

October 26, 2026

The Honorable Carrie Chenery
Secretary of Commerce and Trade
Commonwealth of Virginia
Patrick Henry Building
1111 East Broad Street
Richmond, Virginia 23219

The Honorable Luke Torian
Chair, House Appropriations Committee
Virginia House of Delegates
201 N. 9th Street
General Assembly Building, Room 1223
Richmond, Virginia 23219

The Honorable Betsy B. Carr
Vice Chair, House Appropriations Committee
Virginia House of Delegates
201 N. 9th Street
General Assembly Building, Room 1232
Richmond, Virginia 23219

The Honorable Louise Lucas
Chair, Finance and Appropriations Committee
Senate of Virginia
201 N. 9th Street
General Assembly Building, Room 1404
Richmond, Virginia 23219

Michael Maul
Director, Virginia Department of Planning and
Budget
1111 East Broad Street
Room 5040
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Joseph Benevento
President and CEO
Virginia Innovation Partnership Authority
(VIPA)/Virginia Innovation Partnership
Corporation (VIPC)
313 East Broad Street
Richmond, Virginia, 23219

Commonwealth Center for Advanced Logistics Systems (“CCALS”)

Ladies and Gentlemen: Respectfully submitted is the full and complete CCALS report as required by Section M.2 of Item 115 of the 2026 Session enrolled budget. This report covers the period from July 1, 2025 through June 30, 2026 as called for in budget language (as follows):

M.1. Out of the appropriation in this Item, \$350,000 the first year and \$350,000 the second year from the general fund is designated for the Commonwealth Center for Advanced Logistics (CCALS) to provide seed money for collaborative public sector projects with partners, such as the Port of Virginia, Department of Corrections, and the Virginia Department of Transportation.

2. CCALS shall submit a report by October 1st of each year to the Secretary of Commerce and Trade, the Chairs of the House Appropriations and Senate Finance and Appropriations Committees, the Director of the Department of Planning and Budget, and VIPA to include (i) all planned and actual revenue and expenditures along with funding sources, including state, federal, and other revenue sources for CCALS, (ii) the research activities of CCALS, and (iii) relevant economic outcomes as a result of the CCALS' work in each fiscal year.

Sincerely,



The Honorable Karen R. Jackson, Executive Director, CCALS

cc w/enclosure: Dr. Jeff Fox, Chairman of the Board, CCALS

Annual Report FY2026

October 1, 2026



Commonwealth Center for Advanced Logistics Systems (CCALS)

**Report of Unaudited Revenues, Funding Sources, Research Activities
and Relevant Economic Outcomes
For Fiscal Year 2026**

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Background

Mission

The Commonwealth Center for Advanced Logistics Systems (CCALS) is a multi-university, multi-disciplinary ecosystem that provides an opportunity for faculty and students to collaborate with private, public, and nonprofit sector professionals to proactively engage logistics and supply chain challenges through projects, research experiences, and career-ready workforce opportunities.

Board of Directors

Dr. Jeffrey J. Fox, Chair

Assistant Dean for Research, University of Virginia, Engineering and Applied Science

Dr. Kuntal Bhattacharyya, Secretary

Director, School of Supply Chain, Logistics and Maritime Operations, Old Dominion University

Dr. Khawaja Mamun, Treasurer

Dean, College of Business and Economics, Longwood University

Dr. Dawit Haile

Dean, College of Engineering and Technology, Virginia State University

Eric Jehu

Vice President, Logistics, Virginia Economic Development Partnership

Andrew Sinclair

Executive VP, Public Policy Development and Executive Director, Virginia Chamber Foundation
Virginia Chamber of Commerce

Barbara Nelson

Vice President, Transportation and Government Affairs, Port of Virginia

Staff

CCALS transitioned to in-house human resource management and on-boarded two full-time and three part-time employees:

Executive Director, the Honorable Karen Jackson, former Commonwealth Secretary of Technology. In this capacity, she works to develop opportunities for CCALS universities to collaborate on logistics and supply-chain-related research, problem-solving, and industry relevant engagements and experiences.

Partnership Development Coordinator, June House

Develops and maintains relationships with government, industry, academic, and community partners. The position also supports program planning and execution, grant and contract compliance, reporting, and coordination across CCALS initiatives.

Senior Fellow (PT), David Hinton

Focuses on operationalizing the Cardinal Center for Autonomy and Energy, including partner and resource coordination, program planning, and implementation. He also supports resource development, strategic planning, and business development to expand the Center's capabilities, partnerships, and long-term sustainability.

Senior Fellow (PT), Tom Markee

Responsible for CCALS' accounting and payroll, tax filings, and audit. He transitioned these activities in-house beginning in 2026.

Fellow (PT), Sai Gireesh Komaragiri

Coordinates the activities, membership, and engagement of the CCALS Business Advisory Council and leads planning for the organization's annual logistics conference. He also contributes broad logistics and supply-chain expertise to CCALS programs, partnerships, and outreach activities.

Partners and Collaborators



The Port of Virginia
portofvirginia.com



Virginia Economic Development
Partnership | vedp.org



THE VOICE of BUSINESS

Virginia Chamber
vachamber.com



Longwood University
longwood.edu



Old Dominion University
odu.edu



University of Virginia
virginia.edu



Virginia Commonwealth University
vcu.edu



Virginia State University
vsu.edu



The Chartered
Institute of Logistics
and Transport

The Chartered Institute of
Logistics and Transport
ciltna.com



Center for Hardware and
and Trust | nsfchest.org



Virginia Clean Cities
vacleancities.org



INLAND VALLEY DEVELOPMENT AGENCY

Inland Valley
Development Agency
ivdajpa.org



Electrifying Virginia
Electrifyingva.com



**Virginia Tobacco Region Revitalization
Commission** | revitalizeva.org



**Virginia Department of
Aviation**
doav.virginia.gov



Virginia Department of Energy
energy.virginia.gov



Virginia Clean Energy Innovation Bank
[energy.virginia.gov/renewable-
energy/VCEIB.shtml](http://energy.virginia.gov/renewable-energy/VCEIB.shtml)

Budget Language

Required Report Elements

M.1. Out of the appropriation in this Item, \$350,000 the first year and \$350,000 the second year from the general fund is designated for the Commonwealth Center for Advanced Logistics (CCALS) to provide seed money for collaborative public sector projects with partners, such as the Port of Virginia, Department of Corrections, and the Virginia Department of Transportation.

2. CCALS shall submit a report by October 1st of each year to the Secretary of Commerce and Trade, the Chairs of the House Appropriations and Senate Finance and Appropriations Committees, the Director of the Department of Planning and Budget, and VIPA to include (i) all planned and actual revenue and expenditures along with funding sources, including state, federal, and other revenue sources for CCALS, (ii) the research activities of CCALS, and (iii) relevant economic outcomes as a result of the CCALS' work in each fiscal year.

Highlights

Fiscal Year 2026 was a year of transition and growth for CCALS, marked by the operationalization of major funded programs, deliberate investments in organizational capacity, expanded partnerships and opportunities, continued delivery for established partners, and close alignment of CCALS resources with Commonwealth priorities.

1. Launching New Programs

CCALS focused on moving newly funded Virginia Tobacco Region Revitalization Commission (TRRC), Virginia Department of Aviation, and Virginia Department of Energy programs from award and planning



into active implementation. A significant milestone was the formal launch and ribbon-cutting for the TRRC-funded Energy-Centric UAS Center for Critical Infrastructure, subsequently branded as the **Cardinal Center for Autonomy and Energy**. Five CCALS Fellows representing Virginia Tech, Christopher Newport University, James Madison University, and American University helped develop the Center's brand and market strategy. (see **Appendix 1 for more information**)

Left: Cardinal Center for Autonomy and Energy ribbon-cutting

CCALS and its partners formally launched the Cardinal Center for Autonomy and Energy, supported by the Virginia Tobacco Region Revitalization Commission and collaborating aviation, energy, academic, and industry organizations.

