# Faculty Senate

**M2025.2.25 Motion to Approve Finalist for Faculty Trustee**

**Originator: Executive Committee**

Whereas,

According to the Faculty Handbook, after the deadline for Trustee applications, the Executive Committee will make available the materials from all applicants to members of the Faculty Senate and the Executive Committee will screen the applicants and develop a list of 2–5 finalists. The Executive Committee will present their proposed list of finalists to the Faculty Senate at a regular meeting for approval.

Whereas,

The Executive Committee received a nomination and the required documents, which are attached, for one candidate by the deadline, and the Executive Committee has moved to advance the candidate to the Full Senate as a finalist.

Be it resolved that,

The Faculty Senate approves the following finalist for the position of Faculty Trustee, as recommended by the Executive Committee:

- Dr. Jeffrey Marchetta

Recipients:
Faculty Senate
Bill Hardgrave, President
Stephanie Beasley, Office of the President

Motion Passed 2/25/2025
Vote: 38 For, 3 Against, 0 Abstain

THE UNIVERSITY OF MEMPHIS

Department of Mechanical Engineering

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January 24, 2025

Faculty Senate
University of Memphis

Dear Colleagues,

Please accept this letter as my application for the position of the Faculty Trustee for a second two-year term. I believe I have the requisite knowledge, experience, and commitment to continue carrying out the responsibilities required of the Faculty Trustee. This is my 22nd year as a member of the faculty at the University of Memphis, and I believe I have gained the institutional knowledge and faculty perspective needed to make informed judgements that are in the best interest of the university stakeholders. As a tenured professor in mechanical engineering, I have established a balanced record of teaching, research, and service, which is detailed in my curriculum vita. My curriculum vita also provides evidence of high-quality instruction, student mentoring, sustained externally funded research, peer reviewed research publications, service at all levels of the university, service to the community, and service to my profession. In addition, my two years of service as the Faculty Trustee and eight years of service in the University of Memphis Faculty Senate, culminating in a term as the Faculty Senate President, have provided me with the broad institutional knowledge and perspective needed to continue to serve effectively as the Faculty Trustee.

All Trustees, including the Faculty Trustee, have a statutory, fiduciary responsibility to the university. In accordance with the Constitution of the University of Memphis, the Faculty Senate represents the voice of the faculty. The Faculty Trustee, however, must carefully balance the fiduciary responsibility with the positions taken by the Faculty Senate and those taken by the university administration. During my first two years as a Trustee, my voting record, my public statements and public questions to the university administration reflect my commitment to ensuring that the university president and university administrators who frequently report to BOT are transparent and accountable to university stakeholders. As the only university employee on the BOT, the Faculty Trustee is uniquely positioned to provide relevant ground truth through public votes and statements to better inform university stakeholders. A record of my public statements will show that I appropriately recognize university successes, but I also make a point to highlight the specific and sometimes significant challenges and barriers that faculty and staff have overcome to achieve these successes. On financial matters, I carefully review every university and university foundation budget and audit report, and I have highlighted my concerns as appropriate publicly during the BOT meetings. I will continue to support small but incremental tuition increases annually to help balance increasing university costs, declining enrollment, and diminishing state support with student affordability. I was the sole vote against the revisions to the BOT committee structure due to my concerns over the empowerment of the BOT Executive Committee (which is comprised of 3 of the 9 voting trustees) to make binding decisions on behalf of the BOT and the university. This year, I requested that the Executive Committee reform the process used to evaluate the university president so that the evaluation is more data

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driven and closely tied to the key performance indicators outlined in the ASCEND strategic plan. In November, I circulated the draft of a fiscally responsible Retreat Salary Policy for the university president to the other Trustees. If approved this year, this policy would prescribe the standards for setting the retreat salary for a university president who simultaneously holds a faculty appointment when their administrative appointment as the university president has concluded.

