CHRISTINA L. BLOEBAUM

Kent State University, Kent, Ohio | 571-969-9070 | cbloebau@kent.edu

EXECUTIVE SUMMARY

With a proven record of leadership in higher education, academic innovation, financial stewardship, and institutional growth, I have led transformative initiatives that drive student success, faculty development, and research expansion across disciplines. While my academic background is in engineering and aerospace, my leadership has extended beyond STEM to include university-wide strategic planning, interdisciplinary collaboration, and financial oversight to strengthen institutional impact at all levels. My leadership is driven by a commitment to fostering a culture of innovation, collaboration, and workforce readiness that prepares students for success in a rapidly evolving global economy.

As Dean of the College of Aeronautics and Engineering at Kent State University, I have led transformational initiatives that have significantly enhanced student success, research impact, and institutional growth. Key achievements at Kent State include:

- Expanding student enrollment by 40% through strategic recruitment and retention initiatives.
- Establishing interdisciplinary research centers in advanced air mobility, cybersecurity, and digital engineering design.
- Spearheading a $24.1M expansion of the Aeronautics and Engineering Building to support program growth and cutting-edge research.
- Overseeing the construction of the $6.5M FedEx Aeronautics Academic Center at the Kent State University Airport.
- Leading institutional accreditation efforts, ensuring academic excellence and alignment with workforce and industry needs.
- Developing global and regional student recruitment pipelines, forging partnerships with universities across Africa, Asia, and South America, as well as local high schools and community colleges.
- Advancing faculty development and shared governance, fostering a culture of mentorship, inclusion, and professional growth.

Beyond my leadership at Kent State, I have held senior national leadership roles at Iowa State University, the National Science Foundation (NSF), and the University at Buffalo, driving institutional transformation, interdisciplinary education, and national policy initiatives.

- At Iowa State University, I led academic and research expansion, serving as Interim Chair of Aerospace Engineering, Director of the Iowa Space Grant Consortium, and a named professor (Dennis and Rebecca Muilenburg Professor of Aerospace Engineering), advancing faculty mentorship, interdisciplinary collaboration, and student engagement across disciplines.
- At NSF, I launched and led the System Science and Materials Design Programs, as well as the groundbreaking EFRI ODISSEI initiative, a federally funded program integrating origami design principles into self-assembling systems. I served as the NSF representative on the White House OSTP Aeronautics Science and Technology Subcommittee and chaired the Interagency Working Group on Engineered Systems, coordinating federal agencies to set national research and education priorities.
- At the University at Buffalo, I oversaw strategic faculty recruitment, research growth, and interdisciplinary education, serving as Chair of Mechanical & Aerospace Engineering, founding Director of the New York State Center for Engineering Design & Industrial Innovation (NYSCEDII),

CHRISTINA L. BLOEBAUM

Kent State University, Kent, Ohio | 571-969-9070 | cbloebau@kent.edu

founding professorship holder (UB Professor for Competitive Product and Process Design) and Chair of the President's Review Board for Promotion & Tenure.

With a strong focus on student success and institutional transformation, I have led initiatives that ensure academic excellence, tailored student support, and career-focused pathways, helping students and faculty achieve their full potential. My experience spans institutional planning, faculty development, research enterprise growth, accreditation, and global engagement. I am deeply committed to advancing higher education, fostering innovation, and positioning institutions for sustained national and global leadership.

ACADEMIC & PROFESSIONAL APPOINTMENTS

Kent State University

- Dean and Professor, College of Aeronautics & Engineering (2018–Present)

Iowa State University

- Interim Chair, Aerospace Engineering (2017–2018)
- Director, Iowa Space Grant Consortium (NASA) (2017–2018)
- Associate Chair for Research, Aerospace Engineering (2015–2017)
- Director of Graduate Education, Aerospace Engineering (2013–2015)
- Dennis and Rebecca Muilenburg Professor for Aerospace Engineering (2012–2018)

National Science Foundation (NSF)

- Program Director, Engineering Systems & Design; System Science; Design of Engineering Material Systems; and EFRI Origami Design of Self-assembling Systems for Engineering Innovation (ODISSEI) (2009–2012)
- Member (NSF Representative), Office of Science and Technology Policy (OSTP – White House) Aeronautics Science and Technology Subcommittee (ASTS) (2011-2012)
- Founding Member, Organizer, and Lead, Interagency Working Group on Engineered Systems (the National Science Foundation representative of 13 Federal Agencies), Washington, D.C. (2010-2012)