2. Strengthening Institutional Capacity

CCALS invested in the financial, administrative, compliance, grant-management, and reporting systems needed to support increased activity and a growing portfolio of funded programs. These efforts established a stronger foundation for program and expenditure oversight, enhanced federal reporting, responsible financial stewardship, and future growth.

3. Expanding Partnerships and Opportunities

CCALS pursued new opportunities by responding to a NASA Request for Information, submitting an FAA proposal with James Madison University for UAS workforce programming, and submitting and securing a Tobacco Commission planning grant for an AI-enabled UAS payload.

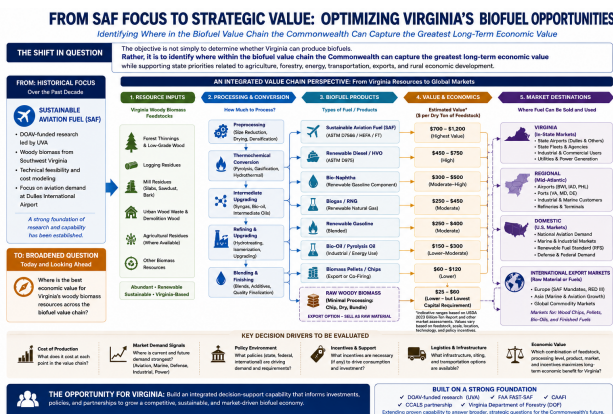
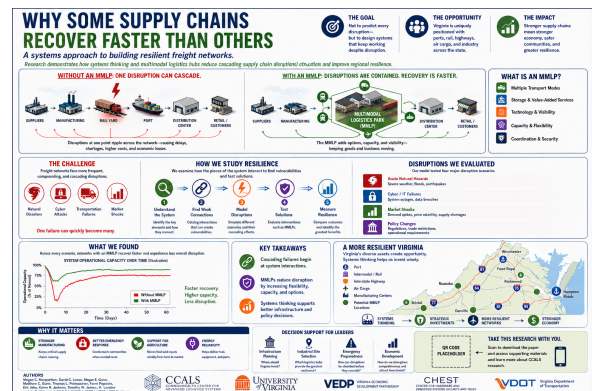


Outreach activities included launching the annual **Next-Gen Smart Logistics Conference** in partnership with Old Dominion University and the Chartered Institute of Logistics and Transport, North America; participating in ODU's **Port Week**; the **Future of Flight: Drone Technology in Action** event in Bristol; and **Hydrogen Day** in Dinwiddie County.

Left: 2025 Next-Gen Smart Logistics Conference

4. Performance and Delivery

While launching new programs, CCALS continued to fulfill its commitments to existing partners and projects. Work included ongoing support for sustainable aviation fuel, Multimodal Logistics Parks, and other established initiatives, with an emphasis on responsiveness, quality deliverables, and maintaining momentum across the organization's portfolio.



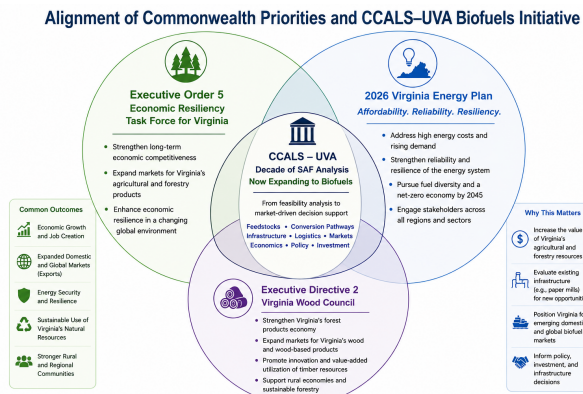
CCALS continued its longstanding collaboration with the Virginia Department of Aviation, the University of Virginia, and other partners to assess the readiness and competitiveness of Virginia's sustainable aviation fuel supply chains. The work included continued supply-chain modeling and stakeholder engagement related to feedstocks, production, transportation, blending, storage, and distribution.