Through my experiences serving as the Faculty Senate President, as a member of the president search committee, and as the Faculty Trustee, I have established a respected working relationship with other Trustees to ensure that a broad faculty perspective is well represented on the board which is primarily comprised of Trustees who have not had experience working in an academic setting. I will continue to provide the faculty perspective to the Trustees on the unique nature of higher education and academia and the importance of tenure, promotion, equity, inclusion, diversity, academic freedom, and shared governance which is particularly important when new Trustees are appointed to the board. As I have done for the previous two years, I will continue to report at least once each term to the Faculty and Staff Senates on the activities of the BOT.

Over the next two years, the Board of Trustees will continue to play a critical role in the direction of the University of Memphis as higher education navigates challenges such as the enrollment cliff, NIL in athletics, use of artificial intelligence, attacks on tenure and academic freedom, college affordability and campus safety. I believe that my experience, knowledge, working relationships with the current Trustees and the university administration, commitment to the university, and commitment to faculty values have uniquely prepared me to continue serving effectively as the Faculty Trustee for an additional two-year term. I look forward to the opportunity to answer any questions or concerns you may have regarding my application. Go Tigers!

Best Regards,

Jeff Marchetta, Ph.D.
Professor, Department of Mechanical Engineering

# JEFFREY G. MARCHETTA, Ph.D.

**Memphis, TN | 901.486.3868 | jmarchtt@memphis.edu**

**https://www.linkedin.com/in/jeff-marchetta-55167951/**

## Mechanical Engineering Professor | Researcher | Educator

Multifaceted and solutions-focused leader accomplished in mechanical engineering, research, education, and service in ever-evolving higher education environments requiring adaptability and decisiveness to succeed. Award-winning professor of mechanical engineering, student advisor and mentor to multi-level engineering students; Community advocate, university faculty leader, published author of journal articles, leader in aerospace and energy science and technology.

## Education

**UNIVERSITY OF MEMPHIS, MEMPHIS, TN**

**Ph.D. in Mechanical Engineering, 2002**
**Master of Science in Mechanical Engineering, 1999**
**Bachelor of Science in Mechanical Engineering, 1997**

## Career Experience

**UNIVERSITY OF MEMPHIS, DEPT. OF MECHANICAL ENGINEERING – Memphis, TN 2002 – Present**
**Professor, Tenure, Mechanical Engineering, 2018 – Present**
**Associate Professor, Tenure, Mechanical Engineering, 2009 – 2018**
**Assistant Professor, Tenure Track, Mechanical Engineering, 2003 - 2009**
**Assistant Professor, Non-Tenure Track, Mechanical Engineering, 2002**

Held progressive leadership roles during tenure with leadership of teaching, student advising, mentoring, support activities, committee service, and community outreach.

- **FACULTY | COMMITTEE LEADERSHIP**
  - Faculty Trustee – Board of Trustees, 2023 – 2025
  - Faculty Senate Parliamentarian, 2022 – 2023
  - Mechanical Engineering Department Undergraduate Coordinator, 2009 – 2016, 2022 -Present
  - Mechanical Engineering Department ABET Coordinator, 2022 - Present
  - Faculty Senate Faculty Policies Standing Committee Chair, 2021 – Present
  - Mechanical Engineering Department Intern | Co-Op Coordinator, 2020 - Present
  - University Career Readiness Task Force, 2019 – Present
  - University Faculty Senate Executive Committee (Elected), 2017 – Present
  - Mechanical Engineering Faculty Senator, 2015 – Present
  - Mechanical Engineering Department Undergraduate Process Team, 2009 – Present
  - Faculty Advisor – University of Memphis AIAA Student Branch, 2004 - Present
  - Full Member Graduate Faculty, 2002 – Present
  - Faculty Athletics Committee, 2021 – 2022
  - Presidential Search Committee, 2021 – 2022
  - Herff College Tenure and Promotion Committee, 2020 – 2022
  - Mechanical Engineering Department Faculty Search Committee Chair, 2002, 2005, 2015 - 2022
  - Faculty Senate President, 2020 – 2021
  - President's Council, 2020 – 2021
  - Dean's Council, 2020 – 2021
  - University Budget Reduction Task Force, 2020 – 2021
  - Faculty Senate President Elect, 2019 – 2020
  - University COVID-19 Steering Committee, 2019 – 2021
  - Herff College Research Workstream, 2019 - 2021

