### JOHN M. SANKOVIC, PhD, MBA, PE, PMP

### **EDUCATION**

| INSTITUTION  | DEGREE                                       | FIELD OF STUDY                |
|--|--|-------------------------------|
| The University of Akron  | B.S.M.E. (summa cum laude)                   | Mechanical Engineering        |
| The University of Akron<br>Thesis: "Arcjet Near Field Plume Studies<br>Using Electrostatic Probes"   | M.S.M.E.                                     | Mechanical Engineering        |
| Cleveland State University   | M.B.A.                                       | Business Administration       |
| Case Western Reserve University  | M.S.E.                                       | <b>Biomedical Engineering</b> |
| Case Western Reserve University<br>Dissertation:<br>"Investigation of the Influence of the<br>Local Flow Conditions Inside a Rotary<br>Blood Pump on Erythrocyte Damage" | Ph.D.  | Biomedical Engineering        |
| Cleveland State University   | Grad. Certificate Adv.<br>Study in Bioethics | Philosophy                    |
| Cleveland State University   | Grad. Coursework                             | Mathematics                   |
| Cleveland State University   | Grad. Coursework                             | Education-Adult Learning      |

#### **PROFESSIONAL EXPERIENCE**

### **Professor, College of Aeronautics and Engineering, Kent State University, Kent, Ohio (01/2025-Present)** Full professor with tenure faculty appointment. Preparing the next generation of aerospace professionals through teaching and guiding research in topics ranging from aerodynamics to space missions and from biomimicry to complex, sustainable systems. Courses taught include Aerodynamics for Engineers I and II.

## Executive Vice President, Parallax Advanced Research and President, Ohio Aerospace Institute (wholly affiliated with Parallax, Beavercreek and Brook Park, Ohio (01/2023-11/2024)

Provide strategic leadership and technical oversight of >\$50MM/y in federally-funded aerospace and defense projects across company's competencies of C5ISR, Airspace Autonomy and Operations, Aerospace Systems, Space and Spectrum Exploitation, and Materials and Manufacturing. Significant recent USAF awards include \$31MM for Computational Fluid Mechanics Research, \$49MM for Digital Engineering Transformation, \$13MM for Next Generational Aeroengine Controls. Secured four Congressionally Directed Research Projects with NASA, DoE, and NIST (\$4MM) and more than \$5MM in State of Ohio funding in both capital and operations budget cycles. Led successful strategic affiliation and organizational integration of the Ohio Aerospace Institute with Parallax Advanced Research.

### President and Chief Executive Officer, Ohio Aerospace Institute, Brook Park, Ohio (09/2018-12/2022)

Provided executive leadership, developed strategic direction and tactical execution of programs for the Ohio Aerospace Institute, a private, not-for-profit collaborative institute chartered to foster relationships between universities, aerospace industries, and government organizations in three focus areas: (1) Aerospace Research: Oversew core research competencies in many technology areas for NASA, the military, and industry with particular focus on Computational Modeling, Materials/Manufacturing, Structures, Vehicle Health Monitoring and Safety, and Space Science and Exploration Technologies. (2) Education and Workforce

Development: Managed programs to support scholarships, visiting faculty, and student and faculty engagement with industry and US Federal labs, including the Ohio Space Grant Consortium. (3) Built and managed collaborations, consortia and public-private partnerships. Fostered opportunities for international collaboration and supply-chain enhancement, including small business assistance. Built on experience in technology-based economic development, intellectual property management and commercialization.

## Director, Office of Technology Incubation and Innovation and Center Chief Technologist, National Aeronautics and Space Administration, John H. Glenn Research Center, Cleveland, Ohio (09/2014-09/2018).

Federal Senior Executive Service appointment leading and managing the Center's strategic partnerships, regional economic development activities, and discretionary investments in research and technology. Provided oversight of the implementation of a full array of technology transfer activities, including licensing and facilitating domestic utilization of NASA-developed technologies by the public and private sectors of the U.S. economy. Serve as the Center Chief Technologist for federal government research center with annual funding of \$600MM/year. Achieved Agency record in technology transfer and licensing.

