Introduction to lubrication of dynamic shaft seals

This tutorial is aimed at industrial or academic workers interested in rotating machines including dynamic shaft seals. Training can be either a first contact with problems of seals lubrication or an updating of previous knowledge.

Part 1 (0.5h): Basics of seals and lubrication (Noël Brunetière)

1. The different types of seals and their main principles
2. Tribology of dynamic seals :
    a. lubrication,
    b. contact,
    c. wear.

Part 2 (1h): Mechanical face seals (Noël Brunetière)

3. Constitution
4. Materials and surfaces
5. Force balance
6. Lubrication mechanisms
7. Thermal effect and deformations

Part 3 (1h): Elastomeric shaft seals (Aurelian Fatu)

8. Basic lip seal concepts
9. Dynamic sealing mechanism
10. Seal materials
11. Numerical modelling
12. Experimental investigations

Part 4 (1.5h): Non-contacting shaft seals (Mihai Arghir)

13. Main types of non-contacting seals
14. Fluid flows in the sealing gap
15. Generated forces and dynamic coefficients
16. Effect of seals on rotor-dynamics

IFMI, Futuroscope, November 4, 2026, 14:00 – 18:00
Event organized jointly with the 25th Tribo-Pprime workshop
https://tribopprime2026.sciencesconf.org

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Fees: 400 €