

Webinar on Materials and Systems Under Extreme Conditions



Organized by ELYTMAX,

CNRS – Univ. Lyon – Tohoku University, International Joint Unit.

Objectives: The topic related to Materials and Systems Under Extreme Conditions covers a wide range of scientific expertise. More precisely, ELYTMAX (Engineering Science Lyon Tohoku, Materials under eXtreme conditions) laboratory, founded in January 2016, investigated some of its aspect. The laboratory gathers a team of around 15 researchers working on materials and system preparation and repair (i.e. addition of protective layers like coatings or biomaterials development), on the understanding of material's behavior (i.e. thermomechanical, electromagnetic or electrochemical response of materials), and on the monitoring of the health of materials (i.e. Non-Destructive testing of materials). The scientific activity of ELYTMAX was evaluated in December 2019 by an external committee, and the laboratory will start a new five-year term from 2021.

ELYTMAX is organizing a webinar devoted to the introduction its own activities to invited scientists from France and Japan, followed by a panel discussion about open scientific questions and new scientific topics.

Date and Time:

2021.01.19 (TUE), 17:00-19:10 (JST) / 9:00-11:10 (CET)

Language: English

Registration fee: Free

Registration deadline: 2021.01.18 **Contact:** iac@grp.tohoku.ac.jp

Agenda:

- 1) **Opening remarks** (15 min)
 - Prof. Motoko Kotani (Tohoku University)
 - Prof. Anne-Christine Hladky (CNRS)
 - Prof. Marie-Christine Baietto (INSA-Lyon – Université de Lyon)
- 2) **Introduction of ELYTMAX** and scientific activities (30 min)
 - Materials preparation, repair and optimization, degradation in complex environment
 - Smart materials and materials integrity follow-up
- 3) **Presentations by panelists & discussion** (80 min)
 - Topic 1: Adhesion mechanisms in coatings
Prof. Costantino Creton (ESPCI, Paris)
Prof. Tsunemoto Kuriyagawa (Tohoku University, Sendai)
 - Topic 2 : Data Science application to Material Science
Prof. Pierre Maret & Prof. Fabrice Muhlenbach (University of Saint Etienne)
Prof. Masanori Hariyama (Tohoku University, Sendai)
- 4) **Closing remarks** (5min)



Deformation of heterogeneous medium under electromagnetic field