## Chief, Space Operations Project Office, Space Flight Systems Directorate, National Aeronautics and Space Administration, John H. Glenn Research Center, Cleveland, Ohio (10/2009-09/2014).

Awarded NASA Outstanding Leadership Medal for executing Division-level responsibilities for the coordination, monitoring, and performance of work of project managers assigned to the division and for assuring commitments to the NASA HQ Human Exploration and Operations Mission Directorate were met. The Office's diverse portfolio consisted of space communication projects, over 30 ISS physical science payloads spanning all stages of development and operations, and sustaining engineering support for the ISS power system. Responsible for nurturing two of the Center's six core competencies, and served as a Subject Matter Expert (SME) in the management and administration of Space Operations work assigned to the Center in the areas of electric power, rocket propulsion, space communications, human health, and physical sciences. Served as the Center lead for the Agency Technical Capabilities Assessment and received sixth Agency Group Honor Award for contributions.

## Chief, Bioscience and Technology Branch, Space Processes and Experiments Division, National Aeronautics and Space Administration, John H. Glenn Research Center, Cleveland, Ohio (01/2007-10/2009).

Served as the first Chief of the newly established organization, developed vision for the Branch, conducted research and development in bioscience and technology discipline with special emphasis on detecting and quantifying the effects of extended periods of microgravity and other space environments on human health and support systems. Served as Center Manager for Constellation Program Lunar Surface Systems activities and established leadership roles in surface communications, power, and passive thermal control. Initiated a partnership with the United Negro College Fund Special Programs (UNCF-SP) to develop a new consortium of universities, which was themed in Energy.

## Radioisotope Power Systems Programmatic Manager, Science Division, Programs and Projects Directorate, National Aeronautics and Space Administration, John H. Glenn Research Center, Cleveland, Ohio (07/2005-01/2007).

Managed overall development efforts for complex NASA projects in support of Science Mission Directorate. Served as an internationally recognized expert in power conversion technologies and associated systems in support of NASA management and other Government agencies. Provided management and coordination of all GRC efforts in support of the Radioisotope Power Sources (RPS) Program. Initiated and developed the groundbreaking critical power conversion technologies NASA missions needed for achieving new planetary science missions. Transformed the Advanced Stirling Radioisotope Generator from a laboratory demonstration to a multiyear development program. Managed resources include \$13MM per year and 22 full-time equivalent (FTE) civil service employees. Key partners included the Department of Energy, the Jet Propulsion Laboratory, and Lockheed Martin. Successful completion of design review and meeting a key delivery target of hermetic Advanced Stirling Converters for testing at GRC led directly to the subsequent establishment of the RPS Program at GRC and the decision to develop the ASC for flight. Awarded fifth Agency Group Honor Award for completing a key delivery target of hermetic Advanced Stirling Converters for testing at GRC.

# Chief (Acting) of the Fluid Physics and Transport Branch in the Microgravity Division, National Aeronautics and Space Administration, John H. Glenn Research Center, Cleveland, Ohio (03/2005-07/2005) and Project Scientist, Fluid Physics and Transport Branch, Microgravity Division, National Aeronautics and Space Administration, John H. Glenn Research Center, Cleveland, Ohio (02/2003-03/2005).

Performed administrative and technical supervision for the Center core competency in reduced gravity fluid physics research and technology, which was composed of a diverse team of fourteen civil servants and additional contractor resources. Provided program management for Multiphase Flow Technology and Thermal Control Systems program elements of Advanced Life Support and Habitation (LSH). Oversaw technical direction, advocacy, budgeting, resource allocation, program planning, and technology management, including strategic roadmap development. Specifically, provided management of the GRC elements, including significant in-house technology development and contracted technology demonstration components, which sought to take technologies from nominally Technology Readiness Level 3 through Technology Readiness Level 6/7. Awarded fourth Agency Group Honor Award for my contributions to the Agency Exploration Systems Architecture Study planning NASA's return to the Moon and beyond. In response to President's Human Research Initiative led the strategic research initiative for the HQ Office of Biological and Physical Research (OBPR) Fluid Physics Program to shift from fundamental research to strategic research and technology development to support power, in-space propulsion, and advanced life support and included program management activities. Developed a collaborative inter-agency research relationship with the U.S. Department of Defense (DoD) (Naval Research Laboratory) and the U.S. Department of Energy (DoE) at Oak Ridge National laboratory, to use NASA GRC multiphase flow technology and technical expertise as applied to thermal control and power conversion. Served in the dual capacity of Science Element Lead and Project Manager for the Two-Phase Flow Facility Experiment planned for International Space Station that addressed key technology elements for Rankine power conversion systems and Vapor Compression Cycle thermal control systems.