CCALS also continued its collaboration with UVA and the Virginia Economic Development Partnership on

Multimodal Logistics Parks and freight-system resilience. The research examined how strategically located multimodal hubs could increase routing flexibility and intermodal connectivity, reduce cascading impacts during disruptions, and support future infrastructure and economic-development decisions.

5. Strategic Alignment and Commonwealth Support

CCALS aligned its expertise, partnerships, and resources with Administration priorities, Blueprint Virginia 2035, and the evolving needs of Commonwealth agencies and stakeholders. This alignment directed CCALS activities toward areas in which its capabilities could support Virginia’s economic development, workforce, infrastructure, logistics, energy, and technology objectives.



Building on more than a decade of SAF research, CCALS began broadening the discussion from a single aviation-fuel opportunity to a more comprehensive examination of Virginia’s biofuel value chain. The evolving work considers how Virginia can derive the greatest long-term value from its agricultural and forestry resources across multiple products and markets while supporting the 2026 Virginia Energy Plan, Executive Directive 2

and the Virginia Wood Council, and Executive Order 5 and the Economic Resiliency Task Force. The objective is to provide integrated, evidence-based decision support—not to advocate for a particular fuel, feedstock, or production pathway.

CCALS also worked closely with the Virginia Chamber of Commerce to align its activities with the Chamber’s expressed priorities, including Blueprint Virginia 2035 and its focus on supply chains, international trade, infrastructure, workforce, and statewide economic competitiveness.

6. Talent Development

During FY2026, CCALS employed four Fellows, working under the direction of the Executive Director, to support projects at the intersection of logistics, energy, and emerging technology. Representing Virginia Tech, James Madison University, American University, and Christopher Newport University, the multi-university team contributed to work involving sustainable aviation fuels, hydrogen-hybrid applications, and unmanned systems.

As the Cardinal Center for Autonomy and Energy moved from concept to launch, the Fellows helped translate its highly technical capabilities into an accessible and recognizable public identity – shaping the Center’s branding, messaging, marketing strategy, and outreach materials. Their work created a stronger platform for communicating the CCAE mission to industry, government, communities, and prospective partners.

An additional Fellow from Old Dominion University supported production of the annual logistics conference and continued development of the CCALS Business Advisory Council, extending student engagement into the organization’s broader outreach and partnership-building activities.

Financial Report

CCALS
Statement of Activity
FY 26 Actuals Compared to FY Budget

	<u>Actuals</u>	<u>Budget</u>	<u>Actual vs Budget</u>
Revenue			
Revenues			
Government - Local, State, Federal	\$ 350,000.00	\$ 350,000.00	\$ -
Grants/Foundations	196,332.38	15,300.00	181,032.38
In-Kind Revenue	1,950.00	-	1,950.00
Conference Revenue	7,242.28	-	7,242.28
Total for Revenues	555,524.66	365,300.00	190,224.66
Expenditures			
Payroll Expenses / Management	183,868.21	98,285.00	85,583.21
Contract Labor	21,333.32	8,000.00	13,333.32
Professional Dues	792.96	3,000.00	(2,207.04)
Professional and Legal Fees	20,294.50	10,000.00	10,294.50
Accounting/Bookkeeping/Payroll	31,424.64	22,000.00	9,424.64
General Liability	5,273.98	6,000.00	(726.02)
Printing and Publications	-	2,600.00	(2,600.00)
Trainings and Conferences	3,318.00	-	3,318.00
Travel Expense	566.75	3,200.00	(2,633.25)
Program Expenses	50,207.36	82,080.00	(31,872.64)
Technology	12,399.00	15,000.00	(2,601.00)
Interest/Card Fees/Bank Fees	35.00	-	35.00
Membership Development	2,300.00	25,000.00	(22,700.00)
Sponsorships	9,440.21	-	9,440.21
Total for Expenditures	341,253.93	275,165.00	66,088.93
Net Suprlus	\$ 214,270.73	\$ 90,135.00	\$ 124,135.73

Supporting Capacity Building

As part of its organizational capacity-building efforts, CCALS completed the transition to bring day-to-day accounting and financial management in-house and selected a new independent auditing firm better aligned with the organization's expanding portfolio of state and federal awards.

