

SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2022 SYMPOSIUM:

LIGHT METALS

Failure, and a Career That is Anything But: An LMD Symposium Honoring J. Wayne Jones

To study materials performance is to push materials to their limits—in creep, in fatigue, and in other demanding environmental conditions. It is to push materials to failure, then to engineer against those failure mechanisms. Over the course of Professor J. Wayne Jones' career, he advanced the state of the art in the study of failure both for creep and fatigue. In the realm of fatigue, he is one of the pioneers of ultrasonic fatigue testing, demonstrating the existence of a fatigue limit for fcc metals in the ultra-high cycle regime. He has worked on a wide range of materials, from light alloys such as magnesium and aluminum to heavier alloys such as nickel superalloys, to less traditional materials such as metal matrix composites and intermetallics.

Later in his career, Professor Jones partnered with the Detroit automotive industry and Thixomat, studying both creep and fatigue in lightweight magnesium alloys. He also worked with the automotive industry to develop lightweight metal matrix composites with high strength and high stiffness. He sought new probabilistic treatments for microstructurally informed fatigue crack nucleation models which could lead to improved lifting predictions.

This symposium honors the breadth of his career by seeking talks primarily in the areas of creep and fatigue. Talks discussing microstructure-sensitive predictions or novel testing/prediction methodologies are of particular interest. Throughout his career, Professor Jones had been a devoted teacher, not only in the classroom but to everyone he interacts with. Just as he has helped to develop alloy systems toward maturity, he has helped many generations of students and young researchers to achieve academic maturity. The Light Metals Division is honored to celebrate his career with this symposium.

ORGANIZERS

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