

# Curriculum Vitae

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## Objective

I am currently a PhD candidate in Mathematics and Computer Science at the University of Cagliari. My research focuses on Computer Graphics and Geometry Processing. Recently, I have mainly been working on projects concerning Quadrangulation and Remeshing of surfaces, and Digital Fabrication of 3D shapes with subtractive techniques.

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## Experience

**Tutor** October 2018 – January 2019

*University of Cagliari, Cagliari, Italy*

Student tutoring for laboratory activities in the Bachelor of Science course “Programming 1”.

**Tutor** October 2017 – January 2018

*University of Cagliari, Cagliari, Italy*

Student tutoring for laboratory activities in the Bachelor of Science course “Database 1”.

**Research assistant** March 2017 – September 2017

*University of Cagliari, Cagliari, Italy*

Academic research in the “Geometry Processing” area. I have been working on a project named “Unfolding Properties of Fabricable Objects”.

**Software developer** March 2016 – July 2016

*BETA Technologies SRL, Sassari, Italy*

Software development in Android and web-based software development (Java, Vaadin).

**Software developer** May 2014 – November 2014

*Accenture S.p.A, Cagliari, Italy*

Web-based software development using the following technologies: ASP .NET (code behind C# .NET), Microsoft SQL Server.

**Internship, Developer**

April 2013 – July 2013

*BETA Technologies SRL, Sassari, Italy*

Internship required by the University of Cagliari for the Bachelor of Science in Computer Science. Development of an application for Windows Mobile (C#).

**Education****PhD course in Mathematics and Computer Science**

October 2017 – November 2020

*University of Cagliari, Cagliari, Italy*

PhD course in Computer Science. PhD supervisor: Prof. Riccardo Scateni

Research interests: Computer Graphics and Geometry Processing for Digital Fabrication and Remeshing tasks.

Thesis title: “Composing quadrilateral meshes for animation”. Doctoral thesis defense scheduled for April 2021.

**Visiting PhD Student**

February 2019 – June 2019 / October 2019 – April 2020

*University of Technology Sydney, Sydney, Australia*

Research in Computer Science. Supervisor: Nico Pietroni.

Research interests: Computer Graphics and Geometry Processing for Digital Fabrication and Remeshing tasks.

**Master of Science in Computer Science**

September 2014 – February 2017

*University of Cagliari, Cagliari, Italy*

Final grade: 110/110 e lode (magna cum laude).

Thesis title: “Unfolding Polygon Meshes for the Fabrication of Simplified Shapes”.

**Bachelor of Science in Computer Science**

September 2010 – December 2013

*University of Cagliari, Cagliari, Italy*

Final grade: 110/110 e lode (magna cum laude).

Thesis title: “Smoothing and Feature Selection in Bayes Text Classifiers”.

**Erasmus Exchange Programme**

September 2012 – April 2013

*Albert-Ludwigs-Universität, Freiburg im Breisgau, Germany*

Study period abroad during the Bachelor of Science in Computer science. Four courses have been attended.

**Skills****Mother tongue:** Italian**Other languages:**

	<b>Listening</b>	<b>Reading</b>	<b>Speaking</b>	<b>Writing</b>
<b>English</b>	Advanced	Advanced	Upper-intermediate	Upper-intermediate

**Social skills:**

- Ability to work individually and as a team member.
- Great interpersonal communication.
- Accustomed to working under pressure.
- Resourcefulness and adaptability.
- Fast learner.
- Good communication and cooperation skills.
- Problem-solving attitude.

**Technical skills:**

- Experience in software design and development.
- Confidence with the object-oriented, imperative and functional programming paradigms.
- Experience with several design patterns and software development processes.
- Database design, implementation and management.
- Confidence with Windows and Linux-based operating systems.

**Programming skills:**

- Programming languages: C++, C, Java, Python, PHP, C#, Matlab, Javascript, ASP .NET, Visual Basic .NET.
- DBMS: MySQL, PostgreSQL, Oracle RDBMS, Microsoft SQL Server, Hibernate.ORM.
- Others: HTML, CSS, SQL, jQuery, AJAX.
- Geometry processing libraries: VCGLib, libigl, CGAL, cg3lib, openVDB.
- Optimization libraries: Gurobi, Ip\_solve.
- IDE: Qt Creator, Eclipse, Visual Studio 2005/2008/2010, Netbeans, Android Studio.
- Confidence with software versioning systems such as SVN e git.

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## Additional information

**Conference/Courses:**

- Participation in EVOCATION Summer School, 01-02 October 2020.
- Participation and presentation of a technical paper in the conference “SIGGRAPH Asia 2019” 17-20 November 2019 in Brisbane, Australia.
- Participation in the conference “Smart Tools and Applications in Graphics 2018” (STAG 2018) in Brescia, Italy, October 2018. Participation in the related PhD School.
- Participation in the conference “Symposium on Geometry Processing 2018” (SGP 2018) in Paris, France, July 2018. Participation in the related Graduate School.
- Participation in the conference “Smart Tools and Applications in Graphics 2017” (STAG 2017) in Catania, Italy, September 2017.
- Participation in the conference “CHIItaly ’17” in Cagliari, Italy. 2018. Presentation of the poster “ChIP: teaching coding in primary schools”.

**Publications:**

- QuadMixer: layout preserving blending of quadrilateral meshes  
S. Nuvoli, A. Hernandez, C. Esperança, R. Scateni, P. Cignoni, N. Pietroni  
ACM Transactions on Graphics (TOG) 38 (6), 1-13
- Mill and Fold: Shape Simplification for Fabrication  
A. Muntoni, S. Nuvoli, A. Scalas, A. Tola, L. Malomo, R. Scateni  
Computers & Graphics 80, 17-28

- Simplification of Shapes for Fabrication with V-Groove Milling Tools.  
A. Muntoni, A. Scalas, S. Nuvoli, R. Scateni  
STAG 2018, 1-12
- ChIP: teaching coding in primary schools  
F. Sorrentino, L. D. Spano, S. Casti, A. Carcangiu., F. Corda, G. Cherchi, A. Murru, A. Muntoni, S. Nuvoli,  
R. Scateni  
2017 Doctoral Consortium, Posters and Demos at CHIItaly 2017, 18-20 September 2017

**Honors & Awards:**

- The master thesis “Unfolding Polygon Meshes for the Fabrication of Simplified Shapes” has been selected by the University of Cagliari among the 17 best thesis for a PechaKucha presentation and the exposition of a poster during the event “UnicaComunica”.
- First place for category “services for citizens” in the event “Hackathon Cagliari”, organised by the municipality of Cagliari in June 2015.

**Hobbies & interests:**

- Passion in problem solving, algorithm designing and optimization: regular participation in the programming and problem-solving contests.
- Regularly play football and jogging.
- Enjoy traveling.

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I authorise the use of my personal data according to Legislative Decree N°196/03.

Yours faithfully,

Stefano Nuvoli