Together, these changes provide more timely visibility into program budgets, expenditures, reimbursements, and cash flow; strengthen internal controls and financial documentation; and create a clearer separation between ongoing financial management and independent audit review. The enhanced structure supports Board oversight, improves CCALS's ability to meet applicable federal funding and reporting requirements, and reinforces the organization's commitment to transparency, compliance, and responsible stewardship of public and partner resources.

Publications and Scholarly Impact

Publications are a central component of CCALS's mission to advance logistics and supply chain research across Virginia and beyond. Through peer-reviewed papers, technical reports, and academic collaborations, CCALS and its partners contribute to a growing body of knowledge that informs practice, policy, and innovation across interconnected logistics and supply-chain domains – including transportation, warehousing, security/resilience, manufacturing, and energy.

*CCALS and its partners
publish applied research
that strengthens
Virginia's position as a
national and international
leader in logistics and
supply-chain innovation.*

These works enhance the Commonwealth's visibility within national and international research communities, demonstrating Virginia's leadership in applied logistics, advanced manufacturing, and supply chain resilience. Collectively, they reflect the strength of CCALS's multi-university, public-private model and its commitment to advancing research that drives innovation, strengthens competitiveness, and delivers measurable impact for Virginia and its partners. ***See Appendix 2: Scholarly Writings and Published Research for a list of select FY26 publications.***

Commitment to Commonwealth Priorities

A Catalyst for Economic Growth and Resilience in Virginia

The Commonwealth Center for Advanced Logistics Systems provides Virginia with a flexible, cross-sector platform for advancing priorities at the intersection of logistics, infrastructure, energy, technology, and workforce development. Through its nonprofit consortium model, CCALS brings together universities, government agencies, nonprofit organizations, and industry partners to address complex challenges that no single organization can effectively address alone.

CCALS extends the value of Commonwealth support by:

- leveraging external funding, expertise, and partner resources to advance Virginia initiatives;
- connecting Commonwealth agencies and businesses with university capabilities and national partners;
- increasing Virginia's visibility through publications, conferences, demonstrations, and national and international collaborations; and
- maintaining an accessible, Virginia-based resource that can respond to emerging logistics, supply-chain, infrastructure, and workforce needs.

Enhancing Logistics and Supply-Chain Resilience

CCALS strengthens Virginia's logistics sector by examining supply-chain vulnerabilities, transportation networks, infrastructure dependencies, and opportunities to improve system resilience. In collaboration with key Commonwealth stakeholders – including the Port of Virginia, the Virginia Department of Aviation, the Virginia Department of Transportation, and the Virginia Economic Development Partnership – CCALS supports research and decision-making related to multimodal freight networks, aviation-fuel supply chains, transportation resilience, and long-term infrastructure investment.

This work helps translate academic research and complex systems analysis into practical information that can support economic development, emergency preparedness, infrastructure planning, and industrial competitiveness.

Advancing Innovation and Regional Opportunity

CCALS supports Virginia's innovation economy by connecting emerging technologies with practical public- and private-sector applications. The development of the **Cardinal Center for Autonomy and Energy**, funded by the Virginia Tobacco Region Revitalization Commission and supported by aviation, energy, academic, and industry partners, demonstrates CCALS's ability to combine Commonwealth investment with specialized expertise from Virginia and beyond.

Partnerships with organizations such as the Inland Valley Development Authority and UAS Center at SBD, the Virginia Department of Energy, the Virginia Department of Aviation, George Mason University, regional airports, and industry partners are helping establish a platform for UAS testing, technology demonstrations, workforce development, and critical-infrastructure applications. This work positions Southern and Southwest Virginia to participate in emerging technology and energy markets while supporting regional economic diversification.