# Deputy Propulsion Program Area Manager, Power and Propulsion Office, Space Directorate, John H. Glenn Research Center, Cleveland, Ohio (10/1997-02/2003) and Aerospace Engineer, On-Board Propulsion Branch, Power and On-Board Propulsion Division, Lewis Research Center (now John H. Glenn Research Center), Cleveland, Ohio (01/1990-10/1997).

Served as Program Area Manager and Technical Leader to a number of professional engineers and support personnel involved with major project engineering and program development efforts in support of the NASA In-Space Propulsion mission. Led restructuring of flight power processor, thruster, and integration contracts for the Express/T-160 Flight Demo sponsored by the Advanced Space Technology Program (ASTP) Future-X Program. Led Space Transportation and National Defense programs involving electric propulsion and assisted the Manager in administering the Center's Cross Enterprise Development and Energetics Program. Oversaw the Pulsed Plasma Thruster Program. Handled project restructuring and the successful delivery of the pulsed plasma thruster for New Millennium Program EO-1 spacecraft. Served as DoD Ballistic Missile Defense Organization (BMDO) Agent for On-Board Propulsion, and as the Center's focal point for Electric Propulsion for Space Transportation. At the NASA Marshall Space Flight Center's (MSFC) request, served as intra-center electric propulsion committee chair. Awarded second Agency Group Honor Award for the pulsed-plasma thruster demonstration on Earth Observer-1 spacecraft and third Agency Group Honor Award for the development of the 5kW Hall thruster power processing unit for the Russian EXPRESS spacecraft.

Through a series of international projects, formed commercial partnerships between U.S. industry and Russian institutes to develop and commercialize Russian Hall thruster technology. Conducted evaluation of Russian Hall thruster technology spacecraft integration issues for Strategic Defense Initiative Organization (SDIO) and successor agency BMDO resulting in decision by SS/Loral to use Hall thruster on their spacecraft. Managed RHETT2 technology development and flight program for Hall thrusters and teamed program with US Navy for flight on US Government spacecraft. The result was the first propulsion system developed and flown out of GRC/LeRC since SERTII in 1970. Initiated and implemented Interagency Agreements with BMDO (\$10MM) and Navy (\$1.9MM) to support technology infusion efforts.

Managed development effort and conducted critical research in 2nd Generation Arcjet thruster technology including actions to identify and incorporate new materials and designs, which enabled the attainment of a 600 second Isp arcjet to be baselined on new satellite series. That thruster is the highest performance arcjet in the world and on-board multiple Lockheed-Martin spacecraft. Best Paper Award at 1993 International Electric Propulsion Conference due to impact of the work. Awarded Agency Group Honor Award for my role in the development and demonstration of the first-generation arcjet thruster on commercial communications spacecraft. Served as the Project Manager for the Low Power Arcjet Thruster Program (LPATS) which developed and demonstrated 500W hydrazine arcjet technology as part of a follow-on program.

### INSTRUCTIONAL EXPERIENCE

**Kent State University,** College of Aeronautics and Engineering, Kent, Ohio Full Professor w/tenure (2025-Present)

• Faculty appointment, preparing the next generation of aerospace professionals through teaching and guiding research in topics ranging from aerodynamics to space missions and from biomimicry to complex, sustainable systems. Courses taught include Aerodynamics for Engineers I and II.

**Cleveland State University,** Monte Ahuja College of Business, Department of Operations and Supply Chain Management, Cleveland, Ohio

Adjunct faculty member (2007-2018).

