

Maks Ovsjanikov

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WEBSITE

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PROFESSIONAL EXPERIENCE

- 2018 – Full Professor, Ecole Polytechnique, UMR CNRS, France.
- 2012 – 2017 Assistant Professor with a CNRS chaire d'excellence and the Jean Marjoulet chair, Ecole Polytechnique, UMR CNRS, France.
- 2011 Software Engineer
Image Search team, Google Inc., Mountain View, CA, USA.

SELECTED FELLOWSHIPS AND AWARDS

- 2023 – **Fellow of ELLIS** - the European Society of AI researchers
- 2024 – 2028 **ERC Consolidator Grant**, VEGA: *Universal Geometric Transfer Learning*
- 2020 – 2024 ANR Chair in Artificial Intelligence, *Analyzing Large Scale 3D Shape Collections*.
- 2018 **CNRS Bronze Medal** from the Institute for Information Sciences and Technologies (INS2I) for research contributions to Computer Science.
- 2017 – 2023 **ERC Starting Grant** EXPROTEA: *Exploring Relations in Structured Data with Functional Maps*.
- 2014 – 2017 Google Inc. Focused Research Award.
- 2014 [Eurographics Young Researcher Award](#) “In recognition of his outstanding contributions to theoretical foundations of non-rigid shape matching, invariant feature descriptors and the analysis of intrinsic symmetries of shapes.” Eurographics Junior Fellow 2017 – 2019.
- 2014 – 2017 Jean-Marjoulet professorial chair.
- 2012 – 2016 CNRS chaire d'excellence.
- 2013 – 2016 Marie Curie Career Integration Grant.
- 2013 – 2014 Google Inc. Faculty Research Award.
- 2011 **Excellence in Research Award** from Stanford University, given to a single graduating PhD, Department of Computational and Mathematical Engineering.

EDUCATION

- 2017 **Habilitation in Computer Science, Université Paris-Sud, France**
Title: A Functional View of Geometry Processing (*Operator-based Techniques for Shape Analysis*). Jury president: Pierre Alliez.
- 2011 **PhD, Stanford University, USA**
Department of Computational and Mathematical Engineering.
Excellence in Research award. Advisor: Prof. Leonidas Guibas.

RESEARCH PROFILE

Published over 100 research articles at top level venues, including SIGGRAPH, ACM Transactions on Graphics, CVPR, ICCV, SGP, NeurIPS, etc.

According to Google Scholar, my work has been cited over 9500 times with [h-index 45](#) as of October 2023. Together with colleagues, introduced several influential concepts in shape analysis including the [Heat Kernel Signature](#), algorithms for isometric shape matching, functional maps and deep learning methods for non-rigid 3D shape processing, among others. In 2018 I received a CNRS [Bronze Medal](#) (highest recognition for junior researchers in France).

Together with Marie-Paule Cani, I launched in 2016 the first Computer Graphics research team at Ecole Polytechnique. My works with colleagues have received **eleven best paper awards or nominations** at top-level conferences, including at 3DV 2022, 3DV 2021, CVPR 2020, ICCV 2019, 3DV 2020 and 2019, and SGP 2018, among others, as well as a SIGGRAPH 2023 Test of Time Award. I hold **seven international patents** or patent applications, and have active collaborations with industry (EDF, Dassault Systèmes, Sanofi S.A., Danone R&D, Youdome startup, etc.) with significant technology transfer.

SUPERVISION AND LEADERSHIP PROFILE

Since 2012 I have supervised or co-supervised **10 defended PhD students**, and **10 postdocs**.

All my students have obtained researcher positions, including, among others:

- Marie-Julie Rakotosaona (PhD student, 2018-2021), received the **best thesis award** from GdR IG-RV the French Computer Graphics association, now a researcher at Google Research Zurich.
- Adrien Poulenard (PhD student, 2017-2020), received the **best thesis award**, 1st place, from the IDIA department of IP Paris in 2020, now postdoc at Stanford University.
- Etienne Corman (PhD student 2013-2016) now a **permanent researcher at CNRS** from 2019.
- Ruqi Huang (postdoc 2017-2019), now an assistant professor at the Tsinghua-Berkeley Shenzhen.
- Viorica Patraucean (postdoc 2012-2014), now a researcher at DeepMind.
- Simone Melzi (postdoc 2019-2020), now a tenure-track assistant prof. at the U. Milano-Bicocca.