- Tenure and Promotion Appeals Committee, 2017 – 2018
- University Undergraduate Council, 2009 – 2011; 2014 – 2016, 2017
- University Faculty Senate Administrative Policies Subcommittee Chair, 2015 – 2016
- University Faculty Senate Compensation Committee, 2015 – 2016
- Herff College Faculty Performance Evaluation Committee, 2015 – 2016
- Pi Tau Sigma Faculty Advisor, 2005 - 2016
- Mechanical Engineering Department Chair Search Committee, 2014
- Herff College Undergraduate Committee, 2005 - 2016
- Engineering Dean Search Committee – 2012
- University Eminent Faculty Award Review Committee, 2011 - 2012
- Mechanical Engineering Student Attraction and Retention Process Team, 2007 - 2009
- University High Performance Computing Research Advisory Committee, 2004-2008, 2010-2012
- Mechanical Engineering Department Graduate Process Team, 2003 - 2009
- University Graduate Grade Appeals Subcommittee, 2005 – 2008
- Mechanical Engineering Department Scholarship and Awards Process Team Chair, 2005--2006
- University Council for Graduate Studies and Research Advisory Committee, 2004 – 2006
- Mechanical Engineering Department Laboratory Improvement Process Team, 2004 – 2006
- Mechanical Engineering Department Constituency Feedback Process Team Chair, 2004 - 2005
- Mechanical Engineering Department Recruitment and Retention Process Team, 2003 – 2006
- Mechanical Engineering Department Overall Curriculum Content Process Team, 2002 – 2004

- **TEACHER | INSTRUCTOR – Undergraduate Students**
  - Introduction to Mechanical Engineering
  - Dynamics
  - Thermodynamics I
  - Thermodynamics II
  - Numerical and Statistical Methods
  - Project Management and Engineering Economics
  - Mechanical Engineering Practicum
  - Preparation for Professional Practice
  - Fluid Mechanics
  - Civil Engineering Hydraulics
  - Fluid Mechanics Laboratory
  - Fluid Thermal Systems Design

- **TEACHER | INSTRUCTOR – Undergraduate | Graduate Students**
  - Applied Computational Fluid Mechanics
  - Aerospace Propulsions
  - Power Generation

- **TEACHER | INSTRUCTOR – Graduate Students**
  - Viscous Flow
  - Engineering Practicum

- **ENGINEERING SUPPORT ACTIVITIES**
  - Herff Engineering Day Airfoil Design Wind Tunnel Competition, Herff College of Engineering, AIAA, 2014 – Present
  - Herff Engineering College Engineering Day CFD Exhibit, Herff College of Engineering, Department of Mechanical Engineering, 2002 - 2010

**LOS ALAMOS NATIONAL LABORATORY** **2002 - 2005**
**Research Associate – CCS-2**

- Collaborated with LANL in the development of three-dimensional computational fluid, heat transfer, and phase change simulation for modeling welding and casting applications, 2003 - 2005
- Conducted an independent simulation validation and verification investigation, Summer 2002

**ORBITAL TECHNOLOGIES CORPORATION (ORBITEC)** **2003 – 2005**
**Research Associate**

- Designed a magnetic fluid management (MFM) flight experiment.

**UNIVERSITY OF TENNESSEE HEALTH SCIENCES CENTER** **2010**

# JEFFREY G. MARCHETTA, Ph.D.

**Research Associate**

- Collaborated with clinicians to design experiments to enable physiological studies of traumatic brain and ocular injuries resulting from blast waves. 2010

## Consulting Services

- Altius Space Machines, Mojave, CA
- Winchester Farmers Market Refrigeration Specialist, Memphis, TN
- Orbital Technologies Corporation, Madison, WI
- National Civil Rights Museum, Memphis, TN
- Masten Space, Mojave, CA

