# University Academic Curriculum Vitæ of Andrea Janes

Personal information

Name: Andrea Alexander Janes E-Mail: andrea.janes@fhv.at

# Education since leaving school

- November 2001: <u>Master of Science</u> degree in Informatics and Economics (Wirtschaftsinformatik in German) at the Technical University of Vienna, Austria. Austrian title: Mag. rer. soc. oec..
- August 2014: <u>Doctor of technology</u> degree (with distinction) in computer science at the University of Klagenfurt, Austria. The doctorate was supervised by Prof. Gerhard Friedrich (University of Klagenfurt) and Prof. Giancarlo Succi (Free University of Bozen-Bolzano). Austrian title: *Dr. techn.*.
- January 2020: <u>Habilitation as associate professor</u> (professore universitario di seconda fascia) in Italy in the field of *Sistemi di elaborazione delle* informazioni (09/H1), i.e., Information processing systems.
- April 2021: <u>Habilitation as associate professor</u> (professore universitario di seconda fascia) in Italy in the field of *Informatica (01/B1)*, i.e., Computer Science.
- January 2023: <u>Adjunct professor</u> (title of docent) at the University of Oulu in the field of Software measurement<sup>1</sup>.

# Present appointment

Job title: Senior lecturer (Hochschullehrer)

Start/end: Since 1.11.2022

Employer: FHV Vorarlberg University of Applied Sciences

Place of work: Dornbirn, Austria

Brief description Teaching in the area of software engineering.

of responsibilities: Participation in the application, evaluation and design of

the study program and in the admission procedures. Promotion of the students' success in their studies. Supervision of internships and theses. Implementation

and support of excursions, practical visits, etc. Establishment and maintenance of contacts with relevant system partners from industry and society, acquisition of transfer projects. Project management and collaboration in transfer and other projects. Research and development, cooperation with companies and

academic institutions.

# Experience in academic teaching

This section lists my experience in academic teaching, provides an overview about the teaching evaluations, and illustrates significant personal achievements in teaching including thesis supervision. Lectures that I am currently developing are marked in gray. The name of the lecture is reported in the teaching language; if it is not English, I provide the translation as a footnote.

<sup>&</sup>lt;sup>1</sup>https://www.oulu.fi/en/university/faculties-and-units/faculty-information-technology-and-electrical-engineering/empirical-software-engineering-software-systems-and-services

Org.	Course	Role <sup>2</sup>	BSc		,	ECTS
fhv	Software Engineering <sup>3</sup>	L	X		′23/24	8
fhv	Fachgespräche zum Software Engineering <sup>4</sup>	L			'23/24	4
fhv	Software Engineering Seminar <sup>5</sup>	L	X		'23/24	3
fhv	Softwareprozesse und -qualität <sup>6</sup>	L	X		'23/24	4
fhv	Grundlagen der Wirtschaftsinformatik <sup>7</sup>	С		X	'23/24	9
uibk <sup>8</sup>	Methods of Software Quality Assurance	L	×		'22/23	3
fhv	System architectures	L	X		'22/23	5
fhv	Enterprise Applikationen <sup>9</sup>	С	X		'22/23	10
fhv	Software processes	L		X	'22/23	5
fhv	Architekturen und Sicherheit in verteilten Systemen <sup>10</sup>	L		×	'22/23	3
fhv	Parallelization and Concurrent Programming	 L	;	·	'22/23	4
	Contemporary Software Development <sup>11</sup>	L, TA			'19/20–'22/2	
	Software Development: from the idea to the				'20/21	3
	product <sup>12</sup>	_			•	
	Application Engineering for Business Informatics	sL, TA	×		'19/20–'21/22	
	Systems Engineering	L	×		'19/20	6
	Internet and Mobile Services <sup>13</sup>	L	X		'18/19	6
	Project Management and Professional Ethics <sup>14</sup>	L	X		'18/19	3
	Software Factory	L, TA		X	'17/18, '18/19	8
unibz	Software Process Management	L			'14/15–'16/17	8
unibz	Architectures of Digital Systems	L, TA	X		'11/12, '12/13,	8
					′14/15–′16/17	
	Project and Team work management	L	X		'14/15	3
	Empirical Software Measurement	TA			'11/12	8
	Introduction to Management Engineering	TA	×		'10/11	4
	Open Tools for IT Management	TA	×		'10/11	4
	Computer Networks	TA	X		'09/10, '10/11	
unibz	Requirements and Design of Software Systems	L, TA			'09/10, '10/11 '13/14	, 8
unihz	Technology Assessment	TA	X		'09/10, '10/11	4
	Analysis	TA	×		'09/10	4
	Software Quality Management	 L			'07/08	4
	Programming Languages	TA	×		'07/08	4
	Software Architectures	TA			'06/07, '07/0	
	Internet Technologies II	TA	×	· · ·	'06/07, '07/0	8 4
	Requirements Engineering	L			'05/06	4
	Laboratorio di tecnologie informatiche <sup>15</sup>	<u> </u>			'05/06, '06/0	-
	Software per la didattica dell'informatica <sup>16</sup>	L			'05/06, '06/0 '05/06, '06/0	
uiiiUZ	Johnware per la uluactica dell'illiorifiatica			<u></u>	03/00, 00/0	4

<sup>&</sup>lt;sup>2</sup>Lecturer (L), Teaching Assistant (TA), or Coach (C). If my role changed during the years (e.g., first only teaching assistant, then lecturer), I report the course in one line mentioning both roles.

