CADAVIOUS M. JONES, PH.D.

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PROFESSIONAL SUMMARY

Accomplished and results-driven leader and Fulbright International Education Administrators (IEA) Program Fellow (2025–2026) with nearly two decades of experience in education, including over a decade in higher education. I specialize in the development and implementation of impactful academic programs, institutional assessment, and STEM workforce-aligned initiatives. I have a proven record of securing competitive external funding, managing complex multi-partner projects, and building collaborative relationships across academia, industry, government, and international partners. Passionate about equity-driven education and global engagement, I have expanded opportunities for students and faculty while aligning programs with national priorities for STEM innovation, workforce readiness, and international competitiveness.

EDUCATION

- Auburn University, Auburn, AL
  Doctorate of Philosophy in Mathematics
- Alabama State University, Montgomery, AL
  Master's Degree in Mathematics
- Alabama State University, Montgomery, AL
  Bachelor's of Science in Mathematics

FACULTY APPOINTMENTS

- Rust College, Holly Springs, MS
  Professor of Mathematics 2022–Present
- Alabama State University, Montgomery, AL
  Associate Professor of Mathematics 2016–2022
- Alabama State University, Montgomery, AL
  Assistant Professor of Mathematics 2012–2015
- Auburn University, Auburn, AL
  Instructor of Mathematics 2013–2016
- Alabama State University, Montgomery, AL
  Adjunct Professor of Mathematics 2010–2012
- Auburn University, Auburn, AL
  Graduate Teaching Assistant 2011 - 2012
- Resurrection Catholic School, Montgomery, AL
  Mathematics & CS Lead/Teacher – 5th through 8th
  Math and Computer Science 2004 - 2008

INTERNATIONAL ENGAGEMENT

- **MATHS: International Math Camps and Professional Development** 2017–Present
  Organized and presented graduate-level math activities for middle and high school students in Australia, Japan, Wales, Germany, and the USA. Led teacher training workshops to integrate advanced math concepts globally. Developed partnerships with international school systems to enhance mathematics education.
- **MASAMU Workshop and Research Group** 2013, 2015–2017, 2021–2023
  Collaborated with researchers from Southern African nations, Australia, France, and the USA on graph theory, producing publications and fostering interdisciplinary exchange.
- **Doctorate of Philosophy Examiner and Adjudicator** 2019–Present
  Provided critical feedback for doctoral candidates at NIT Warangal, India, and University of the Western Cape, South Africa, ensuring rigorous academic standards.
- **Australian Maths Trust, Invited Contributor/Reviewer** 2018–Present

Developed and reviewed Math Challenge booklets for Australian primary students, ensuring high-quality educational content.

- **Associate Editor, Journal of Graphic Era University (JGEU) - STEM** 2020–Present
  Led editorial review for high-quality STEM research, collaborated with a global network of researchers to enhance academic standards, and mentored authors to foster scholarly excellence.

LEADERSHIP EXPERIENCE

- **Dean, Division of Science and Mathematics, Rust College** 2022–Present
  Secured $6.3M+ in funding, increased STEM program offerings by 66.67%, and established international collaborations (e.g., math camps). Managed budgets and oversaw research compliance as Authorized Organizational Representative on Research.gov.
- **Acting Institutional Representative, SACSCOC Annual Meeting, Rust College** 2024
  Represented Rust College in accreditation discussions, focusing on institutional effectiveness and global academic standards.
- **Director, AgriTech Program, Rust College** 2023–Present
  Launched a STEM program integrating agriculture and UAV technology, building global partnerships with agribusinesses.
- **Board Member, Coastal Family Partners** 2020–2022
  Developed strategies to support family-focused initiatives for disadvantaged populations in Mobile, Alabama. Collaborated with community leaders to align programs with organizational goals, enhancing community engagement and well-being.

