# Curriculum Vitae – Fabrizio Montesi



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Google Scholar Languages

Danish, English, Italian.

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#### **Education**

- 29-11-2013: **Ph.D. Degree** in Computer Science, IT Univ. of Copenhagen, Denmark.
- 15-07-2010: M.Sc. Degree summa cum laude in Computer Science, Univ. of Bologna, Italy.

## **Short Bio**

Fabrizio Montesi is Chair at the Danish Institute for Advanced Study and Full Professor (Full Professor) of Computer Science at the University of Southern Denmark, Department of Mathematics and Computer Science, where he currently serves as member of the management group and Head of Section for the section of Artificial Intelligence, Cybersecurity, and Programming Languages. Fabrizio also serves as President of the Microservices Community, maintainer of the open-source programming language Jolie (for microservices), steering group member at the SDU Digital Democracy Centre, and Chair at the SDU eScience Center. He is also Founding Director at italianaSoftware, where he previously served as Co-CEO.

He received his M.Sc. Degree in Computer Science from the University of Bologna in 2010, and his Ph.D. Degree in Computer Science from the IT University of Copenhagen in 2013.

Fabrizio is an ERC grantee (2023) and Villum Young Investigator (2020). He is the recipient of the SDU Innovation Prize (2017), the EAPLS (European Association for Programming Languages and systems) Best PhD Dissertation Award (2014), and the award for Best M.Sc. thesis on ICT (Information and Communication Technology) by the General Confederation of Italian Industry (2011).

His main interest is the science of programming and, more broadly, how programming principles and technology can improve the world. His research focuses on programming languages and systems, cloud and edge computing, microservices, concurrency, cybersecurity, and digital democracy.

#### **Highlights**

Impact: 85 peer-reviewed publications, of which 32 in top venues, 3 in the top 1% of field-weighted citations, and 1 in the top 1% in the world (Scopus). H-index 32 and 4849 citations (Google Scholar, 07-01-2025). Pioneer of the programming paradigm of 'Choreographic Programming' (https://en.wikipedia.org/wiki/Choreographic\_programming) and author of the textbook 'Introduction to Choreographies' (Cambridge University Press, 2023). Lead developer and maintainer of the Jolie programming language (https://www.jolie-lang.org/), listed as 'advantage' by the influential industrial Gartner reports. Developed cybersecurity strategies recommended by NIST (world reference for security standards). Ph.D. award on EU level.

Leadership & Management: PI of seven research projects (total 35+ million DKK), including basic research, innovation, and interdisciplinary research (including from the ERC, Villum Fonden, Independent Research Fund Denmark, and Innovation Fund Denmark). Managed contributions to the Jolie project from 60+ people, both from academia and industry. Chair at the Danish Institute of Advanced Study. President of the international Microservices Community and created the first international scientific forum on Microservices. Head of the Section of Artificial Intelligence, Cybersecurity, and Programming Languages at the University of Southern Denmark (https://acp.sdu.dk). Founding steering member of the Digital Democracy Centre, University of Southern Denmark (https://sdu.dk/ddc).

**Outreach:** Published invited articles in different online magazines, including InfoWorld and DZone. Appeared in several newspapers, online news, and interviews. Co-curated a transdisciplinary art exhibition inspired by our research on choreographic programming, funded by the Danish Arts Foundation and hosted by the Catch institute (Center for art, design and technology, Helsingør, Denmark) in 2021. Received the Contributor of the Year Award (2021) for Microservices by Hackernoon (web

<sup>&</sup>lt;sup>1</sup>https://csrc.nist.gov/publications/detail/sp/800-204/final

<sup>&</sup>lt;sup>2</sup>https://jolie-lang.org/about\_jolie.html

<sup>&</sup>lt;sup>3</sup>See https://microservices.community and https://conf-micro.services

<sup>&</sup>lt;sup>4</sup>For more details and a list of dissemination activities, please see https://www.fabriziomontesi.com/dissemination.html.

magazine for software developers). Coordinated, with the consortium Technology Denmark, the SDU Talent Fellowship in Computer Science<sup>5</sup>, which increased significantly the number of Computer Science MSc students at SDU.