University at Buffalo

- Chair, President's Review Board for Promotion & Tenure (2006-2008)
- Director, New York State Center for Engineering Design & Industrial Innovation (NYSCEDII) (2000–2005)
- University at Buffalo Professor for Competitive Product and Process Design (2000-2006)
- Chair, Mechanical & Aerospace Engineering (1998–2001)
- Professor, Mechanical & Aerospace Engineering (2000–2012)
- Associate Professor (1996–2000)
- Undergraduate Studies Director, Aerospace Engineering (1996-1998)
- Assistant Professor (1991–1996)

CHRISTINA L. BLOEBAUM

Kent State University, Kent, Ohio | 571-969-9070 | cbloebau@kent.edu

EXECUTIVE LEADERSHIP

Kent State University Leadership (2018–Present)

Institutional Growth & Strategic Initiatives

- Expanded student enrollment by 40% through targeted recruitment and retention strategies.
- Spearheaded a $24.1M expansion of the Aeronautics and Engineering Building, supporting academic growth and cutting-edge research.
- Oversaw the $6.5M construction of the FedEx Aeronautics Academic Center at Kent State University Airport, enhancing aviation training facilities.

Academic Excellence & Student Success

- Led ABET accreditation efforts for all engineering and engineering technology programs, ensuring academic rigor and industry alignment.
- Developed global and regional student pathway partnerships, forging collaborations with institutions across Africa, Asia, South America, and regional high schools and community colleges.
- Established interdisciplinary research centers in advanced air mobility, cybersecurity, and digital engineering design, fostering innovation and workforce development.

Iowa State University Leadership (2012–2018)

Academic & Research Leadership

- Served as Interim Chair of Aerospace Engineering, overseeing faculty recruitment, curriculum innovation, and research expansion.
- Directed the Iowa Space Grant Consortium, increasing opportunities for student and faculty engagement in aerospace research.
- Developed major interdisciplinary research collaborations, strengthening funding pipelines and industry partnerships.
- Advanced faculty mentorship and development programs, enhancing interdisciplinary research impact and academic growth.

National Science Foundation Leadership (2009–2012)

Federal Research & Policy Initiatives

- Founded the System Science Program, driving research in large-scale engineered systems and complex decision-making.
- Established the Materials Design Program, pioneering advancements in computational and experimental materials research.
- Led the EFRI ODISSEI Program (Origami Design for the Integration of Self-Assembling Systems for Engineering Innovation), integrating origami-based design principles into self-assembling systems and securing co-sponsorship from AFOSR.
- Chaired the Interagency Working Group on Engineered Systems, coordinating research and policy initiatives across multiple federal agencies.
- Served on the White House OSTP Aeronautics Science and Technology Subcommittee, shaping national aerospace policy and research funding priorities.

CHRISTINA L. BLOEBAUM

Kent State University, Kent, Ohio | 571-969-9070 | cbloebau@kent.edu

University at Buffalo Leadership (1998–2012)

Faculty Development & Research Growth

- Founded the New York State Center for Engineering Design & Industrial Innovation (NYSCEDII), positioning the university as a leader in engineering design and advanced simulation research. NYSCEDII and the UB Chair for Competitive Product and Process Design were funded by the Assembly of the State of New York (in excess of $5M).
- Chaired the Mechanical & Aerospace Engineering Department, leading strategic faculty hiring, curriculum modernization, and securing major research funding.
- Served as Chair of the President's Review Board for Promotion & Tenure, overseeing faculty advancement, tenure evaluations, distinguished faculty considerations, and institutional faculty development initiatives.

STRATEGIC INITIATIVES

Institutional Growth, Budget Oversight & Infrastructure

- Oversaw multimillion-dollar budgets at NSF and Kent State, ensuring financial sustainability, strategic investment, and institutional growth.
- Led financial planning and operational efficiency improvements at Kent State, eliminating redundancies in programs and curriculum to optimize resources.
- Developed formal processes and procedures to standardize operations, improve transparency, and increase operational efficiency at Kent State.
- Generated significant revenue over expenditures, enabling substantial reinvestment into strategic initiatives and infrastructure development.
- Led the construction of the $6.5M FedEx Aeronautics Academic Center at Kent State University Airport, enhancing aviation education and training facilities.
- Spearheaded fundraising and strategic planning for a $24.1M, 40,000+ square foot expansion of the Aeronautics and Engineering Building at Kent State University, ensuring capacity for continued program growth and research innovation.
- Directed over $4M in fund balance reserves to support the Aeronautics and Engineering Building expansion project.
- Allocated $1M to upgrade air traffic control simulation software and hardware to state-of-the-art industry standards.
- Invested over $3M in new aircraft for the Professional Pilot Program, strengthening program competitiveness and training quality.
- Led grant efforts to support millions of dollars in equipment for aeronautics and engineering laboratories at Kent State University (through State of Ohio RAPIDS and Super RAPIDS programs).
- Secured millions in funding for a new initiative at the Kent State Airport, leading efforts to establish a new maintenance operations hangar, a maintenance training academic center, and a Center for Advanced Air Mobility.
- Driving the expansion of Kent State's aerospace innovation capabilities, positioning the institution as a national leader in emerging aircraft technology and aerospace education.
- Spearheaded fundraising and rehabilitation of facilities for the New York State Center for Engineering Design and Industrial Innovation (NYSCEDII) at the University at Buffalo, with state-of-the-industry virtual reality walls, 6 d-o-f motion simulator, and simulation capabilities to support industrial research and workforce development.

