Orolia Academic Partnership Program to Support Positioning, Navigation & Timing Research at Colleges and Universities

OAPP Introductory Webinar Featuring Orolia's Skydel GNSS Simulation Engine Scheduled Dec. 14

Orolia is the world leader in Resilient Positioning, Navigation and Timing (PNT) solutions that improve the reliability

ROCHESTER, N.Y., UNITED STATES, November 30, 2021 / EINPresswire.com/ -- Orolia, the world leader in Resilient Positioning, Navigation and Timing (PNT) solutions, has created the Orolia Academic Partnership Program (OAPP) to build a community to help foster global PNT research and collaboration at top engineering schools and research institutions. Orolia will provide qualified institutions with access to the company's signature Skydel Global Navigation Satellite System (GNSS) Simulation Engine, the industry's most advanced GNSS and PNT testing and simulation tool.

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>
> *Thomas Hobiger, University of Stuttgart*

Supporting its vision to form an interactive community focused on the future of GNSS and PNT research and education, Orolia created an online forum (learn.orolia.com) that allows users to interact with other users and Orolia experts, share information, ask questions and receive feedback. A host of white papers, application notes and detailed technical documents are also available.

Skydel is an innovative GNSS simulation platform that leverages software, advanced graphics cards (GPU) and software-defined radios (SDR). Users can build custom signals and connect to other systems and devices (such as

sensors, IMU, etc.) through Orolia's open-source plug-in capabilities. Skydel also includes the ability to generate and test the vulnerability of GNSS/GPS with integrated interference, jamming and spoofing capabilities. Because Skydel leverages commercial off-the-shelf (COTS) hardware, it is the only GNSS simulation solution that can run independently of simulation vendors' hardware.

"Skydel platform's versatility and capabilities allow users to perform tests in the field, in the lab, and at home - whether you are running a turnkey system provided by Orolia, our partners, or through your own proprietary hardware," said Lisa Perdue, Director, PNT Testing and Simulation at Orolia. "Unlike other GNSS simulators, Skydel is the only professional platform offering a plug-in architecture that provides real-time and direct access to the core simulation engine. This plug-in architecture unlocks a new range of application and customization that is impossible to imagine with traditional instruments."

Perdue added that plug-ins can be shared with the open-source community to leverage all the benefits from a collaborative ecosystem. "We believe this modern architecture is the perfect approach to support academic research as well as allowing users to go further into system integration and customization," she said.

More than 40 schools located throughout North America, Europe, South/Central America and Asia-Pacific are currently enrolled in OAPP, including the Institute of Navigation (INS) at the University of Stuttgart in Germany where Skydel is fueling pioneering student research.

"Skydel allows our students to carry out complex field tests like simulating laboratory scenarios in real-time and using radio hardware to send signals to commercial or self-developed receivers," said Professor Thomas Hobiger with INS. "We can compare our navigation solutions with the simulated trajectories while showing the absolute accuracy of our algorithms, meaning the deviation from the actual position."

Hobiger added the INS wants graduates to be well-prepared for the demands of the industry and future innovation. According to Statista consumer research, the installed base of GNSS devices worldwide stood at 6.4 billion units in 2019. The Asia-Pacific region led the way, accounting for 3.4 billion GNSS devices, with forecasts suggesting this is set to rise to 5.1 billion devices by 2029.

"OAPP members can contribute to this community to share their advancements, upload code or make their work available to others in our GitHub repository," said Perdue. "The goal is to ensure members can access the ideas and expertise of other users across the globe. "The need for continuous and reliable GNSS signals as well as methods to protect those signals from jamming, spoofing, or meaconing is growing exponentially worldwide. These are the main reasons why engineering students should gain valuable experience using a platform that provides accurate PNT simulation and measurement."

Webinar Scheduled
Orolia will host a webinar on Dec. 14 at 11:00 a.m. EST to introduce OAPP and answer questions about the program and Skydel. To register, please visit: https://www.orolia.com/event/orolia-academic-partnership-program-launch/

About Orolia
Orolia is the world leader in Resilient Positioning, Navigation and Timing (R-PNT) solutions that improve the reliability, performance and safety of critical, remote or high-risk operations, even in GNSS-denied environments. Orolia provides virtually fail-safe GNSS and PNT solutions for military and commercial applications worldwide and is widely recognized for its best-in-class customer service and innovation. www.orolia.com

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