- Taught over 1000 students in over 40 MBA level courses in Project Management, Operations Management, Business Statistics and Mathematical Models. Consistently in top quartile for faculty performance based on student assessments.
- Sample student feedback on Rate My Professor and Cleveland State internal feedback systems:
  - "Professor Sankovic is one of the best at CSU. I had him for Stats and Intro to Math. He works for NASA and knows what he is talking about. He relates all the material to real world applications. Uses mainly the chalkboard and some supplemental power point notes.... Highly recommend"
  - "Makes stats fairly painless and fun. Sense of humor. Genuinely brilliant. Never makes you feel dumb, even when you are. I didn't figure on laughing so much in this course."
  - Last course rating was 4.8/5 with 20 Excellent and 5 Above Average for 25 students—Exceptional for course and college

**University of Phoenix,** School of Business, Cleveland and On-Line Campuses (Cleveland, Ohio and Phoenix, Arizona)

Part-time Faculty (2003-2018); Lead Faculty Area Chair for Strategic Management (2010-2015).

- Taught over 200 Higher Learning Commission accredited, graduate and undergraduate courses in strategy, management, research, statistics, and finance. Able to teach over 2000 students in a student body which is non-traditional. Student demographics included working adults, 2:1 female to male ratio, and nearly a 50% underrepresented minority fraction. Experienced in multiple classroom modalities, including traditional, on-line and blended.
- Responsible for overseeing the strategic management faculty members including yearly quality reviews; assessing new faculty candidates, providing faculty mentorship and coaching, and for providing student learning assessments.
- Selected as the 2005 Outstanding Faculty Member for the Undergraduate College of Business and Management at the Cleveland Campus.

**Case Western Reserve University**, College of Engineering, Mechanical and Aerospace Engineering Dept., and Biomedical Engineering Dept. (Cleveland, Ohio) Graduate Assistant (2001-2002).

Provided instruction in Thermal Science, Biomedical Eng. Lab I and II courses, including developing engineering and biomedical ethics content. Resulted in publication on innovative teaching and

interdisciplinary skills development for biomedical engineers (Kourennyi, D.E. and Sankovic, J.M.,2002, ASEE Annual Meeting, Montreal, Canada).

### HONORS

### NASA Awards & Honors:

- Appointment to the Senior Executive Service of the United States of America (2014) (Certified Executive Core Qualifications by Office of Personnel Management to highest level of Federal Government leadership, 0.2% of Federal workforce)
- NASA Outstanding Leadership Medal (2011), One of Highest Agency Honors (Citation: "For outstanding leadership of the Space Operations Project Office and developing excellent customer relationships and high-performing teams to accomplish Agency missions.")
- NASA/Cleveland Clinic Foundation Biomedical Engineering Fellowship (2001-2003) (Competitively selected and awarded two-years leave-with-pay along with full tuition graduate study in Biomedical Engineering at Case Western Reserve University and Cleveland Clinic Lerner Research Institute)
- 6 Agency Honor Group Achievement Awards (1996, 1999, 2001, 2006, 2008, & 2015) (Awarded due to my development and demonstration of the first-generation arcjet thruster on commercial communications spacecraft; for the pulsed-plasma thruster demonstration on Earth Observer-1 spacecraft; for the development of the 5kW Hall thruster power processing unit for the Russian EXPRESS spacecraft; for contributions to the Agency Exploration Systems Architecture Study planning NASA's return to the Moon and beyond; for completing a key delivery target of hermetic Advanced Stirling Converters for testing at GRC; and for my role on the successful completion of the development of a process for the assessment of the technical capabilities of NASA.)
- Numerous NASA Sustained Superior Performance Awards, 5 Quality Step Increase Awards, 14 Special Act/Service Awards
- Invention Award (1995) (Awarded for the arcjet thruster ignition invention)
- Space Act Award (1994) (Awarded for the invention of a longer operating life arcjet thruster)
- 3 Tech Brief Awards (1993, 1995 & 1997)

