Old Dominion University j17johnso@odu.edu

Office of Enterprise Research & Innovation 757-635-9973

Virginia Digital Maritime Center

Suffolk, VA 23435

**EDUCATION**

**Embry Riddle Aeronautics University**, Orlando, FL \*May 2025

M.S. Human Factors Psychology

**Regent University,** Virginia Beach, VA May 2023

Ph.D., Educational Psychology

Dissertation: *Facilitating Self-Directedness: A Meta-Analysis Examining*

*Autonomous Learning in Simulations*

**Regent University**, Virginia Beach, VA May 2020

Ed.S., Educational Psychology

**Regent University**, Virginia Beach, VA Dec. 2007

M.Ed., Curriculum Instruction/Design

**Edinboro University**, Edinboro, PA Dec. 2005

B.S., Cognitive Psychology

**APPLIED RESEARCH FOCI**

**Research Domain(s**): Cognitive Engineering, Learning Engineering, Human Factors Psychology

**Research**:

* Multimodal, Simulation-Based Learning & Training
* Human-Computer Interaction
* Psychophysiology, Brain Computer Interfaces

**ACADEMIC AND RESEARCH POSITIONS**

2022- present **Research Assistant Professor**

Virginia Modeling Analysis & Simulation Center

Old Dominion University

2021- present **Director of STEM and Educational Partnerships**

Virginia Modeling Analysis & Simulation Center

Old Dominion University

2019- 2022 **Curriculum Coordinator**

Virginia Modeling Analysis & Simulation Center

Old Dominion University

2018-2019   **Instructional Designer**

Virginia Modeling Analysis & Simulation Center

Old Dominion University

2018-2019   **Educator**

Isle of Wight Public Schools, Isle of Wight, VA

2007- present **Instructional Design Consultant**

 Classroom Rescue, LLC

2007- 2018   **Educator, Curriculum Writing Committee Chair, Differentiated Instruction Lead Teacher, STEM Coordinator,**

Suffolk Public Schools, Suffolk, VA.

**PROFICIENCIES**

**Cognitive and Knowledge Engineering**: Cognitive task analysis, work task analysis, needs assessment, learner analysis, context analysis, modality analysis, technology readiness assessment, technology adoption assessment, data thematic analysis, effectiveness study in virtual environments. Researched, designed, and development of systems compatible with human cognitive abilities and limitations. Human performance technology assessment to address gaps between desired and observed performance. Embed knowledge engineering topics such as knowledge acquisition, knowledge representation, inference and reasoning, knowledge refinement, and knowledge integration in virtual and multimodal systems.

**Simulations, Simulators, Virtual Environments, & Mixed Reality (AR, VR, XR):** Design, development, validation, and measurement of learning in various simulations, simulators, and virtual/augmented environments for education, training, assessment, and research. Experience in designing, developing, and integrating instructional simulations and games in K-industry settings. Design of simulator scenarios for education, training, and assessment. Determination of simulator fidelity needs based on task analyses and instructional objectives or measurement outcomes. Utilize a learning engineering approach to training challenges for pre-hire workforce through the deployment of integrative learning technologies (virtual reality, augmented reality, 3D models, etc.) and embedded competencies or state educational standards of learning.

**Contributions to Cognitive and Learning Science**: Collaborated with Department of Defense and Design Interactive in the applied research and prototype design of an embedded competency-based content curation and distribution engine for multimodal content sharing systems, incorporating augmented reality and extended reality components. A performance gap analysis and cognitive task analysis was conducted on the integration of artificial intelligence (AI) and machine learning (ML) capability features through the scope of human-centered data deployment.

**STEM Outreach**: Worked/developed outreach to advance programs for modeling and simulation engagement in multiple capacities. Organized and led modeling and simulation summer camps for middle school students, K-12 educator externships, expansion of a modeling and simulation capstone conference from K-12 to higher education, and year-round workshops integrating advanced learning technologies within engineering design challenges for K through community college levels.

**External Funding & Project Management**: Developing and writing proposals for external funding. Aligning SoW to milestones, deliverables, assigning and hiring personnel, and project management. Building R&D relationships. Disseminating results. Awarded, led, and collaborated on teams for major grants ranging from private industry partners, internal research and development projects, K-12 school divisions, military, and government entities totaling over $7,000,000 to date.

