

TIANYI LI

Research engineer in multiphysics and multiscale simulation methods

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Montrouge, France

google scholar

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EXPERIENCES

Simulation Technology Specialist

Dassault Systèmes, Corporate Research

Jan 2020 – now

Vélizy-Villacoublay, France

- Partitioned multiphysics coupling methods: fixed-point acceleration, results mapping, subcycling and temporal interpolation, data-driven surrogates
- 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 homogenization** 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



Recent integration of the Deep Material Network model into Abaqus

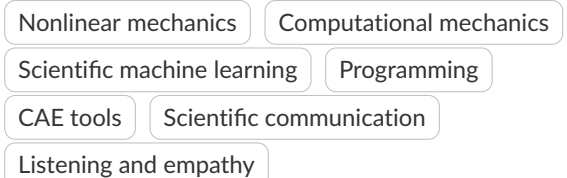
thanks to continuous efforts and collaboration with SIMULIA colleagues



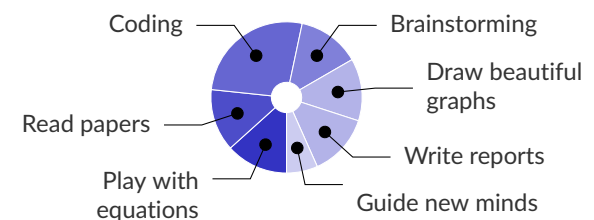
My speech in front of 900 people

and engagement in Eloquence de la Différence

STRENGTHS



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