ADDITIONAL LEADERSHIP ROLES

- DIRECTOR OF OUTREACH,MATHEMATICAL PUZZLE PROGRAMS (MaPP) 2021–Present
- MGM BEST Hub Committee Chair and Robotics Competition Director 2020 – 2022
- CHAIR OF THE DEPARTMENT'S RECRUITMENT COMMITTEE (ASU) 2019 – 2022
- CHAIR OF THE ASU LYCEUM COMMITTEE 2019 – 2022
- PROJECT DIRECTOR OF ALABAMA STATE UNIVERSITY SPACE PROGRAM 2017 – 2022
- ORGANIZING COMMITTEE MATHS: INTERNATIONAL CAMPS
  USA (Alabama/Mississippi) Director 2015–Present
- CHAIR OF THE DEPARTMENT'S RESEARCH DEVELOPMENT COMMITTEE (ASU) 2016 – 2020
- DIRECTOR OF ASU'S UAV CENTER OF EXCELLENCE 2016 – 2022

PROFESSIONAL EXPERIENCE

NIH Reviewer

The National Institutes of Health USER Advocate *2024 - Present*

- Provide critical feedback on end-user tools aimed at enhancing institutional processes, including those related to grant procurement and resource development.

Journal/Proposal Reviewer

Reviewer *2019 - Present*

- Journal of Graphic Era University (JGEU)
- Journal of Applied Mathematics and Computing (JAMC)
- Bulletin of the Iranian Mathematical Society (BIMS)
- Various Springer Journals
- Frontiers in Science, Technology, Engineering and Mathematics (FSTEM)
- The book "Advances in Epidemiological modeling and Control of Viruses" for Centre Regional des Metiers de I'Educationet de la Formation
- Southern Regional Education Board (SREB)

Research & Engineering Apprenticeship Program (REAP)

Research Mentor *2013 - 2022*

- Led high-school students from across the country in summer research as apprentices at Alabama State University for students historically undeserved in STEM.

Student Research Advisement

Research Mentor *2013 - Present*

- Mentored diverse student research projects across various fields, fostering innovation and impactful results. Guided studies in public health awareness (2022), COVID-19 epidemiology (2021), big data applications (2020), and more.

GRANTS

- **Rust College Kids Auto Discovery Day** 2025
  Role: Principal Investigator| Funding Award: $\$35,000$
- **Strengthening the Academic Program through Engineering**, The Black College Fund 2025
  Role: Co-Principal Investigator | Funding: $\$144,822$
- **MCITy Workforce Development Project**
  (CISCO Corporation, The State of Mississippi & Rust College) 2025
  Role: Co-Principal Investigator| Funding Award: $\$4,515,711$
- **Advancing STEM Education in Rural Communities: Integrating AI, Intellectual Property, and Mathematics Curriculum** Rust College Mini Grant 2024
  Role: Co-Principal Investigator| Funding Award: $\$10,000$
- **Enhancement of Capacity in STEM at Rust College MSEIP** US Department of Education
  (Proposal ID ED-GRANTS-033023-001) 2024
  Role: Principal Investigator| Funding Award: $\$893,442$
- **Improving Academic Laboratories** US Department of Education
  Role: Principal Investigator (Activity Director)| Funding Award: $\$234,754$ 2024
- **Agribusiness Development Plan** Delta Regional Authority
  (DRA MS 24181) 2024
  Role: Co-Principal Investigator| Funding Award: $\$150,000$
- **Nissan-RC Cybersecurity Simulation Lab** (Nissan Corporation) 2024
  Role: Principal Investigator| Funding Award: $\$35,000$
- **Rust College STEM & Shipbuilding Program** HII Newport News Shipbuilding
  & Huntington Ingalls Industries Grant Program. (Proposal ID 1051051) 2023
  Role: Principal Investigator| Funding Award: $\$30,000$
- **Rust College Rural AgriTech Program** Delta Regional Authority (DRA MS 23153) 2023
  Role: Principal Investigator/Director| Funding Award: $\$244,923$
- **STEM Engagement Program and Innovation Lab** (Nissan Corporation) 2022
  Role: Principal Investigator| Funding Award: $\$94,225$
- **Best Robotics Grant - Robotics**
  Department of Defense/Missile Defense Agency
  (Proposal ID DOD-MDA PKG00273517) 2022
  Role: Principal Investigator| Funding: $\$20,000$
- **Engineering and Robotics Outreach** (Honda Motor Corporation) 2022
  Role: Principal Investigator| Funding Award: $\$60,000$
- **Combating vaccine-hesitant behaviors in communities of color through public health awareness and training in disease modeling** NIH (Program Mini Award) 2022
  Role: Principal Investigator| Funding Award: $\$5,000$
- **2021 Innovation Grant provided by The Center for the Study of Blockchain and Financial Technology at Morgan State University.**
  Morgan State University 2021
  Role: Co-Principal Investigator| Funding Award: $\$10,000$
- **ASU's NASA Human Exploration Rover Challenge Engineering Project**
  Alabama Space Grant Consortium 2016–2018
  Role: Principal Investigator| Funding Award: $\$55,050$