**PROFESSIONAL MEMEBERSHIPS & SOCIETIES**

IEEE Industry Consortium of Learning Engineering (ICICLE)

IEEE ICICLE Design for Learners

IEEE ICICLE Tools for Learning

IEEE ICICLE Competencies/Credentials/Curriculum

IEEE Learning & Training Standards Committee

IEEE Adaptive Instructional Systems

National Training and Simulation Association

American Society for Engineering Education

Society for Learning Analytics Research (SoLAR)

Reviewer for *Simulation: Transactions of the Society for Modeling and Simulation International*, (peer-reviewed international journal) 2023- present

Department of Education’s Modeling and Simulation Program Task Force

Executive Committee, IEEE Learning Engineering Conference 2023-present

STEM Chair and Executive Committee Member, MODSIM World Conference 2022-present

Co-Chair Modeling Simulation & Visualization Student Capstone Conference, Old Dominion University 2022-present

**HONORS, AWARDS, AND PRIZES**

Dissertation of the Year Nominee Regent University 2022

Rookie Teacher of the Year Suffolk Public Schools 2008

**SPONSORED RESEARCH**

**Current Grants & Projects (as PI and Co-PI)**

**Johnson, J.,** Renne, J., Shull, J., Garcia, H., Cvijetic, B. (January 2024 – November 2024). Immersive STEM Maritime Program. Navy Maritime Programming Funding, in collaboration with Hampton Roads Workforce Council, Virginia Ship Repair Association, Newport News Shipyard

* Role on grant: PI
* Total Award: $900,000
* Research Credit: 20%
* Duration: 10 months

**Johnson, J**., Garcia, H., Cvijetic, B. (May 2023- April 2025). Maritime Entry to Employment (MEET). Reinvent Hampton Roads- GO Virginia.

* Role on grant: PI
* Total Award: $1,090,527
* Research Credit: 15%
* Duration: 2 years

**Johnson, J.** (2023-2027). Technology Enhanced Language Learning in Virtual Reality. Department of Defense Education Activity (DoDEA). Virginia’s Modeling, Analysis & Simulation Center at Old Dominion University (ODU-VMASC) collaboration with York County Public Schools, Virginia.

* Role on grant: PI
* Total Award: $482,000
* Research Credit: 60%
* Duration: 4 years

**Johnson, J.,** Shetty, S., Papelis, Y., Padilla, J., Freydenlund, E., Diaz, R., Smith, K., Nelson, K., Rechowicz, K., Draper-Amason, D., Richter, H. (2022-2024). Graduate Research Opportunities and Workforce Readiness in Modeling and Simulation (GROW M&S). Department of Education Modeling and Simulation Program

* Role on grant: PI
* Total Award: $1,155,000
* Research Credit: 30%
* Duration: 2 years

**Grants Awarded and Completed (as PI)**

**Johnson, J.,** Robinson, M., Garcia, H., Renne, J. (September 2022- February 2024). Maritime Trades Magnet. Department of Education grant. Old Dominion University**.**

* Role on grant: PI
* Total Award: $1,000,000
* Research Credit: 50%
* Duration: 2 years

**Johnson, J.,** Renne, J. (April 2023- October 2023)Maritime Trades Training Curriculum Development. Virginia’s Modeling, Analysis & Simulation Center at Old Dominion University (ODU-VMASC) collaboration with Virginia Ship Repair Association and the Community College Workforce Cooperative (CCWC

* Role on grant: PI
* Total Award: $60,000
* Research Credit: 60%
* Duration: 6 months

**Johnson, J.** (January 2022-August 2023). STEM and Student Engagement. Internal Research and Development (ODU-VMASC).

* Role on grant: PI
* Total Award: $181,000
* Research Credit: 100%
* Duration: 1 year

**Johnson, J.**, Garcia, H. (November 2021- March 2022). Marine Trades Training Pipefitter Simulations. Virginia Ship Repair Association

* Role on grant: PI
* Total Award: $25,000
* Research Credit: 75%
* Duration: 1 year

**Johnson, J**., Smith, K., & Ayaz, G. (October 2021- September 2022). Agile Learning Linked Holistically as Naval Design STEM Experiences for Teachers (ALL HANDS). Internal Research and Development (ODU-VMASC).