SELECTED INVOLVMENT IN SCIENTIFIC MEETINGS

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| 2012 – 2023 | Gave over 70 invited talks at international seminars, including Curves & Surfaces Minisymposium on Deep Learning in Geometry Processing, TU Munich AI seminar, Banff Workshop on Geometry & Learning from Data, 3DGV seminar, London Geometry & Machine Learning summer school, Sony & CSL Seminar, Graphics And Mixed Environment Symposium, etc. |
| 2023 | Keynote speaker , Pacific Graphics, conference. |
| 2023 | Keynote speaker, ml4geo : Machine Learning for Geometry workshop |
| 2023 | Keynote speaker, Symposium on 3D Object Retrieval. |
| 2020 | Keynote speaker , Symposium on Geometry Processing, conference. |
| 2020 | Keynote speaker , Shape Modeling International, conference. |
| 2018 | Local organizer, Symposium on Geometry Processing, Paris, France. |
| 2017 | Technical Program co-chair, Eurographics 3D Object Retrieval Workshop. |
| 2017 | Co-organizer, Dagstuhl Seminar on “Functoriality in Geometric Data,” Germany. |
| 2016 | Technical Program co-chair , Symposium on Geometry Processing (SGP), the world’s premier conference in Geometry Processing. |
| 2015 | Co-organizer, Workshop at the Institute of Advanced Study (IAS), Hong Kong. |
| 2014 | Technical Program co-chair, ECCV Workshop on Non-Rigid Shape Analysis. |
| 2012 | Keynote speaker , Eurographics Workshop on 3D Object Retrieval, Italy. |

SELECTED SERVICE TO THE COMMUNITY

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| 2020 – | Associate Editor, <i>Transactions on Visualization and Computer Graphics</i> journal. |
| 2016 – 2019 | Associate Editor, <i>Computer Graphics Forum</i> journal. |
| 2012 – | Program Committee member of top-level conferences: (SIGGRAPH 2022, SIGGRAPH 2020, SIGGRAPH 2014, SIGGRAPH Asia 2016, 2015, Eurographics 2022, 2021, 2019..., Symposium on Geometry Processing 2022, 2020, 2019... ACCV, etc.). |

SELECTED TEACHING ACTIVITIES

- 2022 – Organizer, instructor, *Analysis and Deep Learning on Geometric Data*, advanced graduate-level course at Ecole Polytechnique.
- 2016 – Organizer, instructor, *Deep Learning for Computer Vision*. Designed and taught the **first Deep Learning course** in the Ecole Polytechnique engineering curriculum.
- 2020, 2021 Instructor in multiple graduate schools, including London Geometry and ML Summer School and Lecco Graduate School ML for Non-Matrix Data, etc.
- 2015, 2018 Organizer, instructor, Master's level mini-course on *Digital Geometry Processing*, dept. Mathematics and Applied Mathematics, University of Verona, Italy.
- 2012 – Organizer, instructor, *Digital Representation and Analysis of Shapes*, Master's level course, Ecole Polytechnique, France.

SELECTED PATENTS AND PATENT APPLICATIONS

1. Mezghanni, M., Ovsjanikov, M., and Boulkenafed, M., *Functional-aware Generative Modeling*, U.S. Patent Application No. 17/486,684, 2021.
2. Mezghanni, M., Ovsjanikov, M., Boulkenafed, M., T. Bodrito *Deep parameterization for 3D shape optimization*, European patent application 2021.
3. Ovsjanikov, M. and Rivlin E. *Combining unstructured image and 3D search results for interactive search and exploration*. U.S. Patent No. 9,372,871, 2016.
4. Ovsjanikov, M., Li, Y., Adam, H., and Rosenberg, C. J. *System and method for associating images with semantic entities*. U.S. Patent No. 9,171,018, 2015.
5. Alldrin, N., Duerig, T., Zhou, Z. H., Ovsjanikov, M., Rosenberg, C., Bengio, S., Gupta, M., *Assigning labels to images*, U.S., Patent No. 8,873,867, 2014.
6. Ovsjanikov, M., and Chen, Y., *Personalized Recommendation of a Volatile Item*, U.S. Patent, No. 9,336,315, 2016.

SELECTED INSTITUTIONAL RESPONSIBILITIES

- 2012 – Reviewer and jury member of PhD thesis committees (Ecole Polytechnique, TU Delft, USI Lugano, Stanford University, TU Delft, U. Sorbonne, RWTH Aachen...).
- 2016 **Co-founder of the first Computer Graphics research team** (STREAM, jointly with Marie-Paule Cani) at Ecole Polytechnique.
- 2016 Faculty Recruiting Committees, Télécom ParisTech, Ecole Polytechnique, France
- 2015 – Co-supervisor of Imaging/Computer Graphics Master's track at Ecole Polytechnique.

RESEARCH AWARDS

- 2023 SIGGRAPH Test of Time Award.
- 2022 Best Paper Award, International Conference on 3D Vision.
- 2021 Best Paper Award, International Conference on 3D Vision.
- 2020 Best Paper Award nomination (one of 26, out of 5865 submissions), Conference on Computer Vision and Pattern Recognition (CVPR).
- 2020 Best Student Paper, International Conference on 3D Vision.
- 2019 Best Paper Award nomination (one of 7, out of 4303 submissions), International Conference on Computer Vision (ICCV).
- 2019 Best Paper Award, International Conference on 3D Vision.
- 2018 Best Paper Honorable Mention (one of three), Symposium on Geometry Processing.
- 2010 NORDIA Best paper award.
- 2009 Best Paper Award, SIAM Conference on Geometric and Physical Modeling.
- 2009 Best Paper Award, Symposium on Geometry Processing.
- 2008 Best Student Paper Award, Symposium on Geometry Processing.