



Simone Scalabrino  
Ph.D. Candidate  
University of Molise

# Simone Scalabrino

<https://dibt.unimol.it/sscalabrino>

Email: [simone.scalabrino@unimol.it](mailto:simone.scalabrino@unimol.it)

**About Me** I am a Ph.D. candidate at the University of Molise, Italy. My research interests include software quality, testing and security. I received my Master's Degree in Computer Science from the University of Salerno in 2015 defending a thesis on Search Based Software Testing, advised by Andrea De Lucia and my Bachelor's Degree from the University of Molise in 2013, defending a thesis about source code readability, advised by Rocco Oliveto and Denys Poshyvanyk.

## Education

### November 2015 - present, University of Molise

Ph.D. Student in Software Engineering

### November 2013 - July 2015, University of Salerno

Master's Degree (*summa cum laude*) in Computer Science

### September 2010 - October 2013, University of Molise

Bachelor's Degree (*summa cum laude*) in Computer Science

## Experience

### January 2018 - present, *Chief Scientific Officer*

I am the CSO at Datasound (<https://www.datasound.it>).

Detailed achievements:

- Skills in planning and writing research projects;
- Skills in research project management.

### November 2018 - February 2019, *Scholarship*

I worked on project "Chronicon" at University of Molise, Italy, supervised by Rocco Oliveto.

Detailed achievements:

- Design and development of Chronicon, an Android videogame;
- Skills in Unity (game engine).

### May 2017 - July 2018, *Visiting Student*

I worked on a tool that detects Android compatibility issues at the Università della Svizzera italiana, supervised by Gabriele Bavota.

Detailed achievements:

- Development for a tool that detects compatibility issues in Android apps;
- Skills in mining software repositories and big data analysis.

### April 2017 - June 2017, *Visiting Student*

I worked on project "Methods & Tools for Understanding and Controlling Privacy" at University of Luxembourg, supervised by Domenico Bianculli.

Detailed achievements:

- Development of a tool for dynamic analysis of Bytecode applications;
- Skills with frameworks for Bytecode instrumentation (Wala);
- Knowledge about static and dynamic analysis techniques.



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### **April 2016 - May 2016, *Visiting Student***

I worked on project “RPMA” at University of Bolzano, Italy, supervised by Gabriele Bavota.

Detailed achievements:

- Evolution of CLAP, a tool for handling mobile app reviews;
- Skills with Natural Language Processing and Machine Learning.

### **March 2015 - October 2015, *Scholarship***

I worked on project “WISCH” at University of Salerno, Italy, supervised by Andrea De Lucia.

Detailed achievements:

- Development of OCELOT, a tool for automatic test case generation;
- Knowledge about Search-Based Software Testing.

### **August 2013 - September 2013, *Visiting Student***

I worked on my bachelor’s thesis at the College of William and Mary, Virginia (USA), supervised by Denys Poshyvanyk.

Detailed achievements:

- Development of a tool for automatic code readability evaluation;
- Skills with Weka and Machine Learning.

## **Communication Skills**

### **2018, *Demonstration, ASE***

I presented the tool “OCELOT” at the International Conference on Automated Software Engineering in Montpellier, France.

### **2018, *Poster, ICPC***

I presented the poster “An Empirical Investigation on the Readability of Manual and Generated Test Cases” at the International Conference on Program Comprehension in Gothenburg, Sweden.

### **2017, *Oral Presentation, ASE***

I presented the paper “Automatically Assessing Code Understandability: How Far Are We?” at the International Conference on Automated Software Engineering in Urbana-Champaign, Illinois (USA).

### **2017, *Workshop, University of Molise***

I held the seminar “Introduction to scripting: automation is cool!” for the Summer School “Mathematics and Computer Science for Supporting Scientific Research”.

### **2017, *Course, University of Molise***

I held two courses (1 and 3 ECTS) about video-game development in Unity for undergraduates and high-school students.

### **2017, *Oral Presentation, ICSE***

I presented the paper “Supporting Software Developers with a Holistic Recommender System” at the International Conference on Software Engineering in Buenos Aires, Argentina.

### **2017, *Poster, ICSE-SRC***

I presented the poster “On Software Odysseys and How to Prevent Them” at the Student Research Competition of ICSE 2017.



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### **2016, *Oral Presentation, ICPC***

I presented the paper “Improving Code Readability Models with Textual Features” at the International Conference on Program Comprehension in Austin, Texas (USA).

### **2016, *Course, University of Molise***

I held two courses (1 and 3 ECTS) about video-game development in Unity for undergraduates and high-school students.

### **2015, *Demonstration, SCORE-it***

I presented the project “Speed-it app” in the final phase of the contest “SCORE-it” in Florence, Italy.

## **Organizational/Managerial Skills**

### **2018, *Local Arrangement co-Chair***

I am one of the Local Arrangement co-Chairs of SANER (International Conference on Software Analysis, Evolution and Reengineering) 2018.

### **2015, *Project Manager***

I managed a team of 12 persons for project *MyUnimol*. The app is available for Android and iOS.

## **Development/Team Working Skills**

### **2017, *Developer***

I participated in the hackathon “hack.developers”, the biggest code sprint ever realized in Italy. Our team, composed by 7 persons, got in the top-10.