* Role on grant: PI
* Total Award: $45,000
* Research Credit: 75%
* Duration: 1 year

**Johnson, J**., Smith, K., & Bothel, T. (October 2021-October 2022). Maritime Careers Experience (MCx). Epic Games MegaGrant

* Role on grant: PI
* Total Award: $75,000
* Research Credit: 75%
* Duration: 1 year

**Johnson, J.** (2021- 2023) Propelling STEM: Gamified Educational STEM Careers and Simulations. Newport News Public Schools, Newport News Shipbuilding in partnership with Virginia’s Modeling, Analysis & Simulation Center at Old Dominion University (ODU-VMASC)

* Role on grant: PI
* Total Award: $185,000
* Research Credit: 60%
* Duration: 2 years

**Johnson, J**. (2020) National PTA and Huntington Ingalls Industries: National STEM+ Families Program

* Role on grant: PI
* Total Award: $10,000
* Research Credit: 100%
* Duration: 1 year

**Grants Awarded and Completed (as Co-PI)**

Smith, K. **Johnson, J**. (July 1, 2023 – Dec. 31, 2023) Operationally Directed Instructional Network- Engineering Library. Valkyrie and Department of Defense

* Role on grant: Co-PI
* Total Award: $105,993.60
* Research Credit: 30%
* Duration: 6 months

Smith, K., **Johnson, J.** (April 2023-December 2024). SBIR Phase II CACHE (ODU-VMASC and Design Interactive).

* Role on grant: Co-PI
* Total Award: $225,000
* Research Credit: 30%
* Duration: 1 year

Smith, K., **Johnson, J. (**July 2021 June 2022). Operationally Directed Instructional Network Engineering Library, Option Year 2.

* Role on grant: Co-PI
* Total Award: $37,097.76
* Research Credit: 30%
* Duration: 1 year

Smith, K., **Johnson, J.** (June 1, 2022-November 14, 2022). SBIR CACHE (ODU-VMASC and Design Interactive).

* Role on grant: Co-PI
* Total Award: $30,000
* Research Credit: 30% Duration: 3 years
* Duration: 6 months

Smith, K., **Johnson, J.**, Diaz, R. (May 2021- May 2022). Digital Shipbuilding Modeling & Simulation Development and Lab Support. Internal Research & Development. (ODU-VMASC).

* Role on grant: Co-PI
* Total Award: $73,000
* Research Credit: 25%
* Duration: 1 year

Ezell, B., **Johnson, J**., Lynch, C., Amason-Draper, D. (2021-2023) Federal Law Enforcement Training Center (FLETC) Training Systems Curriculum Study with Systems Engineering Research Center (SERC) & Virginia’s Modeling, Analysis & Simulation Center at Old Dominion University (ODU-VMASC)

* Role on grant: Co-PI
* Total Award: $750,000
* Research Credit: 20%
* Duration: 2 years

Smith, K., **Johnson, J**. (2021) CACHE: Collaborative Automated Curation Holistic Engine. In partnership with Design Interactive & Virginia’s Modeling, Analysis & Simulation Center at Old Dominion University (ODU-VMASC)

* Role on grant: Co-PI
* Total Award: $42,000
* Research Credit: 30%
* Duration: 1 year

Smith, K**. Johnson, J.** (2021). TED Text: SMS based Micro-Learning. USAF in partnership with Virginia’s Modeling, Analysis & Simulation Center at Old Dominion University (ODU-VMASC)

* Role on grant: Co-PI
* Total Award: $58,500
* Research Credit: 30%
* Duration: 1 year

Smith, K. **Johnson, J**. (2020- 2023) Operationally Directed Instructional Network- Engineering

Library. Valkyrie and Department of Defense

Role on grant: Co-PI

* Total Award: $605,500
* Research Credit: 30%
* Duration: 3 years

Garcia, H. **Johnson, J**. (2020-2021). Human-Machine Inclusive Interface Design: Accessible Interfaces for Underrepresented Populations. Commonwealth Center for Advancement Manufacturing, Va. in partnership with Virginia’s Modeling, Analysis & Simulation Center at Old Dominion University (ODU-VMASC)

* Role on grant: Co-PI
* Total Award: $50,000
* Research Credit: 14%
* Duration: 1 year

**Grant Applications in Progress**

**Johnson, J.,** Smith, K., Renne, J.**,** Galassie, J.(September 2024 – August 2027).High School Summer Research Residency: Pedagogical Digital Twins. ACT Grant, Bayport Credit Union.