CHRISTINA L. BLOEBAUM

Kent State University, Kent, Ohio | 571-969-9070 | cbloebau@kent.edu

Transforming Education & Student Success

- Ensured successful ABET accreditation for all engineering and engineering technology programs at Kent State University, ensuring high academic standards and continuous improvement; all programs are now either accredited or in the final stages of accreditation.
- Ensured successful AABI accreditation for all aeronautics programs, overseeing separation of all concentrations into independent programs.
- Led development of innovative new undergraduate and graduate programs at Kent State University, including the state of Ohio's first program in Cybersecurity Engineering and in UAS Operations, as well as the university's first graduate programs in engineering (MS/PhD Aerospace Engineering and MS/PhD Mechatronics Engineering).

Expanding Student Pathways & Recruitment Initiatives

- Supporting staff in establishing international recruitment initiatives, developing partnerships with universities across Africa, Asia, and South America to expand global student enrollment.
- Leading efforts to implement 2+2 programs and graduate pathways, fostering strong international academic partnerships and increasing access to Kent State's Aeronautics and Engineering programs.
- Formalizing pathway partnerships with regional high schools and community colleges, creating seamless transfer opportunities and strengthening local STEM pipelines.
- Led 40% increase in undergraduate enrollment through strategic recruitment and retention initiatives.
- Established industry partnerships with leading aeronautics, aerospace, cybersecurity, manufacturing, and engineering firms to expand student internships and research collaborations.

Student Success & Access Initiatives

- Established a comprehensive student success framework to ensure all students receive tailored academic and career support.
- Expanded access to higher education by leading initiatives that support first-generation students, students from diverse socioeconomic backgrounds, and students from under-served communities.
- Strengthened student retention and academic achievement through tailored support programs, career pathways, and industry-aligned experiential learning opportunities.
- Secured external funding through sponsorship and philanthropy to support need-based scholarships and academic enrichment programs for students facing financial or educational barriers.
- Launched student mentorship and academic coaching programs to provide individualized guidance, ensuring student persistence and graduation success.
- Spearheaded curriculum modernization, encouraging integration of emerging technologies, including AI and quantum computing.

Faculty Mentorship, Shared Governance & Development

- Strengthened shared governance by collaborating with faculty senate and academic leadership to align institutional strategy with faculty priorities.
- Mentored faculty members across multiple institutions, supporting career advancement, tenure applications, and research success.

- Led faculty mentorship initiatives as Chair of President's Review Board and tenure review committees at the University at Buffalo and Iowa State University as Associate Chair for Research.
- Developed structured mentorship programs at Kent State, Iowa State and UB to support faculty in securing external research funding and progressing in academic leadership.
- Served as a formal mentor in Provost Writing Groups and faculty retention efforts at Iowa State University.

Research, Innovation & Thought Leadership

- Secured $15M+ in external research funding, leading multidisciplinary research initiatives funded by NSF, NASA, and DoD.
- Launched interdisciplinary research centers in cybersecurity, advanced air mobility, and digital engineering design, with funding and support from DoD, ODOT, FAA, NSA, and other agencies.
- Expanded faculty research capacity through targeted hires and mentorship programs.
- Awarded NSF Presidential Faculty Fellow Grant, one of the most prestigious faculty research awards.
- Served as principal investigator on multiple NSF grants, shaping national discourse on engineering education.

Industry & Government Partnerships

- Established partnerships with NASA, DoD, NSF, and top aerospace companies, fostering collaborative research and workforce development programs.
- Developed multiple advisory councils comprising agency and industry representatives to provide insight on college strategy and curricular modifications.
- Led efforts to expand public-private partnerships, securing major funding for research and infrastructure development.
- Strengthened state and federal advocacy efforts to position Kent State as a leader in aeronautics, aerospace and advanced manufacturing research.

