

## 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. Constitution
9. Materials
10. Lubrication mechanisms

### Part 4 (1.5h): Non-contacting shaft seals (Mihai Arghir & Amine Hassini)

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

**EDF Lab, Paris Saclay, October 3, 2018, 14:00 – 18:00**

Event organized jointly with the 17<sup>th</sup> Edf-Pprime workshop

<https://edf-pprime-2018.sciencesconf.org/>

**Contact:** Noël Brunetière, +33 549 496 531, [noel.brunetiere@univ-poitiers.fr](mailto:noel.brunetiere@univ-poitiers.fr)

**Fees:** 400 €