### Additional Professional Awards & Honors:

- Clinton Van Deusen Award, Kent State University College of Aeronautics and Engineering Award (2021)
- Ohio Society of Professional Engineers Commendation, achieved the Highest Score in the State of Ohio, Mechanical Engineering Principles and Practice Examination (2001)
- Ohio Society of Professional Engineers Commendation, achieved the Highest Score in the State of Ohio, Fundamentals of Engineering Examination (1989)
- R&D 100 Award "The Oscar of Innovation" (2008) (Awarded for creating a contact angle measurement device)
- Federal Laboratory Consortium Award of Merit (1994) (Awarded for Excellence in Technology Transfer)

- 3 U.S. Patents (Created a method and apparatus for a pressure-pulse starting method enabling low erosion arcjet thruster ignition methods in 1996, 1997, & 1999).
- Best Paper of Conference at 1993 International Electric Propulsion Conference, Seattle, Washington
- Best Electric Propulsion Paper at 1992 Joint Propulsion Conference, Nashville, Tennessee

### Academic Awards:

- Presidential Scholarship, The University of Akron (1985-1990) (Highest academic, four-year, full tuition)
- University Honors Scholar, The University of Akron, (1990)
- Fred. S. Griffin and Robert, N. Collins Award in Mechanical Engineering, The University of Akron (1990) (citation: "given annually to the student of senior class standing who is considered by the faculty to be the most outstanding based on attitude, extra-curricular activities, creative thinking, leadership responsibility, scholastic achievement, and potential for professional growth").
- Thomas Brittain Award, The University of Akron College of Engineering (1990) (Outstanding Scholastic Achievement in Mechanical Engineering)
- 3rd Place ASME Charles T. Main award (1990) (Presented to nation's outstanding mechanical engineering students)
- 1st Place ASME Region V Old Guard Oral Presentation Competition (1989)
- 1st Place AIAA Region III Student Paper Competition (1989)
- 1st place ASME Power Division Student Paper Competition (1988)
- Cleveland Electric Illuminating Co. Scholarship (1985) (Four year, full-tuition engineering scholarship with cooperative education experiences, and guaranteed professional employment)
- Tau Beta Pi, National Engineering Honorary
- Omicron Delta Kappa, National Leadership Honorary

### SELECTED INVITED PRESENTATIONS:

Sankovic J., "Artemis: The Role of Ohio in Our Return to the Moon," 2025 All-Ohio Engineering Conference, National Society of Professional Engineers-OH, June 2025.

Sankovic, J. "Taking Research From Akron To Orbit And Back Down To Earth," Keynote Address at The University of Akron Research Day, April 2025.

Sankovic J., "A Ten-Year Biomimicry Journey" Baldwin Wallace University, Guest Lecture in SUS/MGT 340 Biomimicry-Nature Inspired Product Design, Oct. 2024.

Sankovic J.. "NASA Space Technologies : How can we extend the benefits to all " Codex , London, UK, Sept. 2017.

<u>https://www.codex.com/dr-john-m-sankovic-nasa-space-technologies-how-can-we-extend-the-benefits-to-all/</u>(technology commercialization)

Sankovic J.. "Mars Technologies " TEDxCNR, Rome, ITALY, Oct 2016 <u>https://www.youtube.com/watch?v=GlD4QZ5vAJk</u> (innnovation and biomimicry)

### **SELECTED PUBLICATIONS:**

Reinhart, R., **Sankovic, J**., Johnson, S., Lux, J. (2014). Recent successes and future plans for NASA's Space Communications and Navigation Testbed on the International Space Station., *Proceedings of the* 65<sup>th</sup> *International Astronautical Congress*, Toronto, Canada.

Sastry, S., Kadambi, J. R., Wernet, M. P., **Sankovic, J. M**., & Ercegovic, D. B. (2010, January). A Thermoacoustic Engine-Refrigerator System for a Space Exploration Mission. In *ASME 2010 International Mechanical Engineering Congress and Exposition* (pp. 261-270). American Society of Mechanical Engineers.

Chao, D. F., **Sankovic, J. M**., Motil, B. J., Yang, W. J., & Zhang, N. (2010). Bubble Departure from Metal-Graphite Composite Surfaces and its Effects on Pool Boiling Heat Transfer. *Journal of Flow Visualization and Image Processing*, *17*(4).