* Role on grant: PI
* Total Award: $500,000
* Research Credit: 20%
* Duration: 3 years

**Johnson, J**., Renne, J., Dudley, J., Garcia, H., Shull, J. (June 2024 – May 2026). Schools Harnessing Innovative Industry 4.0/5.0 Processes and Systems. Blue Force Alliance; Submarine Industrial Base

* Role on grant: PI
* Total Award: $1,500,000
* Research Credit: 30%
* Duration: 2 years

Smith, K., Diaz, R., & **Johnson, J.** (July 2024 – June 2025). Open Data Science with Kamodo. NASA Roses.

* Role on grant: Co-PI
* Total Award: $100,000
* Research Credit: 30%
* Duration: 1 year

Watson, G**., Johnson, J.,** Snell, J.(February 2024- July 2024). XR for Use in Naval Shipyard Industrial Environments. SBIR in collaboration with Charles Rivers Analytics

* Role on grant: Co-PI
* Total Award: $25,000
* Research Credit: 40%
* Duration: 6 months/TBD

**Johnson, J.**, Jovanovic, V.,Renne, J., Garcia, H., Cvijetic, B. SMART Manufacturing Multimodal Training, in collaboration with GENEDGE. Department of Energy. **$300,000**

* Role on grant: PI
* Total Award: $300,000
* Research Credit: 40%
* Duration: 2 years

Smith-Mutegi, D**., & Johnson, J.** (October 2024 – September 2025). Expanding Girls STEM Institute: Fostering and Maximizing Interdisciplinary Learning Year-round (E-GSI: FaMILY). National Science Foundation Advanced Informal STEM Learning.

* Role on grant: Co-PI
* Total Award: $145,292
* Research Credit: 40%
* Duration: 2 years

**Johnson, J**., Goranson, T., Cardier, B., Jayarathna, S., Shull, J., & Renne, J. (July 2024-June 2027 Ontologies of Multimodal Learning Analytics for Skilled Trades Expertise. Institute of Education Sciences, Cognition and Learning.

* Role on grant: PI
* Total Award: $1,400,000
* Research Credit: 40%
* Duration: 3 years

**Grant Applications Not Funded**

**Johnson, J**., Snell, J., Shull, J., Garcia, H. & Renne, J. (September 2024-August 2027) Exploration of Math Literacy Ontological Models in Maritime Trades Training. Institute of Education Sciences, Adult/Postsecondary Education. $1,300,00

**Johnson, J**., Smith, K., Jayarathana, S., Draper-Amason, D., Garcia, H., Shull, J., & Renne, J. (June 2024- May 2027). ATheory-Driven Investigation of Integrated Multimodal Learning Analytics in Complex, Authentic Learning Environments. Institute of Education Sciences, Cognition and Learning **$3,000,000**

Whittlaw, J., **Johnson, J**., Shull, J. (01/2024 – 12/2027). Increasing Inclusion in Undergraduate Education Through Immersive Technologies. Old Dominion University.

**Johnson, J.,** Smith, K., Shull, J. (September 2023- December 2024). Learning Engineering Approach to Immersive Digital Twin Design for Learning and Training. Unity Engine Workforce Grant**; $200,000**

Whytlaw, J., **Johnson, J**. Increasing Inclusion in Undergraduate Education Through Immersive Technologies. National Science Foundation. **$2,000,000**. Submitted July 13, 2023.

Bowles, D., Johnson, J., Shetty, S., Papelis, Y. National Science Foundation: Engine. **$178,101**. Submitted January 2023

Ferrell, V., **Johnson, J.** (2022) iQuest. National Science Foundation: ITEST. **$1,277.000**. (Submitted August 5, 2022

**Johnson, J.,** Smith, K., Ball, P. (2021). Urban STEM Ecology Adventures (U-SEA). Virginia Wildlife Grant program; Summer Internship program; **$9,250**.

**Johnson, J.,** Smith, K., Bothel, T., Garner, J. (2021). Agile Learning Linked Holistically as Naval Design STEM Experiences for Teachers (ALL HANDS). Grant submitted to Office of Naval Research STEM Education & Workforce; **$520,000.**

**Johnson, J.,** Smith, K. (2021). Youth Builders Pre-Apprenticeship Program (YB-PreP). Grant submitted to Office of Naval Research STEM Education & Workforce; **$320,000.**

**Johnson, J**., Smith, K. (2020). Navigating the Engineering Design Process Through Augmented Reality Simulations (NavED). Grant submitted to National Science Foundation- Advanced Informal STEM Learning (AISL); **$296,621**.