Developing Virginia's Workforce and Talent Pipeline

CCALS's workforce-development activities align with VEDP's *Unleash a Talented Workforce*

strategy and the Virginia Chamber of Commerce’s Blueprint Virginia 2035 priority of strengthening Virginia’s talent pipeline. Through fellowships, applied research, industry-informed training, and career-exploration initiatives, CCALS connects students and workers with emerging opportunities in logistics, autonomous systems, energy, advanced manufacturing, and related technologies.

These activities also help employers, universities, and public-sector partners identify evolving skill requirements and develop workforce pathways responsive to regional and industry needs.

Leveraging Cross-Sector Collaboration for Greater Impact

CCALS exemplifies the Commonwealth’s emphasis on collaboration by serving as a neutral convener and integrator across government, industry, academia, and regional organizations. Its partnerships with VDOT, DOAV, the Tobacco Region Revitalization Commission, VEDP, Virginia Energy, the Port of Virginia, the Virginia Chamber of Commerce, and other stakeholders demonstrate how shared expertise and resources can be aligned around common objectives.

By connecting specialized capabilities to clearly defined Commonwealth needs, CCALS helps reduce fragmented efforts and provides a pathway for moving ideas from research and planning through demonstration, implementation, and broader adoption.

Through its focus on logistics resilience, innovation, workforce development, regional opportunity, and cross-sector collaboration, CCALS supports Virginia’s economic-development and competitiveness goals. Its value lies not only in individual projects and deliverables, but also in the durable partnerships, reusable analytical capacity, workforce connections, and implementation pathways created through those efforts. By continuing to align its portfolio with Administration priorities, Blueprint Virginia 2035, and the needs of Commonwealth agencies and industry, CCALS remains a valuable resource for advancing Virginia’s economic growth and long-term resilience.

Appendix 1 - Cardinal Center for Autonomy and Energy

The Cardinal Center for Autonomy and Energy is being established as a leading national resource for the development, testing, and deployment of unmanned aerial systems (UAS). Led by CCALS, the Center is supported by investments and partnerships involving the Virginia Tobacco Region Revitalization Commission's Energy Ingenuity Fund, the Virginia Department of Energy, the Virginia Department of Aviation, the Richard Bland College Foundation, the UAS Center at SBD, and George Mason University's Rapid Prototyping Research Center. Its multi-site operating network includes two sites in Dinwiddie County, one in Blackstone, one in Danville, and one in Wise County.



The Center brings together capabilities in advanced propulsion – including hydrogen and hydrogen-hybrid systems – RF spectrum awareness, integrated sensing and communications, cyber-physical systems, advanced manufacturing, and technology validation.

Center offerings include:

- Hydrogen-hybrid UAS flight testing and infrastructure integration.
- Secure communications and RF/ISAC evaluation environments.
- FAA-aligned BVLOS testing, data collection, and operational analysis.
- Workforce training aligned with FAA, NIST, and industry-recognized credentials and standards.
- Technology demonstrations for public- and private-sector partners.
- Advanced manufacturing, prototyping, and drone validation.
- Dual-use prototyping for defense and critical-infrastructure missions.
- System modeling, deployment planning, and regulatory alignment.

Appendix 2: Scholarly Writings and Published Research

Toward a Coordinated UAS Strategy in Virginia: Leveraging Tobacco Region Investments to Strengthen Statewide Capacity Across Energy, Defense, Agriculture, and Critical Infrastructure

Written by Dr. Deborah D. Stine, Founder of the Science and Technology Policy Academy, under the guidance of Karen R. Jackson, Senior Fellow, CCALS and Dave Hinton, Senior Fellow, Cardinal Center for Autonomy and Energy at CCALS (2026). Available upon request.

