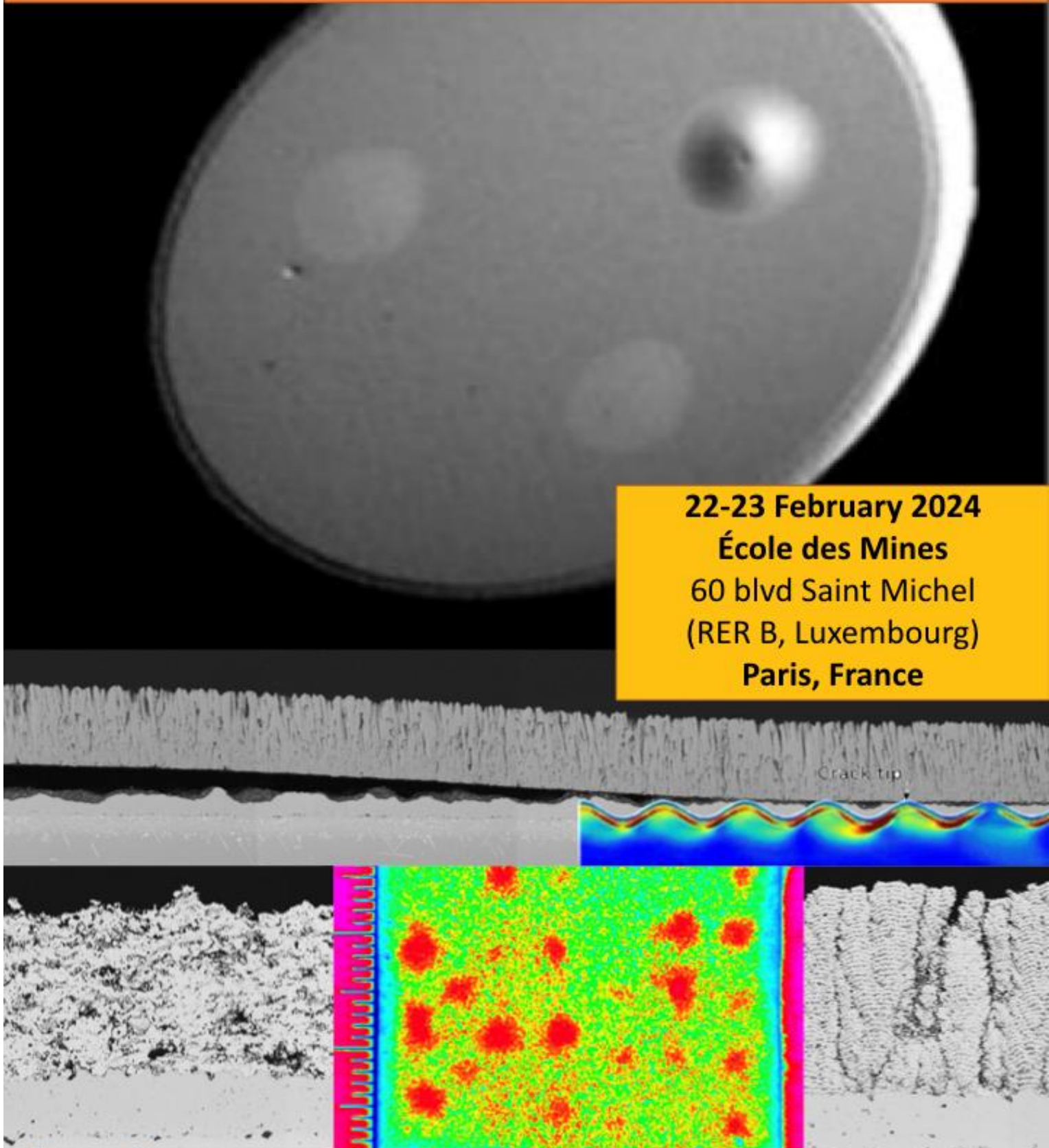


# COATINGS APPLICATIONS FOR HIGH-TEMPERATURE AND HARSH ENVIRONMENTS A LABEGA WORKSHOP

**22-23 February 2024**  
**École des Mines**  
60 blvd Saint Michel  
(RER B, Luxembourg)  
**Paris, France**



The **LaBeGa project** was funded by the Federal Ministry of Economic Affairs and Climate Action (BMWK), Germany, within the framework of the 7th Energy Research Program (FKZ 03EE5045A).