**Johnson, J**., Smith, K. (2020). Youth Builders Pre-Apprenticeship Program: Propelling Advanced Technology Education for the Maritime Industry. Grant submitted to National Science Foundation- Advanced Technical Education (ATE); **$372, 529**.

**Johnson, J**., Smith, K., Shen, Y., Jovanovic, V., Loney, M., Tonelson, S. (2020). Reframing

Failure: An Immersive Simulation Approach to Experimental Design for Urban Secondary

Students. Grant application submitted to National Science Foundation- Innovation and Technology for Education, Students, and Teachers (ITEST); **$620,000.**

**Johnson, J**., Smith, K., & Bothel, T. (2020). Envision, Enact, Embody (E3): Empowering

Tomorrow’s Naval STEM Workforce. Grant application submitted to Office of Naval Research

Science; **$750,00**.

**Johnson, J.** (2020). Dive Into Robotics: Underwater ROVs Summer Camp. Grant application

submitted to American Society of Naval Engineers Tidewater Section; **$5,000**.

Giles, B., J**ohnson, J**., Joe, M., Garner, J., Crompton, H., Shetty, S., & Smith, K. (2020). STEM

University Partnership (STEMup!). Grant application submitted to National Defense Education

Program for Science Technology Engineering & Math (NDEP STEM); **$2,995,000**.

**Johnson, J**., Smith, K., & Bothel, T. (2019). Girls Making Waves: Propelling Immersive,

Experiential STEM Informal Learning. Grant application submitted to National Science

Foundation; **$1,865,000**.

Smith, K., **Johnson, J**. & Bothel, T. (2019). Engaging and Empowering Future and Current

Digital Shipbuilding Workforce Through Transdisciplinary Experiences in Artificial Intelligence. Grant application submitted to Office of Naval Research; **$750,000**.

Smith, K., **Johnson, J**., & Diaz, R. (2019). Workforce Development in Applachia to Support

Shipbuilding Demand. Department of Labor; **$600,000**.

**PUBLICATIONS**

**RESEARCH AND MANUSCRIPTS UNDER REVIEW**

Dennis, T., Smith, K., **Johnson, J**., & Draper-Amason, D. “A Shift in Navy Readiness: Prioritizing Task Proficiency Over Traditional Course Completion”. Proceedings of the 2024 *International* *Industry Training, Simulation & Education Conference.*Orlando, FL. December 2-December 6, 2024. (Abstract Accepted)

Johnson, J. Pedagogical Digital Twins: A Meta-Analysis Examining Models of Expertise in Skilled Trades Training. *Journal of Human Computer Interaction*.

**RESEARCH AND MANUSCRIPTS IN PREPARATION**

Johnson, J. (in prep). *Cognitive and Semantic Models of Expertise: A Framework for Ontological Learning Engineering*.

Johnson, J. (in prep): *Cognitive Models of Expertise: Insights into Digital Training Twins*.

Johnson, J., Garcia, H., Shull, J., Cvijetic, B. (in prep). Multimodal and Multisensory Simulation Based Learning in Skilled Trades Training: Transference of Knowledge in Varying Training Environments Using Welding Simulators.

**Peer-Reviewed Journal Articles**

**Book and Handbook Chapters**

**Johnson, J.** Learning, Unlearning, and Relearning: Embracing Radical Technology Shifts for Teaching and Learning. STEM Century: It Takes a Village to Raise A 21st Century STEM Graduate. August 2023.

**Peer-Reviewed Conference Papers**

Ayaz, G., & Johnson, J. “Enhacing Maritime Trades Training Through Gamified Experiences and Interactive Technologies.” *Proceedings of the 17th Annual Old Dominion University Modeling and Simulation Capstone Conference*. April 11th, 2024.

Evans, Z., **Johnson, J.,** Kumm, A., & Shull, J.“From Virtual Cities to Simulated Restaurants: A New Frontier for Collaborative Language Learning in Virtual Environments”. *Proceedings of the 17th Annual Old Dominion University Modeling and Simulation Capstone Conference*. April 11th, 2024.

Smith, K., **Johnson, J.,** Dennis, T. Draper-Amason, D. “Redefining Journeyman and Master Craftsman Competency Models.” *Proceedings of the Interservice Industry Training, Simulation & Education Conference.*Orlando, FL. November 28-December 1, 2022.

Smith, K., **Johnson, J.,** Cvijetic, B., Ralph, C., Shull, J. “Increasing Student Engagement in STEM through Career Connected Simulations and Games.” *Proceedings of the 2022 ASEE Annual Conference & Exposition*. Minneapolis, MN. June 26-29, 2022.