## Industry Support

1. Co-Project Investigator – Mid South Energy Efficiency and Clean Energy Audit Program – United States Department of Agriculture - $150,293 - Sept. 2023 - August 2025
2. Project Investigator - TN 3-Star Industrial Assessment Center - Department of Energy -$250,000 - Sept 2021. - Aug. 2026 (Funded)
3. Co-Project Investigator - Aerosolization of Emitted Particles in Multiple Breathing, Speech, and Singing Activities - UT Health Sciences Center - $50,000 - June. 2020-Nov.2021 (Funded)
4. Project Investigator - University of Memphis Space Grant - NASA - $186,000 - June 2020- June 2024 (Funded)
5. Co-Project Investigator - MCR Safety Vest Thermal Analysis - MCR - $6,666 - July 2017 - Sept.2017 (Funded)
6. Project Investigator - TN 3-Star Industrial Assessment Center - Department of Energy -$250,000 - Dec. 2016 - Nov. 2020 (Funded)
7. Project Investigator - Simulation of Magnetically Induced Fluid Motion in Reduced Gravity -Tennessee Space Grant Consortium - $48,000 - March 2015 - Aug. 2018(Funded)
8. Co-Project Investigator - Aerogel Based Nanomaterials for Energy Conservation - TN-Score &National Science Foundation - $50,000 - Dec. 2012 - November 2013 (Funded)
9. Project Investigator - Tennessee 3-Star Industrial Assessment Center - Department of Energy -$215,000 - Feb. 2012 - Sept. 2016 (Funded)
10. Project Investigator - A Blast Model for Brain Injuries in Mice - University of Tennessee Health Sciences Center - $6,151 - Jan. 2012 - August 2013 (Funded)
11. Project Investigator - Development, Characterization and Validation - NASA - $260,754 - Sept.2010 - July 2015 (Funded)
12. Project Investigator - Experimental Study of Stress Tolerance - University of Tennessee Health Sciences Center - $6,000 - May 2010 - Dec. 2010 (Funded)
13. Co-Project Investigator Center for Advanced Sensors - Army Research Laboratory - $800,000 -June 2007 - June 2008 (Funded)
14. Co-Project Investigator - Further Study of Air Conditioning and Refrigeration Heat Exchangers -Advanced Heat Transfer, LLC - $105,166 - Jan. 2007-Dec. 2007 (Funded)
15. Project Investigator -Tennessee 3-Star Industrial Assessment Center - Department of Energy -$100,500 - Nov. 2006 - Nov. 2011 (Funded)
16. Project Investigator - Turbulence Mitigation in Video Imaging and Thermal Signatures – Army RTTC (ERC, Inc) - $76,200 - May 2006-May 2007 (Funded)
17. Co-Project Investigator - Benchmarking and Analysis of Air-Conditioning and Refrigeration Heater Exchangers - Advanced Heat Transfer, LLC - $85,910 - Jan. 2006-Dec.2006 (Funded)
18. Co-Project Investigator - Simulation and Optimization of Gas Fireplace Systems – Advanced Heat Transfer, LLC - $30,000 - July 2005-July 2006 (Funded)
19. Project Investigator - Simulation of Magnetically Induced Fluid Motion in Reduced Gravity - Tennessee Space Grant Consortium - $155,866 - Mar. 2005 - Jun 2015(Funded)
20. Senior Personnel - Contract NCMR Stage 2 Annex: Multimedia Repair and Upgrade - National Civil Rights Museum - $44,995 - June 2004-Jan. 2005(Funded)
21. Project Investigator - Simulation of Magnetically Induced Fluid Motion in Reduced Gravity - Tennessee Space Grant Consortium - $1,500 - Feb. 2004-Jan. 2005 (Funded)
22. Co-Project Investigator - Interactions Between Freshman Learning Styles and Retention - National Science Foundation - $2,000 - Jan. 2004-Dec. 2004 (Funded)
23. Project Investigator - Simulation of Magnetically Induced Fluid Motion in Reduced Gravity - Tennessee Space Grant Consortium - $1,000 - Feb. 2003-Jan. 2004 (Funded)
24. Co-Project Investigator - Biologistics Cluster Grant - Fed-Ex Institute of Technology - $12,000 -2017 (Funded)
25. Project Investigator - Faculty Research Grant - University of Memphis - $6,500 - 2017 (Funded)
26. Co-Project Investigator - Biologistics Cluster Grant - Fed-Ex Institute of Technology - $27,000 -2016 (Funded)
27. Project Investigator - Using Plants to Improve Indoor Air Quality and Save Energy – Physical Plant and Planning - $15,500 - May 2009 - Dec 2010 (Funded)
28. Project Investigator - Observing and Summarizing Particle Motion in a Hydrodynamic Separator - Faculty Research Grant - $6,500 - 2005-2006 (Funded)

