researcher for numerous leading edge research and development projects for NASA, the Department of Energy, the US Air Force, Daimler Benz, United Airlines and Quantum Parachutes. As a subcontractor to Quantum Parachutes, Inc., Cislunar Aerospace, Inc. simulated the performance of three separate ram airfoil (parachute) designs for the re-entry (escape) vehicle which had been proposed for the International Space Station. Principal investigator for three innovative educational projects for NASA, one in basic aerodynamics. Has applied the same science and engineering skills to a variety of marine sports as well as tennis, volleyball, winter and wheelchair sports. As the lead aerodynamicist from Cislunar Aerospace to the Hawaiian America's Cup XXX (1999-2000) challenger, Pallis and her staff conducted computer simulations on new sail and mast designs. Worked with Gaastra Sails' and Maui Sails world champion sailors and designers ("The Team") and has coordinated sport science efforts for them in the past. Conducted wave reduction experiments for the International Water Skiing Federation and aerodynamic simulations for the USA Luge team.

She has been research advisor to the International Tennis Federation's (world governing body for tennis) Wheelchair Tennis Medical Commission. She has been a member of the Executive Committee of The International Sports Engineering Association. She has worked with both the United States Olympic Committee and USA Luge team on sports-related aerodynamics.

1991 - 1996 University of California, Davis: Research Scientist (graduate student). Research scientist for NASA Ames Research Center and Lockheed, specializing in parallel hypersonic CFD codes. Responsibilities included analysis, design and development of computer codes. Significant attention given to portability, performance and parallelization. Research focused on a supersonic civil transport.

1978-1989 United Airlines: Maintenance Operations Center, San Francisco, CA. Senior Staff Member in Information Systems Technical Support Group. Project management for prototype research and development. Provided consulting and front-end expertise for technical feasibility studies. Developed project plans, set project goals and milestones, and monitored progress. Responsibility for development of tactical plans and computer performance for UAL's San Francisco Computer Center. Received Award of Merit for capacity planning studies for IBM and UNISYS systems at United's Maintenance Operations Center. Developed model and parallel implementation for Production Scheduling System, an automated system to schedule and execute large volumes of computer jobs and track progress on various mainframes. Model development, performance evaluation, motion/time studies, and analysis of job sequence control.

1977- 1978 Information Industries, Inc.: Systems Engineer. Programmer/Analyst assigned to IBM to Univac conversion project for United Airlines.

1974 - 1977 State of Georgia Department of Human Resources Youth Services Division: Research Unit Research Assistant. Statistical analysis in alternative placement programs for youth offenders. Extracted and recorded offender criminal records and commitment placement data from juvenile court, probation and Youth Services.