



FABER Conference 2026

Hotel Hvar, Jelsa, Croatia

May 5-6, 2026

Tuesday May 5, 2026			
Lecturer	Title of the Presentation	From	To
Papuga	Introduction	9:00	9:10
Halama	Cyclic Behavior and Ratcheting of 42CrMo4 Steel: Introducing the FABEST LCF Competition	9:10	9:40
Pandilov	Influence of Fatigue on the Design of Machine Tools	9:40	10:05
Corsaro	Infrared Thermography and Machine Learning for Enhanced Fatigue Limit Estimation	10:05	10:30
	<i>Coffee break</i>	10:30	11:00
Tezel	Can Additive Manufacturing Replace Conventional Gears? A Fatigue-Oriented Damage Assessment	11:00	11:25
Mülkoğlu	WG5.3 (Welded Joints) in FABER: Progress, Challenges, and Future Directions	11:25	11:45
Sari	Prediction of Ratcheting and LCF Damage Using a Memory Surface in Cyclically Hardening AISi10Mg with Enhanced Uniaxial Ratcheting Resistance	11:45	12:05
Dundulis	Application of Peridynamics (PD) for Numerical Simulation of Low-Cycle Fatigue (LCF) Tests	12:05	12:30
	<i>Lunch break</i>	12:30	14:00
Zacharis	From Benchmarking to Responsibility: Governance and Standardisation Pathways for Validated Fatigue Prediction	14:00	14:30
Kaewunruen	Challenges and progress in fatigue life estimation of railway concrete sleepers in real-world context	14:30	14:50
Balasubramaniam	High-Frequency EMAT for Rail Head Surface Integrity and Residual Stress Analysis	14:50	15:10
Costa Lopes	Damage detection in ultrasonic very high cycle fatigue testing by analysing vibration properties	15:10	15:30
	<i>Guided tour through Jelsa</i>	15:30	17:15
	<i>Coffee break</i>	17:15	17:45
Matušů	High-Cycle Fatigue Response of L-PBF Components Produced with Different Powder Sieving Levels	17:45	18:15
Mendez-Morales	Cumulative One-Parameter Damage Laws for Fatigue Life Prediction of Additively Manufactured Carbon Steel	18:15	18:35
Rauf	Effect of shielding gas on VHCF behavior of Additively Manufactured Nickel based superalloy	18:35	18:55

Wednesday May 6, 2026			
Lecturer	Title of the Presentation	From	To
Amsterdam	Fracture mechanics and physics informed regression analysis of S-N curves with uncertainty quantification	9:00	9:30
Soman	Utilizing non-linear features for monitoring fatigue damage in structures	9:30	9:50
Yıldırım	Fostering Collaboration in Fatigue Assessment: New Benchmarks and Open-Source Tools from FABER	9:50	10:10
Kaplan	Towards Fatigue Benchmarking of Piezoelectric Polymer Nanocomposites: A Case for Expanding the FABER Repository	10:10	10:30
	<i>Coffee break</i>	10:30	11:00
Talemi	Compound Fatigue Problems in Additively Manufactured Materials: Process-Induced Subsurface Defects, Surface Integrity, and Loading Effects	11:00	11:30
Wu	Physics-informed RUL assessment of impacted aluminum panels using stacking ensemble model	11:30	11:50
Karas	Experimental and numerical study of defect influence on the fretting fatigue of LPBF Ti-6Al-4V	11:50	12:10
Tomac	Pixel based mode-shape identification from high-speed camera measurements	12:10	12:30
	<i>Lunch break</i>	12:30	14:00
Papuga	Mean stress effect in multiaxial fatigue strength analysis	14:00	14:30
Šeruga	Prandtl operator approach to fatigue and experimental data from flat specimens	14:30	14:55
Boshnakova	Practical fatigue problems in static and dynamic equipment (welded joints in waister boiler and repeated failure of duplex steel pump element)	14:55	15:15
	<i>Coffee break</i>	15:15	15:45
Pallares-Santasmartas	How robust is the performance of multiaxial fatigue methods when the benchmark is expanded with new materials and loading cases?	15:45	16:05
Natarajan	Evaluation of Axial-Torsional Low Cycle Fatigue tests using Python codes in FABER	16:05	16:25
Janulionis	Fatigue Evaluation of Semi-Trailer Frame Welds Made of LDX 2101 Duplex Steel	16:25	16:50
Papuga	FABER Conference 2026 at its end	16:50	17:00
	<i>Residual Stress Relieve: Wine tasting in Vrboška</i>	18:30	---

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