

# News Release



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## **Tyrata's IntelliTread™ Technology Milestone Brings Real-time Tread Wear Measurements One Step Closer to Reality**

*Tyrata CTO to speak at the Tire Technology Expo 2019 on achieving the technology milestone...*

**DURHAM, NC—March 6, 2019**—Tyrata, Inc., a tire sensor and data management company, has achieved a significant milestone in the development of its IntelliTread™ real-time tread wear sensors. Recent developments in sensor design and operation have produced repeatable results during tests in a variety of OEM passenger tires. IntelliTread™ sensors use wireless signals to track millimeter-scale changes in tread depth. When commercially available, the sensors will signal when it's time to replace tires or report information about uneven and often dangerous tire wear conditions.

Every year, tire-related accidents claim the lives of hundreds and injure thousands in the US alone. Many of these accidents are due to worn tires. Yet, the only common method to determine tread depth is to manually gauge the tire, such as with a penny held in one of the grooves. While integrated tire pressure sensors have provided improvements in safety, the industry is in desperate need of a way to monitor the thickness of a tire's tread, in real time.

New technology from Tyrata can monitor, track and predict tread wear over the life of any tire. IntelliTread™ sensors determine tread depth using proprietary sensor and electronic technology mounted inside of the tire. When a voltage is applied to the sensor, an electrical signal passes through the tire. As the rubber wears down, the signal changes. Sensor electronics use these signal changes to determine the tire's tread depth, which can then be wirelessly transmitted for further analytics and/or displayed to the consumer.

Tires are complex, heterogeneous structures composed of many raw materials with widely different properties. This makes measuring tread wear challenging. Electrical signals must penetrate all layers, including the steel belts that are core to most modern tires, and be sensitive to millimeter changes in tread depth. Through advances in sensor design and operation, along with electronics and packaging, the Tyrata team has now successfully validated the technology in OEM passenger tires including steel belted radial tires from Hankook and Firestone. Sensors mounted to several sections from each tire produced predictable and repeatable responses when the tread was removed, 1 mm at a time. This technology breakthrough opens up the development of production-level packaging and on-vehicle

integration and testing as the company moves forward in its commercialization of the IntelliTread™ technology.

"With these recent results, Tyrata has demonstrated significant progress in moving from our early bench-top technology demonstrations towards real-world application of our sensors inside of a tire," said Jesko von Windheim, Chief Executive Officer of Tyrata. "By demonstrating reproducible measurements in various consumer tires, we've achieved a major milestone in the development of our technology. Our next goal is long-term, in-tire testing. We are starting to evaluate a host of tires for IntelliTread™ integration and invite collaborators to join us in this next phase of evaluation."

Organizations interested in collaboration opportunities or for tire evaluations may contact Luka Lojk at [Luka.Lojk@Tyrata.com](mailto:Luka.Lojk@Tyrata.com) or +1-704-593-8418.

Participants in the upcoming Tire Technology Expo 2019 in Hannover, Germany can speak directly with Tyrata company representatives. Dr. Aaron Franklin, CTO at Tyrata, will be speaking on Intelligent Tread Wear Sensor Technology on Thursday March 7 at 9:00 am in the Stream 12 - New Advances in Pneumatic Tire Performance. Dr. Franklin will describe how the new technology works, present results from recent testing, describe the roadmap towards commercialization, and discuss the potential impact the technology can have on safety, efficiency and vehicle autonomy. David Koester, VP of Engineering, will also be present at the conference. For more information on Dr. Franklin's talk, visit: <https://www.tiretechnology-expo.com/en/conference-programme.php>

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#### **About Tyrata**

**Tyrata, Inc.** is a sensor and data management company offering wireless sensors and systems that monitor and report on vehicular tire tread wear in real time. The company's IntelliTread™ technology monitors, tracks and predicts tire tread wear over the life of any tire. Tyrata serves consumers, fleet management companies, and high-performance specialists who depend on the integrity of tires for safety, efficiency and profitability. For more information, visit [www.tyrata.com](http://www.tyrata.com).

#### **Keywords:**

tire control sensor, tire safety, nanotechnology, telematics, TPMS, tread wear, wheel sensor