<sup>&</sup>lt;sup>3</sup>In English: Software engineering

<sup>&</sup>lt;sup>4</sup>In English: Expert discussions on software engineering

<sup>&</sup>lt;sup>5</sup>In English: Software engineering seminar

<sup>&</sup>lt;sup>6</sup>In English: Software processes and quality

<sup>&</sup>lt;sup>7</sup>In English: Fundamentals of business informatics

<sup>&</sup>lt;sup>8</sup>University of Innsbruck, Austria

<sup>&</sup>lt;sup>9</sup>In English: *Enterprise applications* 

<sup>&</sup>lt;sup>10</sup>In English: Architectures and security in distributed systems

<sup>&</sup>lt;sup>11</sup>In 2022/23, taught as an external lecturer at unibz

<sup>&</sup>lt;sup>12</sup>Taught as a course in the *Studium Generale*, an interdisciplinary study programme available to the general public. See https://www.unibz.it/en/faculties/further-courses/studium-generale/.

<sup>&</sup>lt;sup>13</sup>Taught together with Panagiotis Symeonidis

<sup>&</sup>lt;sup>14</sup>Taught together with Christian Mörtl

<sup>&</sup>lt;sup>15</sup>In English: *Information technology laboratory* 

<sup>&</sup>lt;sup>16</sup>In English: Software for teaching computer science

Org.	Course	Role	BSc MSc	Ac. year	EC	TS
unibz	Didattica dell'Informatica I <sup>17</sup>	L	•	.'06/07		4
unibz	Software Engineering Project	TA	×	'04/05, '0	05/06	8
unibz	Programming Project	TA	×	'02/03, '0	03/04	8
unibz	Algorithms & Complexity	TA	×	'02/03		4

#### Summary of significant personal achievements in teaching

I think teaching is an integral part of scientific work as it confronts students with the latest developments in the research area and it challenges me to be concise, clear, and to point out the practical value of what I research.

When teaching at university level, I mainly adopt a <u>Constructivist Learning</u> approach, which is based on the idea that individuals construct their own understanding and knowledge of the world around them through their experiences and interactions with it. In a teaching context, the consequence is that students should be actively involved in the learning process and that they should be encouraged to construct their own understanding of the material being taught, rather than simply receiving information from me.

It is my goal to not primarily show to students "how something has to be done", but to help them understand the intentions behind methods and technologies, how they can be supported, and what might obstruct them. Through real-world problems and hands-on projects or experiments, I aim to develop the students' problem solving strategies; reading academic papers and watching the original talks of scientists, I want to demystify research and prepare them to be able to consume directly the results of research in their future work. Blended Learning is not only used as a teaching method to engage students, but as a method to familiarize them with research products such as papers, presentations, and technical reports.

I see my role as a facilitator of learning rather than to simply transmit information, and to provide support and guidance as students work to construct their own understanding of the material.

Therefore, in my courses I require students to read the material themselves, retrieve data and additional material from the Internet themselves, implement the teachings of the course in form of a project, and demonstrate and challenge their knowledge solving cases and discussing them among each other.

Such a <u>Flipped Classroom</u> approach, in which students are expected to read the course material outside of class and then come prepared to apply and expand upon that knowledge through activities and discussion, helps me adopting the constructivist principles of learning in a more personalized and differentiated way: students able to work through the material at their own pace and come to class with their own questions and ideas. This is particularly important at the Master's level, where there are often students coming from different backgrounds and different levels of experience with the particular subjects.

<sup>&</sup>lt;sup>17</sup>In English: Didactics of computer science I

When designing the course, I aim for <u>Constructive Alignment</u>, i.e., I first define the course goals and then determine the assessment methods I will adopt to assess if the course goals have been achieved. I then choose teaching and learning activities that help students satisfy the assessment criteria. I regularly evaluate the alignment of goals, activites, and assessment.

To organize the course activities, I apply the <u>AVIVA model</u><sup>18</sup>, which divides a course into five phases: arrive and tune in (students find out about the learning objectives and the program), reactivate prior knowledge (prior knowledge is discussed), inform (students engage with the prepared resources), process (students actively apply and consolidate their knowledge), and finally assess (the learning success is evaluated).