[Readiness and Competitiveness of Virginia's Sustainable Aviation Fuel \(SAF\) and Biofuels Supply Chains: Part II. 2025-2026](#)

The Virginia Sustainable Aviation Fuel (SAF) Coalition: representatives from the University of Virginia's School of Engineering and Applied Sciences, the Commonwealth Center for Advanced Logistics Systems (CCALS), the Virginia Department of Aviation (DOAV), and the Commercial Aviation Alternative Fuels Initiative (CAAFI)

[Assessing the Readiness and Competitiveness of Virginia's Sustainable Aviation Fuel \(SAF\) Supply Chains](#)

Produced for the Virginia Department of Aviation (2026)

Lisa Colosi Peterson; Joshua Hale; Nicholas Jabs, James H. Lambert; Abigail Van Eerden, University of Virginia (UVA), School of Engineering and Applied Sciences

Karen R. Jackson, Commonwealth Center for Advanced Logistic Systems (CCALS)

Rich Altman, Commercial Aviation Alternative Fuels Initiative (CAAFI)

[Geospatially explicit technoeconomic assessment of sustainable aviation fuel production: A regional case study in Virginia](#) (2026)

Curtis D. Davis, Shravan Sreekumar, Richard Altman, Andres F. Clarens, James H. Lambert, Lisa M. Colosi

[Systems Modeling of Sustainable Aviation Fuel Supply Chains in Virginia: A Comparative Analysis of Imported and In-State Pathways](#), Joshua Hale, May 2026

[Carbon Life Cycle Assessment of Electricity Produced from Forest-Derived Biomass in Virginia](#)

Prepared for the Virginia Department of Forestry (2026)

Lisa Colosi Peterson, Nafisa Ahmed, Abigail Van Eerden

[Report of the Biomass Advisory Panel, 2024](#)

[Connecting Transportation Innovation Through Logistics](#)

Karen R. Jackson, Commonwealth Center for Advanced Logistic Systems (CCALS) (2026)

Government, Industry and Academia Collaboration: Virginia's CCALS Model –

<https://pubsonline.informs.org/doi/10.1287/orms.2025.04.17/full> (2026)

Enterprise Resilience and Trust in Multiscale Logistics Systems, in *The Future of Risk Analysis and Management: Technology, AI, Policy, and the Transformation of Risk Transfer*, special edition - <https://ieeexplore.ieee.org/document/11503566> (2026)

Validation of Supply Chains AI/ML Model with Synthetic Data for Embedded Semiconductors - <https://ieeexplore.ieee.org/document/11503552> (2026)

A Systems Modeling Framework for Resilient Infrastructure Planning with Dynamic Context States - <https://ieeexplore.ieee.org/document/11503551> (2026)

Gunn, M.C., Loose, D.C., Gunn, M.E., Marcellin, M.C., Moghadasi, N., Polmateer, T.L., Collier, Z.A., Jackson, K.R., Linkov, I., Lambert, J.H. (2026). *Order sensitivity of Integrated Electronics Supply Networks in Emergent Customer and Market Conditions*. 12th Annual IEEE International Conference on Control, Decision, and Information Technologies. July 2026.

D. C. Loose, B. H. Calhoun, M. E. Gunn, M. C. Marcellin, I. Linkov, and J. H. Lambert, "Self-powered sensors and risk monitoring in textile supply chains," in *Proc. IEEE Int. Conf. Connected Innovation and Technology (ICCITX.0)*, Apr. 2026, submitted.

Gunn, M.C., Loose, D.C., Gunn, M.E., Marcellin, M.C., Moghadasi, N., Polmateer, T.L., Collier, Z.A., Linkov, I., Lambert, J.H. (2026). *Validation of Supply Chains AI/ML Model with Synthetic Data for Embedded Semiconductors*. 20th Annual IEEE International Systems Conference. *In Press*.

Gunn, M.E., Loose, D.C., Gunn, M.C., Sellers, E., Moghadasi, N., Polmateer, T.L., Collier, Z.A., Linkov, I., Lambert, J.H. (2026). *Enhancing Trust in Hardware Supply Chains with Framework for Bills of Materials*. Under Review.

Gunn, M.E., Dorn, R.R., Gunn, M.C., Loose, D.C., Ayyub, B.M., Barletta, W.A., Organek, J.F., Piras, M., Zichichi, S.F., Lambert, J.H. (2026). *Design Evaluation of Machine Learning and Sensors for Detection of Wildfires*. Under Review.