**Johnson, J.,** Smith, K., Adams, G. “Providing Sustainable Engineering Pathways and Training for Female Students through a Pre-Apprenticeship Program*.” Proceedings of the 2022 ASEE Annual Conference & Exposition*. Minneapolis, MN. June 26-29, 2022.

**Johnson, J**. “iLeARN: Immersive Learning Environment and Augmented Reality Technologies in Engineering Design”. *Proceedings of the 2022 International Technology and Engineering Educators Association Conference (ITEEA)*, Orlando FL, March 9-12, 2022.

Smith, K., **Johnson, J.,** Ayaz, G., Horner, C. “Phased Framework for Automated Educational Content Curation.” *Proceedings of the 13th International Conference on Education, Training, and Informatics*. Orlando, FL. March 8-11, 2022.

**Johnson, J**., Smith, K., Dennis, T., Jimenez, G. “Adaptive Assessment Feedback in Competency Based Learning Ecosystems.” *Proceedings of the Interservice Industry Training, Simulation & Education Conference.*Orlando, FL. November 29-December 3, 2021.

Smith, K., **Johnson, J**., Dennis, T. “Leveraging Legacy Training in Modern Systems: Framework and Implementation.” *Proceedings of the Interservice Industry Training, Simulation & Education Conference.*Orlando, FL. November 29-December 3, 2021.

Smith, K., **Johnson, J**. “Uniting Modern Educational Communication Protocols with Traditional Educational Taxonomies.” *Proceedings of the 2021 MSVE Student Capstone Conference*. Old Dominion University, Suffolk, VA. April 22, 2021.

**Peer-Reviewed Conference Presentations**

**Johnson, J.** Multimodal Simulation-Based Skilled Trades Training: An Integration of Learning Engineering Design Processes. Proceedings of the ICICLE 2024 Learning Engineering Conference, IEEE ICICLE, Tempe, AZ. July 22-24, 2024.

Shanta, Susheela, **Johnson, J**., Renne, J., Russell, K. “Ethics in AI and STEM Education.” *Proceedings of the International Technology and Engineering Educators Association, ITEEA,* Memphis, TN. March 6-9, 2024.

Renne, J., **Johnson, J**. “Navigating New Waters: Applications of XR and Integrative Technologies in the Classroom.” *Proceedings of the Virginia Society for Technology in Education Conference, VSTE, Roanoke, VA.* Dec 3-5, 2023.

**Johnson, J**. “Deploying Integrative Instructional & Immersive Learning Environments with Engineering Design Challenges”. *2020 National Center for Simulation Student Training Day*, Orlando, FL, February 24- 25, 2020.

**Johnson, J**. “Advanced Learning Technologies in the Classroom: An Analysis Design for Education 4.0”. *Proceedings of the 2020 Southwest Virginia Higher Education Center Education & Training Conference,* Bristol, VA, December 1, 2020.

**Johnson, J**. “Integrative Engineering Design Challenges for the K-12 Classroom”. *Proceedings of the 2019 Interservice Industry Training, Simulation and Education Conference*, Orlando, FL, December 2-5, 2019.

Smith, K., **Johnson, J**., Bothel, T. “Leveraging a STEM Ecosystem to Promote Connections throughout the Maritime Workforce Pipeline.” *Proceedings of the 2019 International Conference on Social and Education Sciences*, Denver CO, October 7-10, 2019.

**Johnson, J**., Bothel, T., & Smith, K. “Charting the Course: Integrating Advanced Learning Technologies to Motivate STEM Maritime Career Pathways”. *Proceedings of the 2019 International Conference on Social and Education Sciences*, Denver CO, October 7-10, 2019.

**Johnson, J**. “Neuroscience of STEMgagement: Leveraging STEM Learning Ecosystems”. *Proceedings of the Virginia Military Institute STEM Conference,* Lexington VA, September 30- October 1, 2019.

**Johnson, J**. “Digital Ship Connections to the K-12 Classroom: Digital Transformation Technologies” *Demo 2019 Capital Hill Modeling and Simulation Expo*, Washington, D.C, July 10, 2019.

**State and Regional Conferences**

**Johnson, J**. Renee, J. Women in Skilled Careers Summit 2023. Work Like a Girl program. Hampton Roads Workforce Council and WHRO Public Media. June 8, 2023.

