

COAST Autonomous Partners with the University of South Florida to Develop Automated PID Optimization Tool

COAST Autonomous and USF collaborate to create an automated PID optimization tool, boosting autonomous vehicle control accuracy and efficiency.

PASADENA, CA, UNITED STATES, September 30, 2025 /EINPresswire.com/ -- COAST Autonomous, Inc. ("COAST"), a leader in autonomous vehicle technology, today announced an agreement with the University of South Florida ("USF"), a top-ranked research institution, to jointly develop an automated tool for optimizing Proportional–Integral–Derivative (PID) controller parameters.

This initiative builds upon the academic partnership established earlier this year between COAST and researchers in USF's College of Engineering, strengthening their shared commitment to advancing autonomous systems through innovation and applied research.

PID controllers are fundamental to autonomous vehicle performance, influencing stability, responsiveness, and safety. Traditional methods of tuning PID parameters are time-consuming, reliant on expert input, and can produce inconsistent results. The new automated optimization tool will leverage advanced algorithms to improve speed,

COAST Autonomous +
University of South Florida
DEVELOPING AN
AUTOMATED PID
OPTIMIZATION TOOL
Building on our academic partnership to advance the future of autonomous mobility

Early Prototype Expected Next Year

COAST Autonomous and the University

of South Florida announce a new

partnership to develop an automated

PID optimization tool, advancing the

future of autonomous mobility. Early

prototypes are expected next year.

accuracy, and adaptability, delivering robust control solutions that enhance vehicle efficiency and reliability in real-world operations.

"Partnering with the University of South Florida marks another step in COAST's ongoing work to advance autonomous mobility," said David M. Hickey, President of COAST Autonomous. "The automated PID optimization tool improves system accuracy and adaptability, further enabling the growth and scalability of our technology across industries."

The agreement will bring together leading USF faculty and researchers in control systems and automation. "Partnering with COAST allows our students and researchers to apply cutting-edge methods to real-world challenges," said Arman Sargolzaei, associate professor of mechanical and aerospace engineering at the University of South Florida. "Together, we will not only advance the science of control systems but also prepare the next generation of engineers to shape the future of automation."

The project will also receive support from the Florida High Tech Corridor's Matching Grants Research Program, a long-standing initiative that fosters applied research between regional industry partners and academia.

"The Corridor's investment accelerates this research collaboration while providing USF students with hands-on experience that prepares them for the workforce," said Elizabeth Nelson, Corridor Program Director at USF. "COAST Autonomous represents the best of our region's growing advanced manufacturing innovation and this collaboration will have impact well beyond this project."

The joint effort exemplifies how academia and industry can work hand-in-hand to develop practical, scalable solutions that fuel the future of autonomous mobility. Early prototypes of the automated PID optimization tool are anticipated to be available for testing in the coming year.

About COAST Autonomous, Inc.

COAST Autonomous is redefining the future of commercial, industrial, and military transportation. With nearly three decades of innovation, COAST specializes in deploying Autonomous Road Machines (ARMs) engineered to meet stringent machine safety standards. Unlike competitors focused solely on general automotive autonomy, COAST delivers ruggedized, infrastructure-independent, and scalable automation designed for real-world applications. Focused on automation, digitalization, and operational efficiency, COAST is leading the transformation of critical industries through high-performance autonomous solutions. Learn more at www.coastautonomous.com.

About the University of South Florida

The University of South Florida is a top-ranked research university serving approximately 50,000 students from across the globe at campuses in Tampa, St. Petersburg, Sarasota-Manatee and USF Health. USF is recognized by U.S. News & World Report as a top 50 public university and the best value in Florida. U.S. News also ranks the USF Health Morsani College of Medicine as the No. 1 medical school in Florida and in the highest tier nationwide. USF is a member of the Association of American Universities (AAU), a group that includes only the top 3% of universities in the U.S. With an all-time high of \$738 million in research funding in 2024 and as a top 20 public university for producing U.S. patents, USF uses innovation to transform lives and shape a better future. The university generates an annual economic impact of more than \$6 billion. USF's Division I athletics teams compete in the American Conference. Learn more at

www.usf.edu.

About the Florida High Tech Corridor

Since 1996, The Florida High Tech Corridor has been a force multiplier working to unleash the exponential potential of the 23-county region we represent. Anchored by three of the country's top research institutions–University of Central Florida, University of South Florida and the University of Florida–we converge and catalyze the capacity of high tech, innovation and bright minds to generate a global ripple effect that advances the lives of people in the communities we serve. Powered by an ethos of collaboration, we align opportunities, funding and resources in academia, industry and economic development to unleash our region's potential. Learn more at www.floridahightech.com

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