Gunn, M.E., Dorn, R.R., Gunn, M.C., Loose, D.C., Ayyub, B.M., Barletta, W.A., Organek, J.F., Piras, M., Zichichi, S.F., Lambert, J.H. (2026). *Systems Optimization and Risk Management of Sensor Networks for Detection of Wildfires*. 2026 IEEE International Systems Conference. *In Press*.

Gunn, M.C., Loose, D.C., Gunn, M.E., Moghasasi, N., Polmateer, T.L., Collier, Z.A., Linkov, I., Lambert, J.H. (2025). *Semiconductor Supply Chain Synthetic Data Generation Using Knowledge Graphs*. 2025 Resilience Week. DOI: 10.1109/RWS66711.2025.11304458

Gunn, M.E., Dorn, R.R., Gunn, M.C., Loose, D.C., Ayyub, B.M., Barletta, W.A., Organek, J.F., Piras, M., Zichichi, S.F., Lambert, J.H. (2025). *Systems Acquisition and Enterprise Risk Analysis of Wildfire Detection*

and Monitoring Technologies. 2025 11th International Conference on Control, Decision and Information Technologies. DOI: 10.1109/CoDIT66093.2025.11321816.

N. Moghadasi, Z. A. Collier, D. C. Loose, M. C. Gunn, M. E. Gunn, I. Linkov, K. R. Jackson, and J. H. Lambert, "Safety and security priorities of smart embedded devices in a technology enterprise," *Reliability Engineering & System Safety*, 2026

D. C. Loose, Z. A. Collier, N. Moghadasi, E. Seller, I. Linkov, and J. H. Lambert, "Enterprise resilience of semiconductor supply chains with critical materials and extreme weather," *IEEE Systems Journal*

D. C. Loose, M. E. Gunn, I. Linkov, M. C. Gunn, N. Moghadasi, Z. A. Collier, and J. H. Lambert, "Knowledge automation and requirements analysis in e-commerce fraud detection," in **Proc. IEEE International Symposium on Systems Engineering (ISSE 2025)**, 2025, accepted for publication

M. E. Gunn, R. R. Dorn, M. C. Gunn, D. C. Loose, B. M. Ayyub, W. A. Barletta, J. F. Organeek, M. Piras, S. F. Zichichi, and J. H. Lambert, "Systems optimization and risk management of sensor networks for detection of wildfires," in *Proc. IEEE Int. Syst. Conf. (SysCon)*, pp.1–8, Apr. 2026.

Z. Gunn, A. Roy, S. Hasan, D. C. Loose, M. E. Gunn, D. S. Truesdell, J. H. Lambert, and B. H. Calhoun, "Self powered systems as security buttons for improving trust in wildfire sensor nodes," submitted to *Proc. IEEE Int. Conf. Electronics, Circuits and Systems (ICECS)*, under review, 2026.

Z. Gunn, S. Hasan, A. Roy, T. Elliott, D. C. Loose, D. S. Truesdell, J. H. Lambert, and B. H. Calhoun, "Self-powered systems for visibility and trust in supply chains," submitted to *Proc. IEEE Int. Conf. Technology and Engineering Management (TEMSCON)*, under review, 2026.

D. C. Loose, B. H. Calhoun, D. S. Truesdell, M. C. Marcellin, M. E. Gunn, M. C. Gunn, T. L. Polmateer, I. Linkov, and J. H. Lambert, "Self-powered sensors enabling mission level trust in logistics systems and supply chains," submitted to *Proc. IEEE Int. Symp. Systems Engineering (ISSE)*, 2026.

D. C. Loose, B. H. Calhoun, D. S. Truesdell, M. C. Marcellin, M. E. Gunn, M. C. Gunn, T. L. Polmateer, I. Linkov, and J. H. Lambert, "Self-Powered Sensors Enabling Mission Level Trust in Logistics Systems and Supply Chains," in *Proc. IEEE Int. Symp. Syst. Eng. (ISSE)*, 2026, accepted, awaiting publication.