To evaluate a student's work, I <u>apply constructive alignment</u> and assess the achieved course objectives using intermediate and final exams; I prefer to see the lab as a "safe space", in which students are not evaluated but free to try out things and to develop their own "error culture". The <u>highlights of my personal achievements in teaching</u> are:

- Best teacher award: I won the award for the best teacher at the Faculty of Computer Science of unibz in 2017, based on student votes. I was already nominated in 2013 and 2014.
- <u>Studium Generale</u>: In 2020, I taught the course *Software Development:* from the idea to the product for the interdisciplinary study programme "Studium Generale" available to the general public at unibz, 3 ECTS.
- Lectures for high school students: I participated to an initiative to give presentations in high schools to motivate students to attend the university and to study Computer Science with the following presentations: Cost accounting in software engineering, Agile software engineering, and Change of perspective: functional programming using Elixir.
- <u>Internships for high school students</u>: In 2018, '19, '21, and '22, I hosted students from the high schools Galileo Galilei, Max Valier, and Franz Kafka. I involved them in various projects, e.g., a software to match voting preferences with political opinions for the newsmagazine FF or on software to track climbers.
- EURAC Junior Science Camp: In 2013, the EURAC Junior Science Camp introduced 17- to 18-year-old high school students to various areas of science, and I gave a one-day workshop on robot programming.
- <u>JuniorUni</u>: In the years 2011–'13 and 2015–'19, I contributed to the project *JuniorUni*, which aims to present scientific topics to children. Together with children of different age groups I constructed and programmed Lego Mindstorm robots. I visited kindergartens, elementary and middle schools in South Tyrol to teach programming concepts (instructions, loops and conditions) to entire school classes using Lego robots.
- Thesis supervision: on the following pages I list the theses I supervised or currently supervise. I do this also to show the topics of my research since many theses mark the beginning of a line or research or investigate a part of an ongoing research project.

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<sup>&</sup>lt;sup>18</sup>Christoph Städeli, Markus Maurer, Claudio Caduff & Manfred Pfiffner, 2021: Das AVIVA-Modell im Blended Learning: Fünf Säulen einer guten Unterrichtsvorbereitung. Transfer, Berufsbildung in Forschung und Praxis (3/2021), SGAB, Schweizerische Gesellschaft für angewandte Berufsbildungsforschung.

Number, author, and title of the PhD thesis 19	$C^{20}$	Yr.
1. S. S. Optical Flow Estimation		'22
2. S. A. A non-invasive approach to software development analytics		'15
Number, author, and title of the <u>master</u> thesis	C E <sup>21</sup>	Yr.
1. A. B. Software Development Process Support for Microfrontends		<u>'23</u>
2. M. V. Implementation of a database access framework for code		23
generation in a database-first approach (in progess)		LJ
3. D. M. Towards a reference architecture for ETL pipelines, validated		23
in the Erlang ecosystem and the DNN context		
4. F. P. Extending a data-driven application with Event Sourcing		'22
5. D. S. Configurable and resource efficient framework for data and	X	'22
command transmission over LoRaWAN		
6. T.K. Log diagnosis and error detection in the field of electric		'22
mobility		
7. L. F. Generation of Nutritional Natural Language Comments for	X	'22
Recipes		
8. B. K. Interactively Learning of Personalised Constraints for Food	X	'22
Recommendations		
9. A.V. Damage Detection of Powertrains based on Acoustic		20
Signatures		
10. L.S. Bug or not bug: commit classification using weak supervision	X	'20
11. G. S. S. Designing and Implementing a Scalable and Modular		20
Microservice Architecture for Smart Cities		
	X	'20
deployment of a camper prediction system: a Case Study		
13. A. M. The Electronic Health Record (EHR) of South Tyrol – A Case		'19
Study		
14. D. F. Identifying Microservices in a Monolithic Application: A Process		'18
Mining Approach		
15. M. M. Architectural design of a mobile sales force application in a		'18
medium-sized company: requirements analysis, architecture		
development, and evaluation	<b>.</b>	11.0
J	××	16
Respective Associated Variables and Accessor Methods in the Source Code		
	××	116
refactoring and software bugs	^ ^	10
18. M. M. Analyzing user interface activities using process mining		'16
19. D. J. Ensuring relevance in semantic search system development		'15
20. S. K. A method for performing indoor positioning using Bluetooth	×	15
beacons	,	15
21. P. P. Implementation and Analysis of an Energy Saving Kernel-Level		'15
Extension in Android OS		
22. P. D. Software quality strategies of SMEs: an Open Source approach		'15
23. S. C. SmartMetering using IBM BlueMix		'15
24. A. K. Managing Dependencies and Business Goal Alignment in		'15
Software Measurement Programs		
25. S. S. Privacy e confidenzialità in un app per la sanità digitale		'15
26. M. M. Detecting bad smells in meetings using active RFID tags		'13
22.2.2.2	×	'13
28. K. M. Landscape Optimization by offering virtualized data access	××	'13
methods using SAP In Memory technology		

<sup>&</sup>lt;sup>19</sup>The name of the student is anonymized, the full name is available upon request. <sup>20</sup>I supervised this thesis as co-supervisor. <sup>21</sup>This thesis was written during an Erasmus stay or an international MSc curriculum.

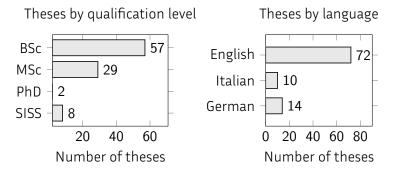
	mber, author, and title of the <u>master</u> thesis C E  D. H. Improving automated requirement traceability in modified ×  code	Yr. ′12
Nu	mber, author, and title of the <u>bachelor</u> thesis	C Yr.
		<b>X</b> ′23
2.	M. E. Vergleich von Low-Code und traditioneller Softwareentwicklung anhand der Entwicklung einer Kollaborationsplattform zur Einsatzplanung bei Umweltkatastrophen (in progress)	'23
3.	F. Ö. Entwicklung eines Rückmeldungsmoduls für Visual Studio Code zur Bewertung der Namensgebung von Programmvariablen (in progress)	'23
	J. M. Service zur Bereitstellung von Ereignissen (in progress) L. T. Development of a Sensor-based Portable Data Collection System for Climbers	'23 '22
6	D. S. Analysis of Support Tickets: a Case Study	'22
	B. S. Proposing Microservice Cuts in a Monolith: a Process Mining Approach	'22
8.	C. C. HelpArt: a Walk-through to Help Artisans Envisioning the Internet	'22
	of Things	
	M. F. Fake: a Simulator for Microservice-based Applications	'22
	D. F. Investigating the attractiveness of smart bathrooms: a case study	'22
	V. A. P. Unity WebGL application for interactive multiuser meetings	'22
	N. M. Tracking the activity of visitors during an event: the Snowdays experience	'22
	A. R. Proactive Voice Assistants in Software Engineering	'21
14.	L. S. Integrated data management with Autodesk Vault, SAP ERP, and coolOrange powerGate: a case study	'20
15.	K. B. Supporting customer interaction during events with Pepper	'19
	P. S. Event and contact management supported by a robotic concierge for the NOI technology park	'19
17	K. S. Identification of Bug-Inducing Commits Based on User Activity	'19
	R. F. Personas-Driven Approach to Test Case Generation	'19
	R. S. Design of A Serverless Architecture for Camper Domotics	'19
		<b>X</b> '19
	H. W. Visitor Guidance Supported by a Robotic Concierge for the NOI	'19
	Technology Park	'19
	S. C. Evaluating Microservice Design Choices using Load Testing F. T. Design and Implementation of a robotic concierge for the NOI	'19
	Techpark	
24.	M. M. K. InteGrate: An App based solution for new school children from different countries to integrate and adjust in German schools in South	'19
25.	Tyrol M. E. S. Evaluation And Tool Support For The REUSE Compliance Of GitHub Repositories	'19
26		<b>X</b> '19
	P. F. Design, Implementation, and Evaluation of a Flashcard Learning >	
28.	App to Learn Shortcuts M. P. A study on presence detection in guestrooms through multiple	'18
29.	3 / 1 / /	<b>×</b> '18
	Transfer Platform	
	D. M. Booster: A Peer-to-Peer Network Interface Balancer	'18
31.	L. S. Estimating the costs of a new climbing route: a genetic algorithm	'18
32.	approach A. R. G-Splint: Blender Addon for analysis of 3D scans and autonomous? modeling of splints	≺ ′18