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## Community Outreach

1. Memphis GRAD Academy - High School Students– Achievement School District of Tennessee - Summer 2015
2. College of Engineering E-Day Wind Tunnel Competition - Middle and High School Students – 2012 - 2020
3. Judge for Science Fair - Elendale Elementary - Shelby County Schools - 2006-2013
4. (GEE) Girls Experiencing Engineering - Guest Lecturer - Elementary and Middle school students - University of Memphis, 2005
5. Science Olympiad - West TN Region Middle School Students - University of Memphis 2004 – 2006
6. Judge for Science Fair - St. Anne School of Memphis - St. Anne School - 2002-2004
7. Judge for Science Fair - 6th Grade students - Appling Middle School – 2004
8. Shelby County Middle School Teacher In-service (see Appendix E) – Middle School Teachers - Shelby County Schools – 2003
9. University Undergraduate Research Forum Judge, 2003 – Present

## Community Leadership

1. National Student Branch Committee Chair - American Institute of Aeronautics and Astronautics,2023 - 2025
2. National Student Branch Committee, Deputy Chair - American Institute of Aeronautics and Astronautics, 2022
3. Panel Reviewer - NASA - Solicitation on the Use of the NASA Physical Sciences Informatics Appendix A, 2020
4. Session Chair - American Society of Gravitational and Space Research, Fluid Physics 5 - Nov. 2013
5. Member - American Society of Gravitational and Space Research, 2013 - Present
6. Technical Session Organizing Chair -American Institute of Aeronautics and Astronautics - 26th Symposium on Gravity Dependent Space Phenomenon, 2012
7. Chair - American Institute of Aeronautics and Astronautics - National Technical Committee on Microgravity and Space Process, 2012-2014
8. University Representative - Tennessee Space Grant Consortium, 2007-Present
9. Lifetime Member - American Institute of Aeronautics and Astronautics, 1994 -Present
10. Member - American Institute of Aeronautics and Astronautics - National Technical Committee on Microgravity and Space Processes - 2001 -Present, Secretary, 2004 - 2009
11. Session Chair, AIAA Aerospace Sciences Meeting and Exhibit, Gravity Dependent Phenomenon I - American Institute of Aeronautics and Astronautics, 2007, 2008
12. Session Co-Chair, 42nd AIAA Aerospace Sciences Meeting and Exhibit Microgravity Materials Science and Space Hardware - American Institute of Aeronautics and Astronautics, 2004
13. Session Co-Chair, AIAA Aerospace Sciences Meeting, Microgravity Fluid Physics I - American Institute of Aeronautics and Astronautics, 2005,2006,2009
14. Member - American Society of Mechanical Engineers, 1995-Present
15. Member - American Society of Engineering Educators, 2004- Present
16. Associate Member - American Society of Heating, Refrigerating and Air-Conditioning Engineers, 2023-Present

## Honors & Recognition

- 2024 – Faculty Service Award – University of Memphis Herff College of Engineering
- 2024 – Associate Fellow – American Institute of Aeronautics and Astronautics
- 2020 – PI Millionaire – University of Memphis
- 2018 – Abe M. Zarem Educator Award – American Institute of Aeronautics and Astronautics
- 2018 – IAC Center of Excellence Award – Department of Energy
- 2000 – Abe Zarem Award for Distinguished Achievement – American Institute of Aeronautics and Astronautics
- 1996 – Elected Member – Pi Tau Sigma Honorary Engineering Fraternity
- 1995 – Elected Member – Tau Beta Pi Society for Distinguished Scholarship in Engineering