### **2015, *Developer***

I worked in a team of 4 persons on the development of “Speed-it app”, a system for speeding up queues. Speed-it app was used at the registration desk of the International Conference on Software Engineering in Florence.

## **Awards**

### **2017, *ACM Distinguished Paper Award, ASE***

I received the ACM DPA at the International Conference on Automated Software Engineering for the paper “Automatically Assessing Code Understandability: How Far Are We?”

### **2016, *ACM Distinguished Paper Award, ICPC***

I received the ACM DPA at the International Conference on Program Comprehension for the paper “Improving Code Readability Models with Textual Features”.

### **2015, *SIGSOFT CAPS, ICSE***

I received the ACM SIGSOFT CAPS grant to support my participation at the International Conference on Software Engineering.



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## Publications

### International Journals

- J3 **S. Scalabrino**, G. Bavota, C. Vendome, M. Linares-Vàsquez, D. Poshyvanyk and R. Oliveto. *Automatically Assessing Code Understandability*. Transactions on Software Engineering (ICSE), 2019, To appear.
- J2 **S. Scalabrino**, M. Linares-Vàsquez, D. Poshyvanyk and R. Oliveto. *A Comprehensive Model for Code Readability*. Journal of Software: Evolution and Process (JSEP), 2018, To appear.
- J1 **S. Scalabrino**, G. Bavota, B. Russo, M. Di Penta, R. Oliveto. *Listening to the Crowd for the Release Planning of Mobile Apps*. Transactions on Software Engineering 2017, To appear.

### International Conferences

- C11 **S. Scalabrino**, G. Bavota, M. Linares-Vàsquez, M. Lanza and R. Oliveto. *Data-Driven Solutions to Detect API Compatibility Issues in Android: An Empirical Study*. Proceedings of the International Conference on Mining Software Repositories (MSR), 2019, To appear.
- C10 V. Piantadosi, **S. Scalabrino**, and R. Oliveto. *Fixing of Security Vulnerabilities in Open Source Projects: A Case Study of Apache HTTP Server and Apache Tomcat*. Proceedings of the International Conference on Software Testing (ICST), 2019, To appear.
- C9 G. Grano, **S. Scalabrino**, D. Di Nucci, M. Guerra, A. De Lucia, H. Gall and R. Oliveto. *OCELOT: a Search-Based Test-Data Generation Tool for C*. Proceedings of the International Conference on Automated Software Engineering (ASE) - Tool demo track, 2018, To appear.
- C8 G. Grano, **S. Scalabrino**, H. C. Gall and R. Oliveto. *An Empirical Investigation on the Readability of Manual and Generated Test Cases*. Proceedings of the International Conference on Program Comprehension (ICPC), 2018, To appear.
- C7 B. Lin, **S. Scalabrino**, A. Mocci, R. Oliveto, G. Bavota and M. Lanza. *Investigating the Use of Code Analysis and NLP to Promote a Consistent Usage of Identifiers*. Proceedings of the International Working Conference on Source Code Analysis and Manipulation (SCAM), 2017, pages 81-90. ISBN 9781538632383.
- C6 **S. Scalabrino**, G. Bavota, C. Vendome, M. Linares-Vàsquez, D. Poshyvanyk and R. Oliveto. *Automatically Assessing Code Understandability: How Far Are We?*. Proceedings of the International Conference on Automated Software Engineering (ASE), 2017, pages 417-427. ISBN 9781538626849.
- C5 F. Zampetti, **S. Scalabrino**, R. Oliveto, G. Canfora, M. Di Penta. *How Open Source Projects use Static Code Analysis Tools in Continuous Integration Pipelines*. Proceedings of the International Conference on Mining Software Repositories (MSR), 2017, pages 334-344. ISBN 9781538615447.
- C4 **S. Scalabrino**. *On Software Odysseys and How to Prevent Them*. Proceedings of the the International Conference on Software Engineering, Student Research Competition (ICSE-SRC), 2017, pages 91-93. ISBN 9781538615898.



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- C3 Luca Ponzanelli, **S. Scalabrino**, G. Bavota, A. Mocci, R. Oliveto, M. Di Penta and M. Lanza. *Supporting Software Developers with a Holistic Recommender System*. Proceedings of the International Conference on Software Engineering (ICSE), 2017, pages 94-105. ISBN 9781538638682.
- C2 **S. Scalabrino**, G. Grano, D. Di Nucci, R. Oliveto and A. De Lucia. *Search-based Testing of Procedural Programs: Iterative Single-Target or Multi-Target Approach?*. Proceedings of the International Symposium on Search Based Software Engineering (SSBSE), 2016, pages 64-79. ISBN 9783319471068.
- C1 **S. Scalabrino**, M. Linares-Vàsquez, D. Poshyvanyk and R. Oliveto. *Improving Code Readability Models with Textual Features*. Proceedings of the International Conference on Program Comprehension (ICPC), 2016, pages 1-10. ISBN 9781509014286.

### Book Chapters

- B1 **S. Scalabrino**, S. Geremia, R. Pareschi, M. Bogetti and R. Oliveto. *Freelancing in the Economy 4.0 - How information technology can (really) help*. Book Chapter of “Social Media for Knowledge Management Applications in Modern Organizations” by F. Di Virgilio. To appear.