**Johnson, J**. “LeARn: Immersive Learning Environments and Innovative Technologies to Support Girls in STEM”. *Proceedings of the SHE CAN STEM Conference*, Virginia Beach, VA. April 8, 2021.

**Johnson, J**., Smith, K., & Russel, J. “Operationally Directed Instructional Network- Engineering Library for Competency-Based Training (ODIN-EL)”. *Proceedings of the Navy Afloat Maintenance Training Strategy (NAMTS) Conference*, Virginia Beach, VA. April 7-9, 2021.

**Johnson, J**. “Disrupting Learning with Advanced Learning Technologies”. *Proceedings of the 2021 STEMFest Conference*, Reynolds Community College, Richmond VA, March 1st, 2021.

Kosteczko, J., Smith, K., **Johnson, J.**, Diaz, R. “Virginia Digital Shipbuilding Program (VDSP) “Building an agile modern workforce to improve performance in the shipbuilding and ship repair industry.” *Proceedings of the 2020 ASEE Annual Conference & Exposition.*Virtual Online, June 21-24, 2020. doi: <https://doi.org/10.18260/1-2--35487>

**Johnson, J**. “Engineering Design Process in the Classroom”. *Proceedings of the 2020 Norfolk Naval Shipyard STEM Conference*, Portsmouth, VA, March 23, 2020.

**Johnson, J**. “Advanced Learning Technologies within the Modeling and Simulation Engineering Classroom”. *Proceedings of the 2019 Southwest Virginia Higher Education Center Education & Training Conference,* Bristol, VA, November 12-13, 2019.

**Johnson, J.** “STEM Workforce of the Future”. Norfolk Naval Shipyard, *Proceedings of the STEM Workforce Conference*. Norfolk, VA. November 15, 2019.

**Johnson, J**., Bothel, T., & Smith, K. “Maritime Engineering Design Challenges”. *Proceedings of the 2019 M&S Leadership Summit*, Norfolk, VA, February 25, 2019.

**STUDENT MENTORING**

**Research Assistant and Internship Supervision**

Noah Boucher- Undergraduate Research Intern, Old Dominion University Game Design Concentration, Summer 2024

Austin Connolly- Undergraduate Research Intern, Old Dominion University Game Design Concentration

Zabia Evans- Graduate Research Assistant, Speech Language and Pathology M.S. Concentration, Fall 2023- Present

Prathyusha Keerthi- Graduate Research Assistant, Computer Science M.S. Concentration, Summer 2023- Present

Devon Nelson- Undergraduate Research Assistant, Game Design Concentration, Spring-Summe-Fall 2023

Christian Lamm- Graduate Research Assistant, Engineering Management M.S. Concentration, Fall 2023; Undergraduate Research Assistant, Game Design Concentration, Spring-Summer 2023

Devon Walker- Graduate Research Assistant, Modeling and Simulation Engineering, M.S. Concentration, Fall 2023; Undergraduate Research Assistant, Game Design Concentration, Spring-Summer 2023

**Service to the Community**

***September 2021 – July 2023***

**Regional Coordinator Mid-Atlantic Region: Marine Advanced Technology Education**

Responsibilities included organizing the annual competition, team support, ROV training and workshops for teams and volunteers, volunteer management, outreach/promotion of the event, and overseeing judging and evaluation of pool mission, engineering presentations, and poster presentations on the day of the competition. ODU-VMASC

***June 2021- Present***

**High School Internship Coordinator: Hoffler Creek Preserve**

Aided in the development and coordination of a STEM ecological internship for high school students in the summer at ODU-VMASC.

***May 2021- Present***

**SHE Can STEM/Butterfly Village: SHE Can STEM Ambassador**

Provide expertise and input on development of various STEM programming and outreach for underserved and underrepresented females in STEM professions in grades K-12 grades. ODU-VMASC

***April 2021- Present***

**ODU Mathematics Festival and Computer Science Festival & TAME Math**

Served on Math Festival executive board to help create, coordinate, and develop programming for annual conference. ODU-VMASC

***July 2019- Present***

**STARBASE, Portsmouth Public Schools**

**Executive Board Member**

STEM pathways program for all 4th- 6th grade students within Portsmouth Public Schools. Assist in STEM curriculum review, marketing, funding, and service outreach/programming. Served as executive board member. Development Expansion & Continuity Committee member. STARBASE is the only public/private STARBASE partnership in the United States.