Number, author, and title of the <u>bachelor</u> thesis	C Yr.
33. R. N. PentDB: A management information system for churches 34. M. Z. A User Interface for an IDE Command Recommender System	'17 '16
35. J. G. SURF: Ein System für die Unterstützung von	'16
Reorganisationsmaßnahmen basierend auf	
FTE-Optimierungspotenzialen	
36. D.O. Software-Qualitätssteigerung durch End-Benutzer-generierte Regressionstests	'16
37. W. F. Refactoring of a Management Software for the Kurhaus Meran	'16
38. S. M. Selecting technologies to implement a distributed web-based	'16
communication platform in.a startup	'15
39. J. G. A modular architecture for a treemap-based dashboard 40. B. G. Extreme Technical Debt	'15
41. S.S. Privacy e confidenzialità in un'App per la sanità digitale	'15
42. S.S. Mobile Webanwendung für die Vermittlung kultureller	'15
Veranstaltungen im Rahmen des Kulturportals Südtirol	13
43. F. P. Abgleich der Inhalte und Einstellungen zwischen Facebook und	'14
Wordpress: ein erster Schritt zur Unterstützung von	
Multichannel-Marketing im Internet	
44. S. K. Analysis and comparison of methods to minimize energy	X '14
consumption in Android Kernels	
45. S. P. Messung und Darstellung des Energieverbrauchs von Android	′14
Applikationen	
46. P. M. Non-Invasive Cost Accounting for Kanban Teams	′14
47. M. M. RescueEye: an unmanned aerial vehicle to get pictures of an	′14
accident scene before rescuers arrive	
48. V. H. Autocomplete for CNC-Programmers	'14
49. D. F. Vertical Life: Migration einer Android Anwendung in iOS	′14
50. M. B. Mobile Sales: eine mobile Applikation für die Auftragsverwaltung	'13
für Handelsvertreter 51. M. M. Online–Plattform für die Vermittlung von Gelegenheitsarbeiten	i '13
für die Generation 50Plus	
52. P. G. FireAlarm Mobile: Die Entwicklung eines Alarmiersystems für die Feuerwehren Südtirols	'13
53. P. P. Dashboarding in Microsoft Design Language (formerly known as Metro Design)	'13
54. R. V. Using LEGO NXT robots for children education	<b>X</b> '12
55. F. O. Dube: A Web Application for the Distribution and Update of Data	
Processing and Visualization Components 56. M. C. Extracting and Representing Application Dependencies from	<b>X</b> ′06
Software Process Data	
57. T.W. Misurazione non-invasiva per la stima dell'effort di requisiti espressi in linguaggio naturale	<b>X</b> ′06
Lales cuponized students in the Pressences for the Faculty of Educ	
I also supervised students in the Bressanone for the Faculty of Educ	
at the "Scuola per la specializzazione dell'educazione secondaria" <sup>22</sup> (	
The students I supervised, together with the title of their theses, an	u the
year of completion are:	
Number, author, and title of the <u>SISS</u> thesis	Yr.
1. L. M. Il modello relazionale per le basi di dati	'07
2. M. N. Didattica assistita da strumenti per presentazioni multimediali	'07
nella comune pratica d'aula: funzioni, scope e passaggio dei parameti	ri
3. M.V. Le certificazioni informatiche nel contesto scolastico	'07
4. A.C. L'algebra di Boole	'06
5. G.C. La crittografia: principali metodologie e applicazioni	'06
6. C. M. F. L'8086 e la programmazione assembly	'06

<sup>&</sup>lt;sup>22</sup>In English: School for the spezialization of secondary education

· · · · · · · · · · · · · · · · · · ·	
7. G. C. Introdurre la programmazione ai principianti: un approccio tramite'06	
Logo e Java	
8. G. F. I reati informatici '06	

The following charts show the distribution of the theses I supervised by qualification level and language.



So far, I supervised 96 theses, including those that are ongoing.

### Postgraduate supervision (PhD level)

In the last 5 years (2018–2023), I supervised 1 PhD student in the subject area Computer Vision. Please, see also the point "thesis supervision" above.

# Other academic responsibilities

This section presents the appointments to faculty and university boards, external appointments at national and international level, responsibilities for organizing conferences and seminars, and editorial and reviewing activities.

#### External appointments at national and international level

Organization	Year/s	Responsibilities
University of	′13	External commission member for the master defense
Maribor, Ślovenia		of M. G. <sup>23</sup> .
Province of	′14	<u>Teacher</u> for the subjects <i>Requirements engineering</i>
Bozen-Bolzano, Ital	У	and KPI management during a course organized for
·	•	the IT requirements management office.
NOI Techpark, Italy	′17–22	Member of the SFSCon Stakeholder Meeting to define
		the theme of the conference and the topics to
		publish on the call for presentations.
SMBS University of	'20	<u>Teacher of the module</u> Praxis-Workshop – Big Data
Salzburg Business		im eigenen Unternehmen (Practical workshop - Big
School, Salzburg,		Data in your own company), together with Diego
Austria		Calvanese.
INNOS GmbH,	'20	<u>Teacher of the module</u> Datenmanagement mit
Austria		Microservices <sup>24</sup> during the webinar Datenbanken und
		deren effiziente Verwendung <sup>25</sup> .
NOI Techpark, Italy	'19–22	Member of the Digital Community Meeting to
, , ,		exchange experiences between the research
		institutions, companies, and startups present at the
		NOI Technology park working in the digital field.
Province of	since '21	<u>Reviewer</u> for innovation, research, and development
Bozen-Bolzano, Ital	У	projects submitted to the Autonomous Province of
,	•	Bozen/Bolzano (provincial law 14/2006).

<sup>&</sup>lt;sup>23</sup>The name of the student is anonymized, the full name is available upon request.

<sup>&</sup>lt;sup>24</sup>In English: Data management with microservices

<sup>&</sup>lt;sup>25</sup>In English: Databases and their efficient use

Organization	Year/s	Responsibilities
University of	'22	Invited Speaker for an inforte.fi <sup>26</sup> seminar, presenting
Jyväskylä, Finland		how to Promote your research in Industry and
		Academia.
unibz	'22/23	External lecturer for a part (4 months out of 6) of the
		course Contemporary Software Development.
uibk	'23	External lecturer for the course Methoden der
		Software Qualitätssicherung, in English: Software
		quality assurance methods.
Dublin City	'22	External Examiner for the master thesis of N. L. <sup>27</sup>
University, Ireland		titled Examining the use of dynamic data when
		undertaking monolith to microservice architecture
		migration
Tampere University	ı, '23	Examiner and Opponent for the doctoral thesis of
Finland		S. M. titled Applications of MLOps in the Cognitive
		Cloud Continuum.
Università degli	'23	External Examiner of the "Commissione per gli esami
Studi di Cagliari,		finali del XXXV Ciclo" <sup>28</sup> .
Italy		

### Responsibilities for organizing conferences and seminars

Date/s	Event	Responsibilities
4.12.11-	2011 Alpine Software Engineering Workshop,	Organizing committee
6.12.11	Corvara, Italy (ASEW 2011)	member
2.12.12-	2012 Alpine Software Engineering Workshop,	Organizing committee
4.12.12	Ortisei, Italy (ASEW 2012)	member
6.5.14-	10th International Conference on Open Source	PC member & PhD
9.5.14	Systems, San Jose, Costa Rica (OSS 2014)	Symposium <u>chair</u>
22.9.14-	3rd International Conference on Software	PC member & Program
23.9.14	Engineering for Defence Applications, Rome,	<u>chair</u>
	Italy (SEDA 2014)	
25.5.15-	16th International Conference on Agile Software	· · · · · · · · · · · · · · · · · · ·
29.5.15	Development, Helsinki, Finland (XP 2015)	in the 21st Century
		Software Engineering)
26.8.15-	41st Euromicro Conference on Software	PC member (Software
28.8.15	Engineering and Advanced Applications, Funcha	l,Value Management)
	Madeira, Portugal (SEAA 2015)	
28.4.16-	1st Joint Seminar in Empirical Software	Organizer
29.4.16	Engineering at the Free University of	
	Bozen-Bolzano (JESE 2016)	
6.12.16-	2016 Alpine Software Engineering Workshop:	Organizer
6.12.16	Random-Based Testing, Bolzano, Italy (ASEW	
	2016)	
22.4.17-	1st International Workshop on Monitoring in	PC member
26.4.17	Large-Scale Software Systems, L'Aquila, Italy	
	(MOLS 2017)	
18.5.17-	2nd Joint Seminar in Empirical Software	Co-organizer
19.5.17	Engineering at the University of Innsbruck (JESE	=
	2017)	<u>.</u>
21.5.17-	1st International Workshop on Microservices fo	rCo-organizer
26.5.17	Agile software development (WMSA 2017)	
6.7.17-	8th Workshop on Computer Science Research	
6.7.17	meets Business, Bolzano, Italy: Data Science, Hov	vmember
	to Create added Value from Data	

<sup>&</sup>lt;sup>26</sup>http://inforte.jyu.fi
<sup>27</sup>The name of the student is anonymized, the full name is available upon request.
<sup>28</sup>In English: *Commission for the final examinations of the XXXV Cycle* 