## Publications

1. van Mersbergen, M., **Marchetta, J**., Foti, D., **Pillow, E., **Dasgupta, A.,**Cain, C., **Morvant, S., (2023) "Comparison of Aerosol Emissions during Specific Speech Tasks," Journal Voice, https://doi.org/10.1016/j.jvoice.2023.05.004.
2. Gasmen, E., **Marchetta, J**., & Sabri, F. (2023). Simulation and Optimization of Aerogel Packaging Solutions for Cold-Chain Biologistics. Journal of Packaging Technology and Research, 7(1), 43-53.
3. **Anderson, C., Janna, W., **Marchetta, J.,** (2021) "Sublimation of Suspended Paradichlorobenzene Spheres in Natural Convection," Heat and Mass Transfer Research Journal, Vol 5, issue 1.
4. **Koziel, P., Janna, W., **Marchetta, J.,** (2021) "A Literature Survey on Methods for Finding Zeroes of the Kummer Function," Heat and Mass Transfer Research Journal, Vol 5, Issue 1.
5. **Marchetta, J.** G., Sabri, F., **Williams, D. S., & **Pumroy, D. W. (2018). Small-scale room-temperature-vulcanizing-655/aerogel cryogenic liquid storage tank for space applications. Journal of Spacecraft and Rockets, 55(4), 1007-1013.
6. **Bautista, K., Janna, W.S., **Marchetta J.G.**, (2017). Sublimating Paradichlorobenzene Cylinders Oriented Horizontally in a Natural Convection Environment. Heat and Mass Transfer, 1(1).