#### **Current and Previous Positions**

Period	Role	Employer
09-2024-present	Chair	Danish Institute for Advanced Study
09-2019-present	Full Professor	Univ. of Southern Denmark
08-2018-present	Head of Section	Univ. of Southern Denmark
	(AI, Cybersecurity, and Programming Languages)	
06-2019-present	President	Microservices Community
08-2021-present	Founding Steering Group Member	Digital Democracy Centre,
		Univ. of Southern Denmark
01-2018-present	eScience Chair	eScience Centre, Univ. of Southern Denmark
08/2017-08/2019	Associate Professor	Univ. of Southern Denmark
08/2014-07/2017	Assistant Professor	Univ. of Southern Denmark
09/2013-06/2014	Postdoctoral Researcher	IT Univ. of Copenhagen
08-2012-09-2012	Visiting Researcher	Imperial College London
09/2010-08/2013	Ph.D. student fellow	IT Univ. of Copenhagen
09-2010-present	Founder Member of the board of directors	italianaSoftware s.r.l. ■
11/2009-present	External Collaborator, Team FOCUS	INRIA 🛮 👢
04/2008-08/2010	Co-CEO	italianaSoftware s.r.l.
03-2007-02-2009	Independent Research Fellow	Univ. of Bologna . EU Project SENSORIA
06/2007-06/2009	Freelance software analyst and developer	Self-employed ■ ■

#### **Awards and Honours**

- 2023: COORDINATION Best Artefact Award.
- 2021: ECOOP (Europe's longest-standing programming conference) Distinguished Paper Award.
- 2021: Hackernoon (dissemination web magazine for software developers) Contributor of the Year (topic: Microservices).
- 2017: University of Southern Denmark Innovation Award. (Given to a single researcher every year, for societal impact.)
- 2015: European Association for Programming Languages and Systems (EAPLS) **Best Ph.D. Dissertation Award**. Highlights from the jury include: 'Unlike most computer scientists, Montesi excels in both systems and theory.'; 'The originality is outstanding [...]. The impact [...] is witnessed by the high number of citations.'. Announcement: http://eapls.org/items/1855/
- 2013: **Best Poster Award** at the ACM SAC 2013 conference, for a paper where I am the only author.
- 2011: National award for Best M.Sc. thesis on ICT, General Confederation of Italian Industry.

## Grants

- 2023: **PI** of *Choreographies for Distributed Systems: Reasoning, Expressivity, and Development (CHORDS)*, ERC Consolidator Grant. Amount: 1,999,497 EUR. Project period: 01-06-2024–31-05-2029.
- 2022: **PI** (with 1 co-PI) of *Explainable Internet Data Flows (X-IDF)*, Villum Synergy Initiation Project. Amount: 2,985,400 DKK. Project period: 01-02-2023–31-01-2025. Interdisciplinary project: Computer Science, Communication Science.
- 2022: **PI** of *Tools and Methods for the Design and Coordination of Reactive Hybrid Systems*, DIREC Explore Project, Innovation Fund Denmark. Amount: 2,262,001 DKK. Project period: 01-04-2022–31-03-2023.
- 2020: **PI** of *Choreographies for Connected IT Systems*, Villum Young Investigator Project. Amount: 7,174,850 DKK. Project period: 01-08-2020–31-07-2025.
- 2020: PI of Generic Microservices, Research Project 1 from Independent Research Fund Denmark (FNU). Amount: 2,341,440
  DKK. Project period: 01-08-2020-31-07-2023.
- 2019: **Deputy Chair for the University of Southern Denmark** in *European Open Science Cloud Nordic (EOSC-Nordic)*, RIA, H2020-INFRAEOSC-2018-2020. Amount (total, for 24 partners): 5,992,225 EUR. Project period: 3 years.
- 2017: **Co-Investigator** (out of 6) of *Online Algorithms and Cheminformatics Meet Concurrency*, Research Project 1 from Independent Research Fund Denmark (FNU). Amount: 1,382,962 DKK. Project period: 01/07/2017–31/06/2020.
- 2017: **Co-Investigator** (out of 3) of *PREDICT* (*Pseudoexon Risk Estimation Database and In silico Clinical Testing*), funded by the Open Data Exploration of Univ. of Southern Denmark. Amount: 1,571,000 DKK. Project period: 01/06/2017–30/04/2019. Interdisciplinary project: Computer Science, Molecular Biology.

