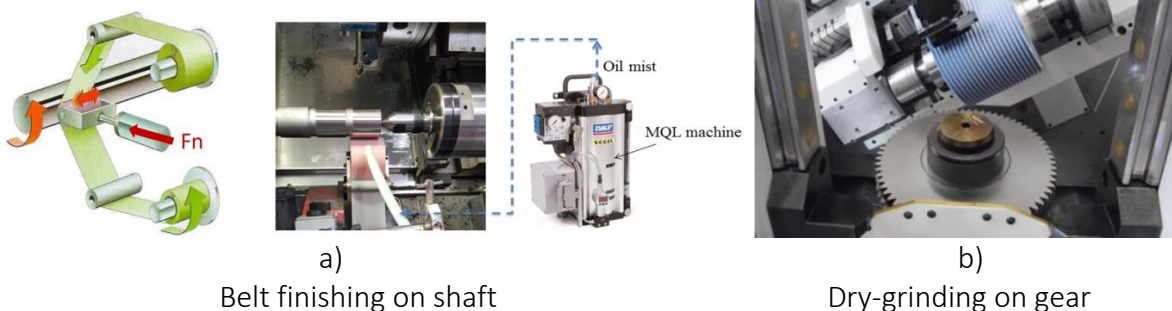


Improvement of the fatigue performance of automotive components through innovative eco-friendly finishing operations

The workshop will present the results of the EU Project FATECO which aimed to improve the fatigue and tribological performance of gears and shaft of automotive components by optimising their surface integrity (SI) and employing new eco-friendly finishing operations. A machine learning system, able to predict the SI of the components and their mechanical properties avoiding very expensive and time-consuming experimental tests, was also developed and presented.

Finishing operations compared:

- **Shafts:** hard turning + belt finishing, cryogenic grinding, wet and dry grinding.
- **Gears:** wet grinding, dry-hard finishing, and wet superfinishing.



Registration and venue:

The number of participants is limited and it is strongly recommended to register as soon as possible sending an email to: alessandro.fortunato@unibo.it. Information required: name of the Company, name of the attendees. **Venue:** Centro Residenziale Universitario Di Bertinoro, Rocca di Bertinoro Via Aldruda Frangipane, 4 47032 Bertinoro FC.



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Preliminary Agenda

9:00-9:30	Workshop opening and registration
9:30-10:50	Presentations of results on shafts
10:50-11:00	Coffee Break
11:00-13:00	Presentations of results on gears
13:00-14:00	Lunch
14:00-14:30	Final remarks



Preliminary Agenda

9:00 - 9:30	Workshop opening and registration
9:30 - 10:10	Fateco Project Introduction
10:10 -10:30	Belt Finishing of shafts: ENISE (SI included)
10:30 -10:50	Cryogrinding of shafts : MGEP (SI included)
10:50 - 11:10	Grinding of gears: EMAG (SI included)
11:10 -11:30	Coffee Break
11:30 – 11:50	SI Summary : MGEP
11:50 – 12:10	Fatigue: Sidenor
12:10 – 12:30	Tribology: CRF
12:30 – 12:50	Fatigue: UNIBO
12:50 - 13:10	Machine Learning: UNIBO
13:10 - 14:00	Lunch
14:00 – 15:00	Workshop closure

(in each presentation 15 minutes for presentation and 5 for questions)

