

LATYS Advances IoT Connectivity with Cutting-Edge RIS Solutions at CloT Conference

MONTREAL, QUEBEC, CANADA, December 4, 2024 /EINPresswire.com/ -- LATYS is proud to announce a major breakthrough in IoT connectivity, with our R&D team presenting two groundbreaking research papers at the prestigious CloT Conference in Montreal. These publications highlight our commitment to advancing wireless communication technology through innovative Reconfigurable Intelligent Surface (RIS) solutions, which address critical challenges in WiFi-connected IoT systems.



Figure 3: Non-reciprocal transmissive RIS, LATYS FOCUS.

Our research focuses on improving communication efficiency and reliability in environments impacted by power disparities and spectrum congestion, which are common challenges in IoT deployments. These advancements are featured in two key papers: [LATYS FOCUS RIS](#) and [RIS Full-Duplex Communication](#)

The first paper, "Non-Reciprocal RIS Solution for Power Mismatch in WiFi-Connected IoT Devices," introduces LATYS FOCUS, a non-reciprocal RIS designed to solve the near-far problem in WiFi networks. By dynamically amplifying client signals, this technology ensures efficient, balanced communication between access points and power-limited IoT devices. The result is optimized network performance, even in power-constrained environments, offering significant potential for transforming WiFi connectivity in IoT ecosystems.

Our second paper, "Non-Reciprocal RIS-Aided Full-Duplex Communications: IoT Applications," explores the use of RIS technology to enhance full-duplex communication systems. As IoT adoption accelerates, spectrum congestion is becoming an increasingly critical challenge. This research demonstrates how non-reciprocal RIS setups can double spectrum efficiency by managing independent transmission and reception paths, providing a robust solution for high-demand IoT environments. The findings underscore LATYS's leadership in advancing wireless communication technologies and our dedication to driving the next generation of IoT solutions.

For more detailed information on these innovations and to explore how our RIS solutions can enhance your IoT connectivity, visit: www.latysfocus.com.

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