## PROGRAM

Mines PARIS, Room V106 A		Thursday, 22 <sup>nd</sup> February 2024
12:00		<i>Welcome - Snack Buffet – Room V117</i>
13:00	Prof-Dr. Robert Vaßen FZJ-IEK1, Jülich	Introduction – Labega German French Project
13:20	Dr. Lara Mahfouz Safran Tech, Magny	Analysis Of TBCs Damage Through the Laser Shock for Damage Monitoring (LASDAM) Method - LABEGA
13:40	Dr. Arturo Flores-Renteria Siemens Energy, Berlin	Operation Conditions of Thermal Barrier Coatings for Future Stationary Gas Turbines
14:00	Jens Igel FZJ-IEK1, Jülich	Development of Improved Thermal Barrier Coatings for Load-Flexible Gas Turbines by Optimizing the Coating Microstructure - LABEGA
14:20	Dr. Simon Goutier IRCER, Limoges	Characterization Of a Suspension Plasma Spray (SPS) Torch, Influence of the Torch and the Injection Method
14:40	Dr. Daniel Mack FZJ-IEK1, Jülich	Analyzing Thermal Strain Conditions in Burner Rig Environment - LABEGA
15:00		<i>Coffee break - Room V117</i>
15:30	Prof. Uwe Schulz DLR, Cologne	PVD-Based Coatings for TBCs and EBCs
15:50	Dr. Jonathan Cormier PPRIME, Poitiers	Damage Mechanisms in TBC/EBC Coated HT Materials in Engine Simulated Environment.
16:10	Dr. Lidong Zhao IOT, Aachen	A Si-Si <sub>3</sub> N <sub>4</sub> Composite Coating by Atmospheric Plasma Spraying as Potential Bond Coat Between EBCs and CMCs
16:30	Dr. Aurélie Quet CEA, Le Ripault	Ultra-Refractory Ceramic Coatings by Plasma Spraying and Assessment of Their Behaviour Under Plasma Flow
16:50	G Reisel, J Gutleber, J He Oerlikon Metco, Barchfeld	New Bond Coat for TBC With Improved Lifetime
17:10	Dr. Damien Texier ICA, Albi	Micromechanical Testing for the Study of Ductile-To-Brittle Transition Temperature in Overlay and Diffusion Bond Coatings
18:00-20:30		<i>Cocktail Event - Room V117</i>
Mines PARIS Room V106 B		Friday, 23 <sup>rd</sup> February 2024
08:30		<i>Welcome Coffee - Room V117</i>
09:00	Niama Radi Safran Tech, Mines Paris	Recent developments and analysis of $\gamma$ - $\gamma'$ coating for single crystal superalloy and TMF loadings
09:20	Dr. Susanne Schrüfer Rolls-Royce, Dahlewitz	Advanced Coating Systems for Shroudless Turbines
09:40	Dr. Frédéric Rousseau IRCP, Paris	Local Deposition of YSZ by Low-Power Atmospheric Plasma: Applications to Aeronautical Turbines
10:00	Dr. Vincent Guipont Mines-CMAT, Evry	LASAT applied on ceramic coatings: Case studies and recent advances using IR imaging - LABEGA
10:20		<i>Coffee break - Room V117</i>
10:40	Dr. Pascale Kanouté ONERA, Chatillon	Lifetime Assessment of TBCs: On the Evolution of ONERA's Energetic Approach Through Thermal Gradient Tests and Numerical Sub-Modeling
11:00	Dr. Mario Rudolphi Dechema, Frankfurt	Mechanical Aspects of TBC Failure in Dry and Humid Conditions
11:20	Dr. Francis Rebillat LCTS, Bordeaux	Yttrium Disilicate EBC for SiC/SiC Composites
11:40	Dr. Christian Kontermann TU, Darmstadt	Mechanism-Based Experimental and Theoretical Approaches for Assessing the Structural Integrity of Plasma-Sprayed Multilayer TBCs
12:00	Dr. V Maurel, Dr. V Guipont, Mines, Evry	Concluding remarks
12:15		<i>Farewell snack buffet -Room V117</i>

## WORKSHOP VENUE

- The workshop will be held in Paris at the ECOLE DES MINES, 60 Boulevard Saint Michel, 75006 PARIS, France
- ECOLE DES MINES is located near the “Jardin du Luxembourg” in the Latin Quarter
- Train: RER line B “LUXEMBOURG” station



<https://maps.app.goo.gl/AF41usK1eZAtnRxo7>

## REGISTRATION

- Registration: [labegaworkshop.sciencesconf.org](http://labegaworkshop.sciencesconf.org)
  - For speaker and for invited attendee
  - For non invited attendee: apply online or contact us by email
- No registration fee but limited number of participants

## ORGANIZATION AND CONTACT PERSONS

### Germany

Prof. Dr. Robert Vaßen

Forschungszentrum Jülich GmbH • Institute of Energy and Climate Research • Materials Synthesis and Processing (IEK-1)  
Tel: +49 2461 61-6108 • [r.vassen@fz-juelich.de](mailto:r.vassen@fz-juelich.de)

### France

France

**Dr. Vincent Guipont**

MINES Paris -PSL • Centre des Matériaux  
Tel: +33 (0)1 60 76 30 72 • [vincent.guipont@minesparis.psl.eu](mailto:vincent.guipont@minesparis.psl.eu)

**Dr. Vincent Maurel**

MINES Paris -PSL • Centre des Matériaux  
Tel: +33 (0)1 60 76 30 03 • [vincent.maurel@minesparis.psl.eu](mailto:vincent.maurel@minesparis.psl.eu)

## LaBeGa Project

The **LaBeGa project** was funded by the Federal Ministry of Economic Affairs and Climate Action (BMWK), Germany, within the framework of the 7th Energy Research Program (FKZ 03EE5045A).