Date/s	Event	Responsibilities
3.9.17-	1st International Conference on Lean and Agile	
6.9.17	Software Development, Prague, Czech Republic	
	(LASD 2017)	
4.9.17- 7.9.17	2017 Summer School on Software Engineering, Bolzano, Italy (SESchool 2017)	Organizing committee member
21.9.17	3rd Joint Ontology Workshops, Episode 3: The	Track co- <u>chair</u> (Data
23.9.17	Tyrolean Autumn of Ontology, Bozen-Bolzano,	meets Applied
LJ.J.11	Italy (JOWO 2017)	Ontologies)
29.11.17-	18th International Conference on	PC member (Full Papers)
1.12.17	Product-Focused Software Process	& Session chair
	Improvement, Innsbruck, Austria (PROFES 2017)	· · · · · · · · · · · · · · · · · · ·
21.5.18-	19th International Conference on Agile Software	
25.5.18	Development, Porto, Portugal (XP 2018)	Papers)
28.8.18-	44th Euromicro Conference on Software	PC member (Monitoring
31.8.18	Engineering and Adv. Applications, Prague, Czech	
	Republic (SEAA 2018)	Systems)
9.9.18-	2nd International Conference on Lean and Agile	PC member
12.9.18	Software Development, Poznań, Poland (LASD	
0.010	2018)	
9.9.18-	2018 Summer School on Software Engineering,	
12.9.18 23.9.18-	Bolzano, Italy (SESchool 2018)  34th International Conference on Software	member PC member (Artifacts)
29.9.18	Maintenance and Evolution, Madrid, Spain	remember (Arthacts)
LJ.J.10	(ICSME 2018)	
281118-	19th International Conference on	PC member (Full
30.11.18	Product-Focused Software Process	Research and Industry
	Improvement, Wolfsburg, Germany (PROFES	Papers)
	2018)	,
21.5.19-	20th International Conference on Agile Software	PC member (Research
25.5.19	Development, Montréal, Canada (XP 2019)	Paper)
8.7.19-	12th Seminar on Advanced Techniques & Tools fo	
10.7.19	Software Evolution, Bolzano, Italy (SATToSE 2019)	
1.9.19-	3rd International Conference on Lean and Agile	PC member
4.9.19	Software Development, Leipzig University,	
10.9.19-	Leipzig, Germany (LASD 2019) 2019 Summer School on Software Engineering,	Organizing committee
12.9.19	Bolzano, Italy (SESchool 2019)	member
11.9.19-	12th International Conference on the Quality of	
13.9.19	Information and Communications Tech., Ciudad	
	Real, Spain (QUATIC 2019)	Maintenance and
		Comprehension)
30.9.19-	35th IEEE International Conference on Software	PC member (Short
4.10.19	Maintenance and Evolution, Cleveland, Ohio, USA	APapers)
	(ICSME 2019)	
27.11.19-	20th International Conference on	PC member (Full
29.11.19	Product-Focused Software Process	Research and Industry
	Improvement, Barcelona, Catalunya, Spain	Papers)
15.1.20-	(PROFES 2019) Reality Check: IT students meet companies, a	Organizer
3.6.20	bi-monthly event, organized together with the	Organizei
3.0.20	NOI Technology park in Bolzano, open to all	
	bachelor, master, and PhD students, to allow	
	companies to present themselves to students	
	and to help students to get to know the local IT	
	landscape, Bolzano, Italy	
8.6.20-		
	21st International Conference on Agile Software Development, Copenhagen, Denmark (XP 2020)	

Date/s	Event	Responsibilities
1.7.20-	6th International School on Software	Organizing committee
3.7.20	Engineering, Bolzano, Italy (ISESchool 2020)	member
26.8.20-	16th International Symposium on Open	PC member (OpenSym
27.8.20	Collaboration, Madrid, Spain (OpenSym 2020)	2020 New Ideas and
6.9.20-	4th International Conference on Lean and Agile	Emerging Research) PC member
9.9.20	Software Development, Sofia, Bulgaria (LASD	
0.0.20	2020)	DC
8.9.20-	13th International Conference on the Quality of	
11.9.20	Information and Communications Technology (QUATIC 2020)	Artificial Intelligences for Software Evolution)
11.11.20-	18. Anwenderkonferenz zu Softwarequalität, Test	
11.11.20	und Innovation, Bolzano, Italy (ASQT 2020)	
	21st Int. Conference on Product-Focused	PC member (Full
27.11.20	Software Process Improvement, Turin, Italy	Research Papers and
27.11.20	(PROFES 2020)	Short Papers)
23.1.21-	5th International Conference on Lean and Agile	
23.1.21	Software Development, online (LASD 2021)	
23.5.21-	4th International Conference on Technical Debt,	PC member (Tool Papers)
24.5.21	online (TechDebt 2021)	
7.6.21-	Summer School in HPC and AI, Bolzano, Italy	Organizing committee
8.6.21	1/45 1.4	member
8.9.21-	14th International Conference on the Quality of	
11.9.21	Information and Communications Technology, online (QUATIC 2021)	Evolution)
25.11.21-	22nd Int. Conference on Product-Focused	PC member (Full
26.11.21	Software Process Improvement, Turin, Italy	Research Papers and
20.11.21	(PROFES 2021)	Short Papers)
11.11.21-	19. Anwenderkonferenz zu Softwarequalität, Test	:PC member
11.11.21	und Innovation, Bolzano, Italy (ASQT 2021)	
27.10.21-	2nd Workshop on Data for Smart Health,	Session <u>chair</u> (Industry
27.10.21	Bolzano, Italy (D4SH 2021)	and Public Governance)
22.1.22-	6th International Conference on Lean and Agile	
22.1.22	Software Development, Sofia, Bulgaria (LASD	
	2022)	
17.5.22-	5th International Conference on Technical Debt,	PC member (Tool Papers)
18.5.22	Pennsylvania, USA (TechDebt 2022)	& Session <u>chair</u> (Machine
		Learning for Technical
		Debt)
	International Workshop on Applied Research,	PC member
24.8.22	Technology Transfer and Knowledge Exchange in	
	Software and Data Science, Vienna, Austria (ARTE	
	2022)	
31.8.22-	Euromicro Conference on Software Engineering	Track co- <u>chair</u> (Cloud
2.9.22	and Advanced Applications, Maspalomas, Gran	Native And Dev Ops)
	Canaria, Spain (SEAA 2022)	
	16th ACM/IEEE International Symposium on	PC member (Registered
23.9.22	Empirical Software Engineering and	Reports)
210 22	Measurement, Helsinki, Finland (ESEM 2022)	B.C
2.10.22-	38th IEEE International Conference on Software	
7.10.22	Maintenance and Evolution, Limassol, Cyprus	and Emerging Results
2.7.2.22	(ICSME 2023)	and Registered Reports)
3.10.22-	22nd IEEE International Working Conference on	
4.10.22	Source Code Analysis and Manipulation (SCAM	and Emerging Results)
211122_	2022) 23rd International Conference on	Track co- <u>chair</u> (Doctoral
24.11.22	Product-Focused Software Process	Symposium) & PC
L7.11.LL	Improvement, Jyväskylä, Finland (PROFES 2022)	
	improvement, zyvaskyta, i intaliu (FROI LS 2022)	memoer

