

European Safety and Reliability Conference

esrel2021.org

CALL FOR ABSTRACTS

Special session on Accelerated Life Testing & Accelerated Degradation Testing

Description

The accelerated life testing (ALT) and accelerated degradation testing (ADT) subject the test units to more extreme stress levels than normal operating conditions so that more information about the lifetime characteristics of a product or device can be collected rapidly. Through extrapolation, the lifetime distribution at the usage stress is then estimated with an appropriate regression model.

Motivation

Thanks to the ever improving manufacturing process and technology, products and devices are becoming highly reliable with substantially long life-spans these days, which makes the standard testing procedure at normal operating conditions practically unfeasible. For gaining sufficient information about the lifetime distribution of a product or even a prototype, such tests are too time-consuming and costly to the industry. For such reasons, ALT and ADT are not only getting increasingly popular but also necessary as they quickly yield information on the lifetime distribution of highly reliable products in a shorter period of time.

Objective

The special session aims to present the contemporary research on statistical modeling, design and inference for accelerated life testing and accelerated degradation testing. The session aims to bring together both academic and industrial researchers and practitioners interested in theoretical developments and practical applications in this reliability field.

Organizer

HAN, David (david.han@utsa.edu), the University of Texas at San Antonio (USA)

The validation of the special sessions will be done under the responsibility of the technical and scientific committee. Organizers are invited to provide a list of reviewers that may be supplemented by TC members to ensure consistency in the evaluation process.