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7. **Guley, N. H., Rogers, J. T., Del Mar, N. A., Deng, Y., Islam, R. M., D'Surney, L., **Marchetta, J.G.**, & Reiner, A. (2016). A novel closed-head model of mild traumatic brain injury using focal primary overpressure blast to the cranium in mice. Journal of neurotrauma, 33(4), 403-422.
8. Sabri, F., **Marchetta, J. G.,** **Faysal, K. M., **Brock, A., & Roan, E. (2014).Effect of aerogel particle concentration on mechanical behavior of impregnated RTV 655 compound material for aerospace applications. Advances in Materials Science and Engineering, 2014.
9. Sabri, F., **Marchetta, J**., & **Smith, K. M. (2013). Thermal conductivity studies of a polyurea cross-linked silica aerogel-RTV 655 compound for cryogenic propellant tank applications in space. Acta Astronautica, 91, 173-179.
10. Sabri, F., **Marchetta, J. G.**, **Sinden-Redding, M., **Habenicht, J. J., **Chung,T. P., **Melton, C. N., **Lirette, R. L. (2012). Effect of surface plasma treatments on the adhesion of Mars JSC 1 simulant dust to RTV 655, RTV 615, and Sylgard 184.
11. Hines-Beard, J., **Marchetta, J.,** **Gordon, S., **Chaum, E., **Geisert, E. E., & Rex, T. S. (2012). A mouse model of ocular blast injury that induces closed globe anterior and posterior pole damage. Experimental eye research, 99,63-70.
12. **Marchetta, J. G.,** & **Winter, A. P. (2010). Simulation of magnetic positive positioning for space-based fluid management systems. Mathematical and Computer Modelling, 51(9-10), 1202-1212.
13. **Marchetta, J. G.,** & **Roos, K. M. (2009). Simulating magnetic positive positioning of cryogenic propellants in a transient acceleration field. Computers & fluids, 38(4), 843-850.
14. **Marchetta, J. G.,** & **Benedetti, R. H. (2010). Simulation of jet-induced geysers in reduced gravity. Microgravity Science and Technology, 22, 7-16.
15. **Marchetta, J. G.,** **Simmons, B. D., & Hochstein, J. I. (2008). Magnetic retention of LO2 in an accelerating environment. Acta Astronautica, 62(8-9),478-490.
16. Hochstein, J. I., **Marchetta, J. G**., & **Thornton, R. J. (2008). Microgravity geyser and flow field prediction. Journal of Propulsion and Power, 24(1), 104-110.
17. **Marchetta, J. G.** (2006). Simulation of LOX reorientation using magnetic positive positioning. Microgravity-Science and Technology, 18, 31-39.
18. **Marchetta, J. G.,** & Hochstein, J. I. (2004). Simulation and prediction of magnetic propellant reorientation in reduced gravity. Journal of Propulsion and Power, 20(5), 927-935.
19. **Marchetta J.G,** (2000). A Computational Model of Magnetic Positive Positioning in Reduced Gravity. AIAA Student Journal,37(4),21-43.
20. Liu, J., Hamer, J., Jenner, R., Hopkins, S., Perry, Z., Wood, S., **Marchetta, J.** (2024), Team Flying Tigers Design, Build, Fly Competition. Paper presented at the 2024 AIAA Science and Technology Forum and Exposition, AIAA SciTech Forum, AIAA 2024-0143, doi.org/10.2514/6.2024-0143.
21. **Gasmen, E., & **Marchetta, J. G.** (2022). Simulation of bulk evaporation and condensation using the energy of fluid method. Paper presented at the AIAA Science and Technology Forum and Exposition, AIAA SciTech Forum 2022,doi:10.2514/6.2022-1568.
22. ** Bowen, D., & **Marchetta, J.** (2022). Thermomechanical simulation of an Aerogel/RTV based cryogenic propellant tank. Paper presented at the AIAA Science and Technology Forum and Exposition, AIAA SciTech Forum 2022,doi:10.2514/6.2022-2493
23. **Tetreault, S.M., **Marchetta, J.G.,** Janna, W.S, (2022) "Sublimation of Naphthalene Sphere in a Natural Convection Environment," Volume May 2022, Pages 1101-1117, 7th Thermal and Fluids Conference, TEFC, Las Vegas, NV.
24. Stinnett, S, Van Mersbergen, **Marchetta, J.G.,** (2021) "Say it, Don't Spray It – The Impact of Personality Type and Vocal Endurance on Particulate Emissions," The Fall Voice Conference, held virtually, October 2021. [abstract and presentation]
25. Van Mersbergen, M., **Marchetta, J.G.,** Stinnett, S., "Glottal Parameters Contributing to Properties of Particulate Emission During Speech, Singing, and Breathing," The 14th International Conference on Advances in Quantitative Laryngology, Voice and Speech Research, June 2021. [abstract and presentation]
26. **Eason, N., **Marchetta, J.,** Janna, W., "Experimental Study of Confined Pool Boiling Heat Transfer," 5-6th Thermal and Fluids Engineering Conference, held virtually, May 2021, DOI: 10.1615/TFEC2021.boi.036258.
27. **Marchetta, J.G**., Janna, William S., "Senior Design Project: Design, Construction and Testing of a Hydraulic Ram Pump," ASEE Southeastern Section Annual Meeting, held virtually, March 2021.
28. **Pillow, A., Cain, C., Gopalakrishnan, R., Hochstein, J., **Marchetta, J,** Foti,D., "Respiratory Droplets Transport via Vortex Dynamics during Expiration,"73rd Annual Meeting of the APS Division of Fluid Dynamics, Nov. 2020. [abstract and presentation]
29. **Marchetta, J.G.,** Janna, William S., "Senior Design Project: Design of a Heated Pet Washer," ASEE Southeastern Section Annual Meeting, Auburn AL, March 2020.
30. Foti, D., **Pillow, A., **Cain, C., Gopalakrishnan, R., Hochstein, J. **Marchetta, J.,** "Simulations of the Interactions of Coherent Vortical Structures and Respiratory Droplets during Expiration," 73rd Annual Meeting of the APS Division of Fluid Dynamics, Nov. 2020. (abstract & presentation)
31. Janna, William S., **William P. Anderson and Jeffrey G. **Marchetta, J.** "Sublimating Paradichlorobenzene Spheres in a Natural Convection Environment," IMECE2018-86427, presented at IMECE, Pittsburgh PA November 2018.
32. **Marchetta, Jeffrey G**., **Mitchell, K.M., "Thermal Characterization of Polyimide Aerogel/RTV-655 Compound for Space-based Propellant Tanks," Presented at the 34th Annual Meeting for the American Society for Gravitational and Space Research, Bethesda, MA, November 2018.

