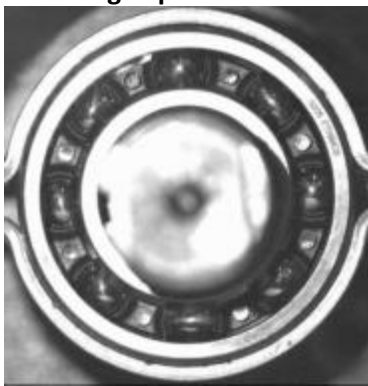




SURVISHNO CONTEST

The contest comprises two questions, based on the analysis of a short video of an operating rolling-element bearing acquired by a high-speed camera with a sampling frequency of 2 kHz. The casing of the bearing is attached to two springs, allowing a rotation of the outer ring.

High-speed video



A rolling element bearing is run under nonstationary speed.

Unconventional mounting



The outer race of the bearing admits rotational displacement.

The contestants shall estimate the instantaneous speeds of the shaft, the fundamental train (cage) and the outer ring. Additionally, the health condition of the bearing shall be diagnosed.

Best contributions will be rewarded with special prizes. Every contributor will be rewarded by a surprise gift and goodies. Authors of the best contributions will have the opportunity to present their work during a SURVISHNO special session. Video files can be found on the Survishno website.

The format of the contributions is a short presentation of 3 slides maximum for the speed estimation method, and 3 slides maximum for the bearing diagnosis. Additionally, the time history of the instantaneous angular speed for the shaft, fundamental train, and the outer ring (2000 samples by second in Hz) in a txt format should be provided. The files should be respectively named, "shaft.txt", "train.txt" and "outer.txt".

Contributions must be sent by email to adrien.marsick@insa-lyon.fr, the deadline to submit a contribution is on July 1st.

Contestants may be individual persons or teams of persons.

Competition is open to participants who registered to the conference.

Participation to the contest is conditioned to registration and attendance to the conference.

Winners will be chosen by a Jury composed of members of the Organizing Committee, on the basis of objective success criteria relying on hidden additional measurements. Data provided in the contest are publicly available.

Subsequent use of the data is allowed only for scientific research. Any publication that will result from subsequent use of the data must reference the "SURVISHNO Contest, Conference Survishno, July 10-13, 2023, Toulouse, France".