Chao, D. F., McQuillen, J. B., **Sankovic, J. M**., & Zhang, N. (2009, January). Catastrophe Optics Method to Determine the Micro-Nano Size Profiles at TPL of Liquid Films on a Solid Surface. In *ASME 2009 Second International Conference on Micro/Nanoscale Heat and Mass Transfer* (pp. 443-449). American Society of Mechanical Engineers.

Kwon, O., Tranter, M., Jones, W. K., **Sankovic, J. M.,** & Banerjee, R. K. (2009). Differential translocation of nuclear factor-kappaB in a cardiac muscle cell line under gravitational changes. *Journal of biomechanical engineering*, *131*(6), 064503.

Kwon, O., Krishnamoorthy, M., Cho, Y. I., **Sankovic, J. M**., & Banerjee, R. K. (2008). Effect of blood viscosity on oxygen transport in residual stenosed artery following angioplasty. *Journal of biomechanical engineering*, *130*(1), 011003.

Sastry, S., Kadambi, J. R., **Sankovic, J. M**., Wernet, M. P., & Izraelev, V. (2008). Experimental Investigation of Flow in a Bladeless Rotary Blood Pump Using Particle Image Velocimetry. *Journal of Flow Visualization and Image Processing*, *15*(4).

Kwon, O., Devarakonda, S., **Sankovic, J**., & Banerjee, R. (2008). Oxygen Transport and Consumption by Suspended Cells in Microgravity: A Multiphase Analysis. *Biotechnology and Bioengineering*, 99(1), 99-107.

Kwon, O., Tranter, M., Jones, W. K., **Sankovic, J. M**., & Banerjee, R. K. (2008, June). Enhanced nuclear translocation of nuclear factor-kappa B in micro-G stimulated cardiomyocyte cells. In *ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY* (Vol. 28, No. 6, pp. E108-E109). 530 WALNUT ST, PHILADELPHIA, PA 19106-3621 USA: LIPPINCOTT WILLIAMS & WILKINS.

Zhang, N., Chao, D. F., & **Sankovic, J. M**. (2007). Catastrophe Optics in the Study of Spreading of Sessile Drops. *Lasers and Electro-Optics Research at the Cutting Edge*, 193

Motil, B., Chao, D. F., **Sankovic, J. M**., & Zhang, N. (2007). On Flow Stagnation in a Tube Radiator. In 46th AIAA Aerospace Sciences Meeting and Exhibit.

Mehta, M., Kadambi, J. R., Sastry, S., **Sankovic, J. M**., Wernet, M. P., Addie, G., & Visintainer, R. (2007, January). Particle velocities in the rotating impeller of a slurry pump. In *ASME/JSME 2007 5th Joint Fluids Engineering Conference* (pp. 369-378). American Society of Mechanical Engineers.

Chao, D. F., **Sankovic, J. M**., & Zhang, N. (2006). Profile patterns and stability of evaporating liquid sessile drops. *Journal of thermophysics and heat transfer*, *20*(3), 620-624

Zhang, N., Chao, D. F., & **Sankovic, J. M**. (2006). CONVECTIVE INSTABILITIES IN EVAPORATING LIQUID LAYERS. In *International Heat Transfer Conference 13*. Begel House Inc..

Zhang, N., Chao, D. F., & **Sankovic, J. M**. (2006). Two Basic Modes of Bubble Growth and Determination of Departure Diameters in Pool Boiling. In *AIAA Meeting Papers on Disc [CD-ROM], Section*. AIAA 2006-983. 44th AIAA Aerospace Sciences Meeting and Exhibit, 9 - 12 January 2006, Reno, Nevada

Kwon, O., Sartor, M., Tomlinson, C., Miller, R., Olah, M., **Sankovic, J**., & Banerjee, R. (2006). Effect of simulated microgravity on oxidation-sensitive gene expression in PC12 cells. *Advanced Space Research*, *38*(6), 1168-1176.

