

# DAVID JOURDAN

djourdan@berkeley.edu | djourdan.netlify.app | github.com/DavidJourdan

## Education

---

<b>PhD in Computer Science - Université Côte d'Azur</b> Advisors: Adrien Bousseau and Mélina Skouras Topics: Computational fabrication, geometry processing	Oct. 2018 - Mar. 2022
<b>MSc in Computer Science - Télécom ParisTech</b> Topics: Computer graphics, applied mathematics	2015 - 2018
<b>Classes Préparatoires MPSI/MP* - Lycée Chateaubriand</b> Rennes, France. Intensive training in mathematics and physics.	2013 - 2015

## Work Experience

---

<b>Postdoctoral researcher - University of California Berkeley</b> Principal Investigator: Lining Yao	2024 - 2025
<b>Postdoctoral researcher - Inria Nancy</b> Principal Investigator: Sylvain Lefebvre	2022 - 2024
<b>Teaching assistant - Polytech Nice</b> Classes taught: Imperative programming (Python), Data structures and algorithms (Java)	2019 - 2022
<b>Research Intern - Inria Sophia-Antipolis</b> Advisors: Adrien Bousseau and Mélina Skouras	Mar. 2018 - Aug. 2018

## Publications

---

### **StarDEM: Efficient Discrete Element Method for Star-shaped Particles**

Camille Schreck, Sylvain Lefebvre, David Jourdan, Jonás Martínez  
*Eurographics 2024 (Short papers)*

### **Shrink & Morph: 3D-printed self-shaping shells actuated by a shape memory effect**

David Jourdan, Pierre-Alexandre Hugron, Camille Schreck, Jonás Martínez, Sylvain Lefebvre  
*ACM Transactions on Graphics (Proc. SIGGRAPH Asia 2023)*

### **Four-dimensional Printing on Textiles**

#### **Evaluating digital file-to-fabrication workflows for self-forming composite shell structures**

Asterios Agkathidis, David Jourdan, Yang Song, Arathi Kanmani, Ansha Thomas  
*Education and research in Computer Aided Architectural Design in Europe (eCAADe) 2023*

### **Simulation of Printed-on-fabric Assemblies**

David Jourdan, Mélina Skouras, Etienne Vouga, Adrien Bousseau  
*Symposium on Computational Fabrication (SCF) 2022*

### **Computational Design of Self-Actuated Surfaces by Printing Plastic Ribbons on Stretched Fabric**

David Jourdan, Mélina Skouras, Etienne Vouga, Adrien Bousseau  
*Computer Graphics Forum (Proc. Eurographics 2022)*

### **Printing-on-Fabric Metamaterial for Self-Shaping Architectural Models**

David Jourdan, Mélina Skouras, Etienne Vouga, Adrien Bousseau  
*Advances in Architectural Geometry (AAG) 2020*

### **Optimizing Support Structures for Tensile Architecture**

David Jourdan, Mélina Skouras, Adrien Bousseau  
*Journées françaises d'informatique graphique (jFIG) 2018*

## Invited talks

---

## Computational design of self-shaping textiles

Liverpool School of Architecture

Inria Nancy (Team MFX)

02/11/2022

22/02/2022

## Printing-on-Fabric Metamaterial for Self-Shaping Architectural Models

GdR MePhy Workshop (online): From Computational Fabrication to Material Design

Journée IHM IG-RV (online): Tangible interfaces

The University of Texas at Austin (Etienne Vouga's group, online)

Journées françaises d'informatique graphique (jFIG) 2020 (online)

Inria Grenoble (Team Anima, online)

22/06/2021

07/06/2021

20/12/2020

27/11/2020

29/11/2020

## Service

---

### Teaching

Workshop on Computational design

Imperative programming

Data structures and algorithms

University of Liverpool (2022 - 2023)

Polytech Nice (2019 - 2022)

Polytech Nice (2019 - 2021)

### Reviewer

SIGGRAPH Asia 2023 Full Papers

Eurographics 2023 Short Papers

SIGGRAPH 2023 Full Papers

## Programming skills

---

### Open-Source contributions

*Fabsim*: A simple C++ library written in C++ for simulating rods, membranes and shells

*Optim*: An optimization library for solving nonlinear problems. Contains Newton method and LBFGS

### Languages

C++, Python, JavaScript, Java

### Technologies

Eigen, CMake, Catch2, P5.js

## Personal

---

### Languages spoken

French (native), English (fluent)

### Music

Jazz trombone (conservatory of Nancy)