

Name: Dr Sorin-Cristian Vladescu

Theme: Tribological Challenges in a Hydrogen Environment – Development and Evaluation of a Novel, Optical Test Apparatus

Related Presentation/Publication

- A. J. Spora, K. K. Yap, Y. Shimizu, C. Tadokoro, S-C. Vladescu, "Tribological Challenges in Hydrogen: Solutions for the Future Energy Transition", (2025) Attached. To be submitted to Tribology International within two weeks
- B. "Unraveling lubricant degradation pathways under hot vaporous water contamination: Implications for High-Temperature Tribological Systems." (2025) – In preparation, to be submitted to Tribology Letters.
 Focus: This publication will highlight both the mechanism of lubricant breakdown (degradation pathways) under elevated temperature/water conditions and the real-world significance for tribological performance.
- C. "First-in-situ film thickness measurements and cavitation visualisation in hydrogen environments via optical fluorescence techniques." (2026) to be submitted to Tribology International.

Focus: This publication will emphasise the novelty of real-time film-thickness measurements and cavitation imaging under hydrogen, using advanced optical methods to capture never-before-seen data.

Besides the above-mentioned publications, we have extensively presented the newly designed test equipment to various visiting academics at King's College London, as well as during two conferences/seminars held at King's College: