

18 September 2019

9.00 am - 18.00 pm



MINES ParisTech  
60 bd Saint-Michel

# DATA science DAY

Organized by the Department Mechanical and Materials Engineering of MINES ParisTech

Information MINES ParisTech Sophia Antipolis : Elie HACHEM (CEMEF)

9.00-9.30

Direction MINES ParisTech - Accueil et introduction

9.30-10.15



**Prof. Charbel Farhat** Stanford University  
*A Physics-Based Alternative Approach to Digital Twins*

10.15-10.30

**Etienne Decencière** Centre for Mathematical Morphology (CMM)  
Department of Mathematics and systems  
*Convolutional neural networks and mathematical morphology  
for biomedical image analysis*

10.30-10.45

**Hervé Chauris** Centre of Geosciences  
Department Earth sciences and environment  
*Imaging with large seismic data sets*

10.45-11.00

**Philippe Blanc** Centre Observation, Impacts, Energy (O.I.E.)  
Department Energy and processes  
*Signal and Image processing of Earth observation for solar short term forecasting*

11.00-11.15

**Pascal Le Masson** Centre for Management Science (CGS)  
Department of Economics, Management, Society  
*Data science and design theory: beyond modelling & optimizing,  
the generativity logic in stats & AI*

11.15-11.30

**Chloé-Agathe Azencott** Centre for Computational Biology (CBIO)  
Department of Mathematics and Systems  
*Biomarker discovery for precision medicine*

11.30-11.45

**Fabien Moutarde** Robotics Center (CAOR)  
Department of Mathematics and Systems  
*Deep Reinforcement Learning for Autonomous Vehicles & Robotics*

11.45-12.30



**Dir. Rech. Marc Schoenauer** INRIA Saclay  
*Sciences des données: validation, certification, transparence,  
et impacts sur la société*

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12.30-13.30 LUNCH BREAK

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afternoon - après-midi



13.30-14.15



**Prof. Francisco Chinesta** ENSAM ParisTech  
*Data-Driven Empowered Physics-Based Models*

14.15-14.30

**Jonathan Viquerat, Elie Hachem** Centre for material forming (CEMEF)  
Department of Mechanical and Materials engineering  
*Deep Reinforcement Learning for fluid mechanics problems*

14.30-14.45

**Thomas Walter** Centre for Computational Biology (CBIO)  
Department of Mathematics and systems  
*Computer Vision for Bioimage Analysis*

14.45-15.00

**David Ryckelynck** Centre of materials (CDM)  
Department of Mechanical and Materials engineering  
*Transfer learning for hybrid modeling in mechanics of materials and structure*

15.00-15.15

**Bruno Figliuzzi** Centre for Mathematical Morphology (CMM)  
Department of Mathematics and systems  
*Fast marching based approach to image segmentation*

15.15-15.30

**Florent Di Meglio, Nicolas Petit** Automatic control and systems Centre (CAS)  
Department of Mathematics and systems  
*Assimilation of Experimental Data for Nonlinear Reduced Order Models*

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15.30-15.45 COFFEE BREAK

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15.45-16.00

**Véronique Stoven** Centre for Computational Biology (CBIO)  
Department of Mathematics and systems  
*Machine-learning chemogenomics for identification of drugs mechanism of action »*

16.00-16.15

**Xavier Freulon** Centre of Geosciences  
Department Earth sciences and environment  
*Random fields on Riemann Manifolds using Stochastic Partial Differential Equation (SPDE)*

16.15-16.30

**Céline Houriez** Centre Thermodynamic of Processes  
Department Energy and processes  
*Data Science for Molecular Simulation: some perspectives*

16.30-16.45

**Thomas Romary** Centre of Geosciences  
Department Earth sciences and environment  
*Sequential data assimilation: application to the hydro-biogeochemical model Prose*

16.45-17.15



**Prof. Jean-Philippe Vert** Google AI  
*Learning from ranks and learning to rank*

# *Invited Speakers*

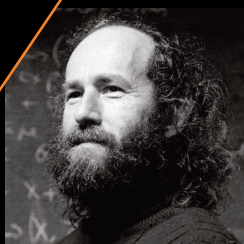
(in order of appearance)

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9.30-10.15

Pr. Charbel FARHAT  
Stanford University



11.45-12.30

Dir. de Rech.  
Marc SCHCENAUER  
INRIA Saclay



13.30-14.15

Pr. Francisco CHINESTA  
ENSAM ParisTech



16.45-17.15

Pr. Jean-Philippe VERT  
Google AI