EDUCATION

Ph.D. Aerospace Engineering, University of Florida, 1991
Formal and Heuristic System Decomposition Methods in Multidisciplinary Synthesis

M.S. Aerospace Engineering, University of Florida, 1987
Implementation of Global Sensitivity Analysis in Dual Structural/Control Optimization

B.S. Aerospace Engineering, University of Florida, 1986

AWARDS, RECOGNITIONS & LEADERSHIP

National Honors and Recognitions

Aerospace Educator Award, Women in Aerospace – National award recognizing leadership in STEM education.

Fellow, American Institute of Aeronautics and Astronautics (AIAA) – The highest honor recognizing aerospace leadership.

Multidisciplinary Design Optimization (MDO) Award, AIAA – Recognized for significant contributions to aerospace optimization research.
World's Top 2% Scientists (Stanford Study) – Ranked among the top global researchers in engineering for lifetime achievements.
NSF Presidential Faculty Fellow – Prestigious national recognition for top faculty in research and education.
Crain's Notable Women in STEM
Outstanding Alumnus Award, Department of Mechanical and Aerospace Engineering, University of Florida
Business First, 40 Under Forty

Institutional Awards
Named Dennis and Rebecca Muilenburg Professor for Aerospace Engineering, ISU
Excellence in Research Recognition, SUNY Research Foundation
Named Professor for Competitive Product and Process Design, UB
Honored for Notable Contributions to Teaching and Learning, UB
Chancellor's Award for Excellence in Teaching, SUNY
Riefler Award, UB
University Teaching Fellow, UB

National & Institutional Leadership Service
Member, Advisory Board, Advancing Manufacturing Technologies in Northeast Ohio (AMARII) *(2024–Present)*
Member, Board of Directors, Parallax Advanced Research *(2024–Present)*
Member, Board of Directors, Ohio Aerospace Institute *(2023–Present)*
Member, Team NEO/JobsOhio, AAM NEO Strategy Committee *(2023-Present)*
Member, State of Ohio Advanced Air Mobility Committee *(2021-2024)*
Member, Remote Tower Initiative, State of Ohio *(2020-2023)*
Member, Planning Committee and Panelist, Ohio Aerospace Day *(2018, 2019)*
Member, White House OSTP Aeronautics Science and Technology Subcommittee *(2011–2012)*
Member and Lead, Interagency Working Group on Engineered Systems *(2010-2012)*

RESEARCH & SCHOLARLY CONTRIBUTIONS

Technical Interests
Design of Complex Engineered Systems, Value Driven Design, UAS for Health Monitoring, Multidisciplinary Design Optimization, Visualization and Visual Design Steering for Large-scale Optimal Design, Visualization of Multidimensional/Multivariate Data, Structural Analysis and Optimization

Contributions
Throughout my career, I have advanced interdisciplinary research in engineering design optimization, complex systems, and aerospace applications, often spearheading large collaborative research efforts. My contributions include:

- $15.9M+ in external research funding from NSF, NASA, DoD, and industry partners.
- Leadership in national research policy, including founding the System Science Program and Materials Design Program at NSF.

CHRISTINA L. BLOEBAUM

Kent State University, Kent, Ohio | 571-969-9070 | cbloebau@kent.edu

- Principal Investigator on multiple large-scale grants, leading innovative research in digital engineering, value driven design and multidisciplinary design optimization.
- Mentorship of 15+ Ph.D. students and 30+ M.S. students, many of whom have advanced to leadership roles in academia, industry, and government.
- Keynote speaker at international conferences in engineering design, complex systems, and aerospace innovation.
- Over 100+ peer-reviewed publications and conference proceedings, shaping thought leadership in engineering optimization and aerospace systems.

TEACHING EXPERIENCE

Throughout my career, I have been committed to innovative teaching, curriculum development, and student success. I have developed and revised 10+ courses across multiple institutions, integrating interdisciplinary approaches, research-driven methodologies, and emerging technologies into engineering and aerospace education. Key contributions include:

- Developed and redesigned undergraduate and graduate courses at Kent State University, Iowa State University, and the University at Buffalo, focusing on engineering design, systems optimization, and digital engineering.
- Led curriculum innovation efforts, ensuring that course content remains cutting-edge, industry-aligned, and responsive to evolving engineering challenges.
- Recipient of multiple teaching awards, including the Chancellor's Award for Excellence in Teaching at UB and Aerospace Educator Award from Women in Aerospace, recognizing my dedication to student learning and instructional effectiveness.

- Pioneered new teaching methodologies, incorporating visualization, simulation tools, and interdisciplinary problem-solving approaches to enhance student engagement and learning outcomes.
- Actively mentored students beyond the classroom, providing research opportunities, career guidance, and professional development support to ensure long-term student success.

PROFESSIONAL REFERENCES

Available upon request.