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33. **Carley, L., Janna, W.S., **Marchetta, J.G.**, "Sublimation Rate of Vertically Oriented Naphthalene Cylinders in Natural Convection", IMECE2017-70164, presented at the 2017 ASME International Mechanical Engineering Congress and Exposition, Tampa, Florida, Nov. 2017.
34. Janna, W.S., **Marchetta, J.G.**, Palazolo, P., "Fluid Mechanics Laboratory Experiment: Calibration of a Semi-Circular Weir," presented at the ASEE Southeast Section Conference, San Juan, Puerto Rico, March 2017.
35. †**Pumroy D., **Williams D., and **Parker W.A., **Marchetta, J.G.** "A Feasibility Experiment of a Small Scale RTV-655 Cryogenic Liquid Container for Space Applications", 54th AIAA Aerospace Sciences Meeting, AIAA SciTech, (AIAA 2016-0407). http://dx.doi.org/10.2514/6.2016-0407
36. Sabri, F., **Marchetta, J.G**., **Faysal, K.M.R., Hewitt, R., Roan, E "Mechanical Testing of Cross-linked Silica Aerogel Impregnated Silicone for Cryogenic Tank Applications," AIAA Paper 2012-1117, presented at the AIAA 50th Aerospace Sciences Meeting, Nashville, TN, Jan. 2012.
37. Sabri, F., **Marchetta, J.G**., **Smith, K.M., "Thermal Characterization of Cross-linked Silica Aerogel-RTV655 for Cryogenic Propellant Tanks," AIAA Paper2012-1118, presented at the AIAA 50th Aerospace Sciences Meeting, Nashville, TN, Jan. 2012.
38. Goff, J.A., Cutter, B.F., Zegler, F., Bienhoff, D., Chandler, F., **Marchetta, J.G**., "Realistic Near-Term Propellant Depots: Implementation of a Critical Spacefaring Capability," AIAA 2009-6756, presented at the AIAA Space 2009 Conference and Exposition, Pasadena, CA, September 2009.
39. **Winter, A.P., **Marchetta, J.G**., "Simulating Self-Pressurization in Propellant Tanks," AIAA Paper 2010-1297, presented at the AIAA 48th Aerospace Sciences Meeting, Orlando, FL, Jan. 2010.
40. Griffin, S.T., **Marchetta, J.G.**, "Small Scale Pulsed System For Autonomous Vehicles," Directed Energy Modeling and Simulation Conference 2009,Monterey, CA, April 2009.
41. **Winter, A.P., **Marchetta, J.G.**, Hochstein, J.I., "An Energy of Fluid (EOF) Approach To Modeling Self-Pressurization in Propellant Tanks", AIAA Paper 09-1152, presented at the AIAA 47th Aerospace Sciences Meeting, Orlando, FL, Jan. 2009.
42. **Marchetta, J.G.**, Perry, E.H., **Schultz, M.D., **Grizzard, M.R., **Butler, B.A. "Using Extended Surfaces to Reduce the Thermal Signature of Military Assets," Paper 6941-5, presented at the SPIE Defense and Security 2008 Meeting, Orlando, FL, March 2008.
43. **Marchetta, J.G.**, **Roos, K.M., "Simulating Magnetic Positive Positioning in a Transient Acceleration Field," AIAA Paper 2008-820, presented at the 46thAerospace Sciences Meeting, Reno, NV, Jan. 2008.
44. **Marchetta, J.G.**, Perry, E.H., "Online Learning Objects: Do They Enhance Mastery of Mechanical Engineering Competencies," presented at the 2007 ASEE Conference and Exhibition, Honolulu, HI, 2007.
45. **Marchetta, J.G.**, **Roos, K.M., "Three-Dimensional Computational Simulation of Magnetic Positive Positioning," AIAA Paper 2007-0956, presented at the45th Aerospace Sciences Meeting, Reno, Nevada, Jan. 2007.
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