TIANYI LI

Research engineer in multiphysics and multiscale simulation methods

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EXPERIENCES

Simulation Technology Specialist

Dassault Systèmes

Jan 2020 – now | Vélizy-Villacoublay, France

- Collaborations with **CATIA** and **SIMULIA** brands

Research and Development Engineer

Promold

Apr 2017 – Dec 2019 | Paris, France

- Injection molding (process) and integrative multiscale (structural) simulations of fiber-reinforced polymers with **Moldflow**, **Moldex3D**, **Optistruct**, **Radioss**, **code_aster** and **Digimat**
- **Rheological** and **thermomechanical modeling** of fiber-reinforced composites: anisotropic fiber-dependent viscosity, fiber orientation and homogenization methods. Code development using **C++**
- Uncertainty propagation for injection molding simulations using *data-driven* surrogates
- Development of various GUI-based simulation tools using **Python**
  - Integrative multiscale simulation methodology from process to structural analysis: results **mapping**, **mean-field homogenizaton** methods of fiber composites
  - Adaptive optimization methodology of fiber orientation model parameters using **Kriging** and **Expected Improvement**
  - Buckling analysis of fiber-reinforced materials with finite element library **FEniCS** and eigenvalue solver **SLEPc**
- Development of scientific computing tools: procedure automation under **HyperWorks** using **TCL**; **Docker** deployment; post-processing of simulation results under **ParaView**; data analysis and visualization under **Jupyter**

PhD Candidate in Solid Mechanics

IMSIA (CNRS-EDF-ENSTA research lab)

Oct 2013 – Sep 2016 | Palaiseau, France

- **Phase-field fracture** modeling of brittle materials: variational formulation and numerical simulations (**PhD thesis**)
- Code development in an industrial explicit dynamics finite software **Europlexus** using **PETSc** (**Fortran**): quasi-perfect scaling efficiency obtained
- Contributions to the open-source finite element library **FEniCS** (**C++**)

MOST PROUD OF

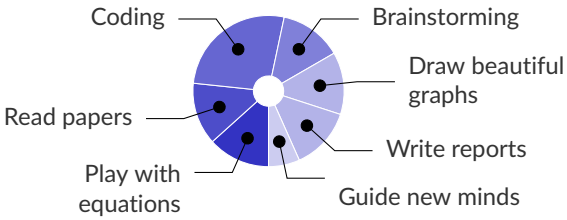
7 reviewed research articles
and more than 130 citations since

Given a speech in front of 900 people
and engaged in Eloquence de la Différence

STRENGTHS

Nonlinear mechanics | Computational mechanics | Scientific machine learning | Programming | CAE tools | Scientific communication | Listening and empathy

TYPICAL DAY AT WORK



LANGUAGES

Chinese ●●●●●

French / English ●●●●○

EDUCATION

PhD in Solid Mechanics

Univ. Paris-Saclay (Ecole Polytechnique)

2013 – 2016 | Palaiseau, France

Engineer in Mechanics

Université de Technologie de Compiègne

2010 – 2013 | Compiègne, France

Bachelor in Mechanics

Université de Technologie Sino-Européenne de Shanghai

2007 – 2010 | Shanghai, China