

Jérémie Dumas

12 Impasse du Canal
13710 Fuveau
France

Birth Date: 31/03/1990
Cell Phone: (+33)6 65 66 99 38
Email: <firstname>.<lastname>@ens-lyon.org

Current Occupation

2020– **Research Engineer**, Adobe Research, Seattle, USA

Work and Education

- 2018–2020 **Software Engineer**, nTopology, New York, USA
- 2017–2018 **Postdoctoral Researcher**, Courant Institute of Mathematical Sciences, New York, USA (*advisors: Daniele Panozzo and Denis Zorin*)
- 2013–2017 **PhD Thesis in Computer Science**, Inria, Nancy, France
Defended on February 3, 2017 (*advisor: Sylvain Lefebvre*)
Visiting Scholar, Hong Kong University, Hong Kong (*April 2014, April 2016*)
- 2010–2012 **Master d'Informatique (M.Sc. in Computer Science)**
École Normale Supérieure de Lyon, France, *mention Bien*
Exchange Student Program (Winter 2011)
DIRO, Université de Montréal, Canada.
- 2009–2010 **Licence d'Informatique (B.Sc. in Computer Science)**
École Normale Supérieure de Lyon, France, *mention Bien*.
- 2007–2009 **Classe préparatoire aux grandes écoles in Science (Undergraduate studies for the competitive entrance exams to the French "grandes écoles", national institutes of higher education)** Lycée Thiers, Marseille, France.

Research Internships

- 2013, Mar–Aug **Building Textured Surface Mesh Models Using Kinect** (*advisors: Janne Heikkilä and Juho Kannala*) Center for Machine Vision, Oulu, Finland
- 2012, Sep–Feb **Sparse Reconstruction and Structure from Motion** (*advisor: Tomáš Pajdla*)
Center for Machine Perception, Prague, Czech Republic
- 2012, Feb–Jul **Path Graphs Decompositions and Representations** (*advisor: Christophe Crespelle*) Laboratoire d'Informatique et du Parallélisme, Lyon, France
- 2011, Apr–Jul **Solid Texture Generation and Wood Growth Simulation** (*advisor: Pierre Poulin*)
Laboratoire d'Informatique Graphique de l'Université de Montréal, Québec
- 2010, Jun–Jul **Diffusion in Dynamic Networks** (*advisor: Christophe Crespelle and Éric Fleury*)
Laboratoire d'Informatique de Paris 6, France

Awards

- 2017 **PhD Thesis Award** from Université de Lorraine.
- 2018 **Eurographics Annual Award for Best PhD Thesis** from the Eurographics association.
- 2018 **IG-RV PhD Thesis Award** from CNRS's GdR IG-RV.

Selected Publications

- **Half-Space Power Diagrams and Discrete Surface Offsets** *Zhen Chen, Daniele Panozzo, Jérémie Dumas*. IEEE Transactions on Visualization and Computer Graphics (TVCG). 2019.
- **Poly-Spline Finite Element Method** *Teseo Schneider, Jérémie Dumas, Xifeng Gao, Mario Botsch, Daniele Panozzo, Denis Zorin*. ACM Transactions on Graphics (TOG). Volume 38 Issue 3, March 2019.
- **Decoupling Simulation Accuracy from Mesh Quality**. *Teseo Schneider, Yixin Hu, Jérémie Dumas, Xifeng Gao, Daniele Panozzo, Denis Zorin*. ACM Transactions on Graphics (TOG) — SIGGRAPH Asia 2018 Conference Proceedings. Volume 37 Issue 6, November 2018.
- **Orthotropic k-nearest Foams for Additive Manufacturing**. *Jonàs Martínez, Haichuan Song, Jérémie Dumas, Sylvain Lefebvre*. ACM Transactions on Graphics (TOG) — SIGGRAPH 2017 Conference Proceedings. Volume 36 Issue 4, July 2017.
- **Procedural Voronoi Foams for Additive Manufacturing**. *Jonàs Martínez, Jérémie Dumas, Sylvain Lefebvre*. ACM Transactions on Graphics (TOG) — SIGGRAPH 2016 Conference Proceedings. Volume 35 Issue 4, July 2016.
- **Structure and Appearance Optimization for Controllable Shape Design**. *Jonàs Martínez, Jérémie Dumas, Sylvain Lefebvre, Li-Yi Wei*. ACM Transactions on Graphics (TOG) — SIGGRAPH Asia 2015 Conference Proceedings. Volume 34 Issue 6, November 2015.
- **By-Example Synthesis of Structurally Sound Patterns**. *Jérémie Dumas, An Lu, Sylvain Lefebvre, Jun Wu, Christian Dick*. ACM Transactions on Graphics (TOG) — SIGGRAPH 2015 Conference Proceedings. Volume 34 Issue 4, July 2015.
- **Bridging the Gap: Automated Steady Scaffoldings for 3D Printing** *Jérémie Dumas, Jean Hergel and Sylvain Lefebvre*. ACM Transactions on Graphics (TOG) — SIGGRAPH 2014 Conference Proceedings. Volume 33 Issue 4, July 2014.