<sup>&</sup>lt;sup>5</sup>Video: https://www.youtube.com/watch?v=HoBsuFvw6X0

- 2017: **PI** (with 1 co-PI) of *Open Data Framework*, funded by Max-Planck Odense Center, Species360, Odense city, and the Open Data Exploration of Univ. of Southern Denmark. Amount: 4,164,000 DKK. Project period: 01-02-2017–31-01-2019. Interdisciplinary project: Biology, Computer Science.
- 2014: **PI** of *Choreographies for Reliable and efficient Communication software (CRC)*, Individual Postdoctoral grant from Independent Research Fund Denmark (FTP). Amount: 2,431,030 DKK. Project period: 01-08-2014–31-07-2017.
- 2014: **Investigator member** of *Evolving software systems: analysis and innovative approaches for smart management*, Croatian Science Foundation. Amount: 594,300 HRK (584,711 DKK). Project period: 07/01/2015–30/06/2018.
- 2013: ACM SIGPLAN travel grant for presenting at the conference ACM POPL 2013.
- 2008: **Joint PI**, I TECH-OFF innovation grant for italianaSoftware s.r.l. The Italian business grant for the support of new and innovative ICT companies. Amount: 10,000 Euros (74,381 DKK).
- 2007: **Joint PI**, Ingenium innovation grant. A grant for the creation and support of business ideas with strong growth potential. Amount: 5,000 Euros (37,190 DKK).
- 2007: **Joint PI**, Start Cup innovation grant. The Italian grant for excellent business plans on technology and innovation. Amount: 5,000 Euros (37,190 DKK).

## Other Scientific and Management Qualifications

- Service: **Editor** of 2 journal issues (including Elsevier SCP); **Program chair** (or co-chair) of 10+ intl. scientific events (including ESOCC, the Microservices conference, and tracks at ACM SAC and IEEE SOCA); **PC member** of 20+ intl. events; **Steering committee member** of the intl. Microservices Conference and the SOAP track for the intl. conference ACM SAC (2015-2018).
- Presentations: Three **invited keynotes** (Choreographic Programming at PLDI'24, Microservices 2019, and WS-FM'14); various invited seminars at institutions in Denmark, France, Italy, Portugal, and United Kingdom; other 12 talks at intl. scientific venues.
- EU Projects: deputy chair for the Univ. of Southern Denmark in European Open Science Cloud Nordic, RIA, H2020-INFRAEOSC-2018-2020; WG vice-chair, EU COST Action IC1201 BETTY; member, EU COST Action IC1405 REVER; member, EU FP6 Integrated Project SENSORIA.

#### **International Collaborations**

60+ scientific **co-authors**, including intl. leaders such as Davide Sangiorgi (INRIA , and Univ. of Bologna , h-index 51), Philip Wadler (Univ. of Edinburgh , h-index 74), Nobuko Yoshida (Univ. of Oxford , h-index 63).

My industrial network includes, but is not limited to, companies from Denmark, Italy, United Kingdom, and USA, for example: Bank data (\*\*); Imola Informatica (\*\*); Nordea (\*\*); Red Hat (\*\*); SANOVO (\*\*).

## **Supervision Experience**

Postdocs: 7. Ph.D. students: 7. Scientific developers: 1. M.Sc. students: 24. B.Sc. students: 19.