McQuillen J., **Sankovic J.**, and Lekan, J., "Mulitphase Flow Technology Impacts on Thermal Control Systems for Exploration," AIAA 2006-345, *Proceedings of the 44<sup>th</sup> Aerospace Sciences Meeting*, January 2006.

Zhang, N., Chao, D., and **Sankovic, J**., "Two Basic Modes of Bubble Growth and Determination of Departure Diameters in Pool Boiling," AIAA 2006-983, *Proceedings of the 44<sup>th</sup> Aerospace Sciences Meeting*, January 2006.

McQuillen, J., **Sankovic, J**., and Hall, N.R., "Multiphase Flow Separators in Reduced Gravity," IMECE2005-80764, *Proceedings of the 2005 ASME IMECE*, November 2005.

Zhang, N., Chao, D. F., Sankovic, J. M., McQuillen, J. B., & Lekan, J. F. (2005, January). On Analog Simulation of Liquid-Metal Flows in Space Rankine-Cycle Power-Systems. In *ASME 2005 International Mechanical Engineering Congress and Exposition* (pp. 755-761). American Society of Mechanical Engineers.

Son, S. Y., Greenberg, P.S., and **Sankovic, J.M**., "Heterogeneous condensation for space applications: nanoparticle condensation nuclei in microchannel," ICMM2005-75093, *Proceedings of the 2005 ASME ICMM*, June 2005. Accepted for publication in International Journal of Thermal Sciences.

Kadambi JR, Mehta M, **Sankovic** J, Addie G, Visintainer R., "Measurements of Particle Velocities in the Impeller of a Centrifugal Slurry Pump", *Proceedings of the 12<sup>th</sup> International Symposium on Applications of Laser Techniques to Fluid Mechanics*, Lisbon, Portugal, July 2004.

Mehta M, Kadambi JR, Sastry S, **Sankovic** J, Wernet M, Addie G and Visintainer R, "Study of Particulate Flow in the Impeller of a Slurry Pump Using PIV," *Proceedings of the 2004 ASME Heat Transfer/Fluids Engineering Summer Conference* paper # HT-FED2004-56684, Charlotte, North Carolina, USA, July 2004.

**Sankovic JM**, Mehta M, Kadambi JR, Wernet M and Smith WA, "Investigations of the Flow Field in a Rotary Blood Pump Using PIV", *J. Fluids Engineering*, 126:730-734, Sept. 2004 (also FEDSM-45490, July 2003)

Kadambi JR, Charoenngam P, Subramanian A, Wernet MP, **Sankovic J** and Addie G, "Investigations of Particle Velocities in a Slurry Pump Using PIV: Part 1, The Tongue and Adjacent Channel Flow", *J. Energy Resources Technology*, 126:271-278, Dec. 2004 (also FEDSM2002-31284, July 2002).

Kournenyi, D.E., and **Sankovic, J.M**., "Interdisciplinary Skills Development in the Biomedical Engineering Laboratory Course," *Proceedings of the 2002 ASEE Annual Conference & Exposition Conference*, June 2002.

**Sankovic, J.M.**, "NASA Technology Investments in Electric Propulsion: New Directions in the New Millennium," *Proceedings of the 3rd International Spacecraft Propulsion Conference sponsored by CNES/ESA*, (also NASA TM-2002-210609) October 2000.

Oleson, S.R. and **Sankovic, J.M**., "Advanced Hall Electric Propulsion for Future In-Space Transportation," *Proceedings of the 3rd International Spacecraft Propulsion Conference sponsored by CNES/ESA*, (also NASA TM-2001-210676) October 2000.

Dunning, J.W. and Sankovic, J.M., "NASA's Electric Propulsion Program," AIAA-Paper 2000-3145, July 2000.

Dunning, J.W. and Sankovic, J.M., "NASA's Electric Propulsion Program," AIAA-Paper 99-2161, June 1999.

Dunning, J.W., Jankovsky, R.S., Patterson, R.J., and **Sankovic, J.M**., "NASA's Electric Propulsion Program," AIAA-Paper 98-3180, July 1998.

Oleson, S.R. and **Sankovic, J.M**., "Electric Propulsion for Low Earth Orbit Constellations," *Proceedings of the* 1998 JANNAF Propulsion Meeting, NASA TM-1998-208821, July 1998.