PUBLICATIONS

- D. Jordan, S. Saldanha, K. Bibb, and **C. J. Jones**, **Technology in the General Biology Classroom: A Snapshot of how a Student Attitudinal Survey Shifts the Classroom to a more Active Learning Environment Pre- and Post Pandemic**. Frontiers in Science, Technology, Engineering and Mathematics (FSTEM) to be published 2024
- Y. Lee, B. Carrigan, S. Clontz, P. Couch, A. Owens, **C. Jones**, Y. Pang, **MaPP Challenge: Giving a Taste of Contemporary Mathematics Research to Secondary Students in a Puzzle-based Outreach Program**, Book International Perspectives on Mathematics Outreach to by be published by Information Age Publishing (IAP) 2024
- **Jones, C.**, Osaye, F., Susilowati, L., Somto, A. **Wiener index in graphs with prescribed girth given minimum and maximum degrees** Journal of Theory and Applications of Graphs, 2023
- Simelane, S., Dlamini, P., Osaye, F., Obaido, G., Ogbukiri, B., Aruleba, K., **Jones, C.**, Chukwu, W., Egbelowo, O. **Modeling the impact of public health education on tungiasis dynamics with saturated treatment: Insight through the Caputo fractional derivative** Mathematical Biosciences and Engineering, 20(5): 7696-7720 2023
- **Jones, C.**, Barnett, J., Blumenthal, A.,Devilbliss ,M., Fain , B., Kumwenda, K., Jones, E., and Matzke, R. **WORM coloring complete n-partite graphs.** Submitted. 2023
- Feng, C., **Jones, C.**, **Dynamic behavior in a three coupled Kaldor-Kalecki delayed model.** Journal of Mathematics and Modeling in Finance (JMMF), Vol. 2, No. 1, Pages:95– 105, 2022
- **Jones, C.M.**, Swamidurai, R., Dean, D.,& Prevo-Williams, R.,Barnett, J.,& Kannan, **U Active Learning in Physics and Engineering Through UAV and Data Analytics.** Paper presented at 2021 ASEE Virtual Annual Conference. Content Access, Virtual Online. 10.18260/1-2–36645 2021
- Swamidurai, R., & **Jones, C. M.**, & Pettis, C., & Kannan, U. (2020, June) **Applications of Linear Algebra Applied to Big Data Analytics.** Paper presented at 2020 ASEE Virtual Annual Conference Content Access, Virtual Online. 10.18260/1-2–34153. 2020
- **Jones, C.**, Kannan, U. , Pettis, C. and Swamiduari, R. **Big Data Analytics - With an Infusion of Statistics** for the Modern Student. The ASEE, American Society for Engineering Education, Paper ID #27519 2019
- **Jones, C.**, Barnett, J., Blumenthal, A., Johnson, P., Matzke, R. and Mujuni, E. 2014. **Connected minimum secure dominating sets in grids.** AKCE International Journal of Graphs and Combinatorics .Volume 14, Issue 3, Pages 216-223 2017
- Johnson, P. and **Jones, C.** 2014. **How to find a defense against an attack when there is one.** Congressus Numerantium 221 , pp. 105-109. 2014
- Johnson, P. and **Jones, C.** 2013. **Secure-dominating sets in graphs.** Advances in Domination Theory II, V.R. Kulli, edition, ISBN: 81-900205-6-0, Vishwa 2013

