

PERSONAL INFORMATION **Filippo Maggioli**

WORK EXPERIENCE

September 2022 – January 2023

**Research Internship**

King Abdullah University of Science and Technology  
Thuwal 23955-6900, Kingdom of Saudi Arabia

Development of a physically inspired simulator of wilting plants for computer graphics, computer vision and agricultural applications.

**Business or sector** Academic research

EDUCATION AND TRAINING

2019-Present

**PhD in Computer Science**

Sapienza - University of Rome

2018-2019

**Master in Computer Science**

Sapienza - University of Rome

110 with honors /110

2014-2017

**Bachelor in Computer Science**

Sapienza - University of Rome

110 with honors /110

PERSONAL SKILLS

**Mother tongue** Italian

**Other languages**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user  
[Common European Framework of Reference for Languages](#)

**Communication skills**

- team work: I have worked in different teams composed by international people, both in my university and other institutions
- teaching skills: I have a three years experience as a private teacher, and I have experience as a university tutor and teaching assistant for a semester

**Organisational / managerial skills**

- during my PhD I supervised younger and less experienced colleagues, and the thesis work of a bachelor student
- during my PhD I helped in organizing the open-day for my department for two years

**Digital competences**

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

[Digital competences - Self-assessment grid](#)

- Computer skills**
- research experience in computational geometry, computer graphics, numerical simulations and numerical linear algebra
  - experience in designing efficient algorithms
  - proficient programming skills in MATLAB, C/C++, CUDA and OpenGL
  - competent with 3D modeling softwares like Blender

## PUBLICATIONS

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- [1] **Filippo Maggioli**, Toni Mancini, and Enrico Tronci. “SBML2Modelica: integrating biochemical models within open-standard simulation ecosystems”. In: *Bioinformatics* 36.7 (2020), pp. 2165–2172.
- [2] Luca Moschella, Simone Melzi, Luca Cosmo, **Filippo Maggioli**, Or Litany, Maks Ovsjanikov, Leonidas Guibas, and Emanuele Rodolà. “Learning Spectral Unions of Partial Deformable 3D Shapes”. In: *Computer Graphics Forum*. Vol. 41. 2. Wiley Online Library. 2022, pp. 407–417.
- [3] **Filippo Maggioli**, Simone Melzi, Maksim Ovsjanikov, Michael M Bronstein, and Emanuele Rodolà. “Orthogonalized Fourier polynomials for signal approximation and transfer”. In: *Computer Graphics Forum*. Vol. 40. 2. Wiley Online Library. 2021, pp. 435–447.
- [4] Viviana Arrigoni, **Filippo Maggioli**, Annalisa Massini, and Emanuele Rodolà. “Efficiently parallelizable strassen-based multiplication of a matrix by its transpose”. In: *50th International Conference on Parallel Processing*. 2021, pp. 1–12.
- [5] Daniele Baieri, Stefano Esposito, **Filippo Maggioli**, and Emanuele Rodolà. “Fluid Dynamics Network: Topology-Agnostic 4D Reconstruction via Fluid Dynamics Priors”. In: *arXiv preprint arXiv:2303.09871* (2023).
- [6] **Filippo Maggioli**, Riccardo Marin, Simone Melzi, and Emanuele Rodolà. “MoMaS: Mold Manifold Simulation for real-time procedural texturing”. In: (2022).
- [7] **Filippo Maggioli**, Daniele Baieri, Simone Melzi, and Emanuele Rodolà. “Newton’s Fractals on Surfaces via Bicomplex Algebra”. In: *ACM SIGGRAPH 2022 Posters*. 2022, pp. 1–2.

**AUTORIZZAZIONE AL  
TRATTAMENTO DEI DATI**

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Roma, 14/04/2023