Plokhikh, A.P., Vazhenin, N.A., Sarmiento, C.J., and **Sankovic, J.M**., "Study of the Hall Thruster Self-Emission Effective Center Location Within the Radio Frequency Band," *Proceedings of the 1997 International Electric Propulsion Conference*, Sept. 1997.

Koester, J.K., Lazarovici, C.E., **Sankovic, J.M**., Herbert, G.A., Petrosov, V.A., Baranov, V.I., Romashko, A., and Petrusevitch, V., "The Express/T-160E Space Flight Test Program," *Proceedings of the 1997 International Electric Propulsion Conference*, Sept. 1997.

**Sankovic, J.M.**, Pencil, E.J., and Jacobson, D.T., "RHETT2/EPDM Magnetic Field Integration Impacts," *Proceedings of the 1997 International Electric Propulsion Conference*, Sept. 1997.

Sarmiento, C.J., **Sankovic, J.M**., Freitas, J., and Lynn, P.R., "RHETT2/EPDM Hall Thruster Propulsion System Electromagnetic Compatibility Evaluation," *Proceedings of the 1997 International Electric Propulsion Conference*, Sept. 1997.

**Sankovic, J.M**., Manzella, D.H., Osborn, M.F., "RHETT2/EPDM Development Testing," *Proceedings of the 1997 International Electric Propulsion Conference*, Sept. 1997.

Lynn, P.R., Osborn, M.F., **Sankovic, J.M.** and Caveny, L.H., "Electric Propulsion Demonstration Module (EPDM) Flight Hall Thruster System," *Proceedings of the 1997 International Electric Propulsion Conference*, Sept. 1997.

Lichon, P.G., Tilley, D.L., Anderson, R., **Sankovic, J.M**., "500-Watt Arcjet System Development and Demonstration," *Proceedings of the 1997 International Electric Propulsion Conference*, Sept. 1997.

Manzella, D., Sarmiento, C., **Sankovic, J.M**., and Haag, T.W., "Performance Evaluation of SPT-140," *Proceedings of the 1997 International Electric Propulsion Conference*, Sept. 1997.

**Sankovic, J.**, Caveny, L., Lynn, P.,"The BMDO Russian Hall Electric Thruster Technology (RHETT) Program: From Laboratory to Orbit," AIAA-Paper 97-2917, July 1997.

Jankovsky, R.S., **Sankovic, J.M.**, and Oleson, S., "Performance of a FAKEL K10K Resistojet," AIAA-Paper-97-3059, July 1997.

Oleson, S., Hamley, J., **Sankovic, J**., "Sample Mission Application of Capacitor Powered Hall Thrusters," AIAA-Paper 97-2785, July 1997.

Hamley, J., **Sankovic, J.M**., Miller, J., Lynn, P., O'Neill, M., Oleson, S., "Hall Thruster Direct Drive Demonstration," AIAA-Paper 97-2787, July 1997.

Oleson, S., and **Sankovic**, J., "Benefits of Low-Power Electrothermal Propulsion," Proceedings of the 1996 JANNAF Propulsion Meeting, (also NASA TM 107404), Dec. 1996.

Manzella, D., Oleson, S., **Sankovic, J.**, Haag, Semenkin, A., "Evaluation of Low Power Hall Thruster Propulsion," AIAA-Paper 96-2736, July 1996.

**Sankovic, J.M**., and Hopkins, J.B., "Miniaturized Arcjet Performance Improvement," AIAA-Paper 96-2962, July 1996.

Lichon, P.G. McLean C.H., Vaughn, C.E., and **Sankovic, J.M**.,"Development of a 500 Watt Class Arcjet Thruster," *Proceedings of the 1995 International Electric Propulsion Conference*, Sept. 1995.

Caveny, L.H., **Sankovic, J.M.**, Allen, D.M., Herbert, G., and Garner, C.E., "The BMDO Electric Propulsion Propulsion Flight Readiness Program" IEPC-95-132, *Proceedings of the 1995 International Electric Propulsion Conference*, Sept. 1995.

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