PRESENTATIONS

- **Combinatorial Analysis of Pyramid, Ponzi, and MLM Schemes: Structural Instabilities and Disproportionate Impacts on People of Color,**
  2025 Joint Mathematics Meetings
  AMS Special Session on Combinatorics and Graph Theory in Honor of Dr. Peter Johnson 2025
- **Building a Winning DWP Grant Application: Our Partnership-Focused Approach**
  2025 Pre-Award Technical Assistance Workshop (DRA). 2024
- **Appalachian Leadership Institute Session** Innovation in Workforce Development 2024
- **Department of Defense HBCU/MI Program Summer**, Presented on strategies for success in STEM: Virtual Event. 2023
- **Blockchain Development – Nodes and Configuration, APIs, Interfaces**, ASU Blockchain Think Tank 2021
- **Applications of Linear Algebra Applied to Big Data Analytics**, Paper presented at 2020 ASEE, Virtual Annual Conference 2020
- **Using Technology to Enhance and Improve Student Outcomes in General Biology Courses** 2020
- **Building a Culture of Engineering through Manufacturing and Active Learning**, Huang, H., Jones, C. and Dean, D., **Manufacturing USA, NSF, Washington, DC** 2019
- **Big Data Analytics: with an infusion of statistics for the modern student - initial findings**, SAMSA conference Arusha, Tanzania 2017

- **Connected minimum secure-dominating sets in grids**, SAMSA conference at the University of Pretoria, South Africa 2016
- **Security in graphs**, SAMSA conference at Stellenbosch University, Cape Town, South Africa 2013

RESEARCH INTERESTS

DISCRETE MATHEMATICS: COMBINATORICS; SECURITY AND GRAPHS; WORM COLORINGS; DOMINATION THEORY: UNMANNED ARIAL VEHICLES: ROBOTICS: IMAGE & OBJECT RECOGNITION: BIG DATA ANALYTICS

PROFESSIONAL DEVELOPMENT

- **Institutional Review Board (IRB) Training, CITI Program**: Social & Behavioral and Research Basic/Refresher.
- **Quality Matters Certification**: Applying the QM Rubric (Virtual).
- **MATLAB Programming**: Completed OnRamp training program.
- **FAA Commercial Drone Piloting:** Training as an FAA Commercial Drone Pilot at Alabama State University.
- **CCNA: Introduction to Networks:** Cisco Certified Network Associate (CCNA)

HONORS & AWARDS

- **Fulbright International Education Administrators (IEA) Program Fellow** France & Senegal 2025–2026
- **L.A. Potts Award**, 82nd Annual PAWC, Tuskegee University 2024
- **UIDP HBCU Travel Award** 2024, 2025
- **All-Star Faculty Award**, Alabama State University Student Athlete Advisory Committee (SAAC) 2014
- **Southern Regional Education Board Fellowship**, Auburn University 2011–2014
- **National Science Foundation Bridge-to-Doctorate Fellowship**, Auburn University 2009–2010

MEMBERSHIPS

- Alpha Phi Alpha Fraternity, Inc.
- American Mathematical Society
- National Association of Mathematicians
- Phi Mu Alpha Sinfonia Fraternity of America
- Phi Mu Epsilon
- Southern Africa Mathematical Sciences Association