Reviewing Activities

(Sorted alphabetically)

2018	ACM Symposium on Computational Fabrication (SCF)
2015	ACM Symposium on User Interface Software and Technology (UIST)
2016,2018	ACM Transactions on Graphics (TOG)
2018	Computational Visual Media Conference (CVM)
2018,2019	Computer-Aided Design (CAD)
2017,2018	Computers & Graphics
2020	Eurographics (International Program Committee)
2016,2017,2018	Eurographics Short Papers
2020	Eurographics (International Program Committee)
2019	Fabrication and Sculpting Event (SMI'FASE)
2017,2018,2019	Graphics Replicability Stamp Initiative (GRSI)
2015,2019	IEEE Transactions on Visualization and Computer Graphics (TVCG)
2018,2019	Pacific Graphics (International Program Committee in 2018)
2018,2019	Shape Modeling International (SMI)
2017,2018,2019	SIGGRAPH
2019	SIGGRAPH Asia
2019	Strojniški vestnik - Journal of Mechanical Engineering (SV-JME)

Teaching

2017-2018	Introduction to Computer Graphics , Main Instructor (<i>B.Sc. and M.Sc. courses</i>), New York University, New York, USA.
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- 2013–2016** **Tutorials in Java**, *Introduction to Computer Science (B.Sc. course)*, ENSEM, Nancy, France.
- 2014–2016** **Tutorials in 3D Printing**, *Algorithmic aspects of toolpath generation for filament printers (M.Sc. course)*, ENSEM, Nancy, France.

Research Interests

Geometric Modeling, Shape Optimization, Digital Fabrication, Discrete Algorithms, Numerical Optimization, Texture Synthesis, Graph Theory, Artificial Intelligence, Computer Vision...

Programming Skills

Languages	C++, C, Python, Lua, Bash, CMake (Expert) OCaml, Ruby, Java (Intermediate)
Scientific	Maple, Mathematica, Matlab
Other Tools	LaTeX, Awk, ns-2, Gnuplot
Libraries	Qt, MPI, Tikz, OpenGL, OpenCL, OpenCV, Theano, CGAL Numpy, Scipy, Matplotlib, Panda, Plotly

Programming Contests

- 2016, Feb** **Google Hash Code**, *Online Qualifications, (101 / 1054)*
- 2011, Nov** **ACM ICPC**, *Southwestern Europe Regional Contest, (Madrid) Gold Medal (2nd place)*
- 2010, Mar** **Prologon**, *Finalist, (41/98)*

Personal Interests

- *Dance*: Lindy Hop, West Coast Swing, Ballroom Dances, Balfolk ...
- *Art*: Photography, Music, Anime, Literature, Science-Fiction
- *Outdoor*: Medieval Reenactment, Hiking, Swimming, Archery, Ice Skating

Language

- *French*: Native
- *English*: Advanced
- *Italian, Japanese, Czech, Finnish, French Sign Language*: Basic knowledge