Date/s	Event	Responsibilities
13.3.23-	20th IEEE International Conference on Software	
17.3.23	Architecture, l'Aquila, Italy (ICSA 2023)	, ,
27.3.23-	7th International Conference on Lean and Agile	PC member
2.4.23	Software Development (Track on Lean and Agile	
	Software Development at the 38th ACM/SIGAPP	
	Symposium On Applied Computing), Tallinn,	
	Estonia (LASD 2023)	
14.5.23-	4th Workshop on Gender Equality, Diversity, and	lWorkshop co-chair
20.5.23	Inclusion in Software Engineering, Melbourne,	· —
	Australia (GE@ICSE 2023)	
14.5.23-	International Conference on Technical Debt,	PC member
15.5.23	Melbourne, Australia (TechDebt 2023)	
14.6.23-	27th International Conference on Evaluation and	lTrack co- <u>chair</u> (Short
16.6.23	Assessment in Software Engineering, Oulu,	Papers and Posters)
	Finland (EASE 2023)	
15.7.23-	49th Euromicro Conference on Software	Track co- <u>chair</u> (Emerging
15.7.23	Engineering and Advanced Applications (SEAA	Computing Technologies)
	2023)	
17.7.23-	17th IEEE International Conference on	PC member
20.7.23	Service-Oriented System Engineering, Athens,	
	Greece (SOSE 2023)	<u></u>
11.9.23-	16th International Conference on the Quality of	
13.9.23	Information and Communications Technology	co- <u>chair</u> (Journal First
10.0.00	(QUATIC 2023)	and Special Issue <u>chair</u> )
18.9.23	17th European Conference on Software	PC member
22.9.23	Architecture (ECSA 2023)	DC (CCAM 2022
2.10.23 – 3.10.23	23rd IEEE International Working Conference on Source Code Analysis and Manipulation, Bogotà,	
3.10.23	Colombia (SCAM 2023)	NIER HACK)
101023_	- 5th International Conference on Microservices	DC member
12.10.23	(Microservices 2023)	r c member
	- 17th ACM/IEEE International Symposium on	PC member (Registered
27.10.23	Empirical Software Engineering and	Reports)
L7.10.L3	Measurement, New Orleans, Louisiana, United	перопезу
	States (ESEM 2023)	
241023-	- 10th European Conference On Service-Oriented	PC member & Projects
	And Cloud Computing, Larnaca, Cyprus (ESOCC	
200.20	2023)	and madely mach <u>eman</u>
20.11.23-	24rd International Conference on	Program co- <u>chair</u>
23.11.23	Product-Focused Software Process	<u> </u>
	Improvement, Dornbirn, Austria (PROFES 2023)	
26.3.24-	31st International Conference on Software	Track co- <u>chair</u> (Industrial
29.3.24	Analysis, Evolution and Reengineering,	Track)
	Rovaniemi, Finland (SANER 2024)	
-		

### Editorial and reviewing activities

- Guest editor (issue accepted by editor):
  - Special Issue on Software Product and Process Improvement. Information and Software Technology. Andrea Janes and Valentina Lenarduzzi (eds.), 2023.
  - Special Issue: Gender Equity, Diversity, and Inclusion in Software Engineering. *Journal of Systems and Software*. Letizia Jaccheri, Lafifa Jamal, Andrea Janes, Valentina Lenarduzzi, and Vandana Singh (eds.), 2023.

- Special Issue: Quality of Information and Communications Technology. Information and Software Technology. Guilherme Horta Travassos, Andrea Janes, Valentina Lenarduzzi (eds.), 2023.
- Reviewed papers from the following academic conferences and workshops: <u>ARTE</u> '22; <u>ASQT</u> '20, '21; <u>ECSA</u> '23; <u>ESEM</u> '22, '23; <u>ESOCC</u> '23; <u>ICSA</u> '23; <u>ICSME</u> '18, '19, '23; <u>LASD</u> '17, '18, '19, '20, '21, '22, '23; <u>MOLS</u> '17; <u>Microservices</u> '23; <u>OSS</u> '14; <u>OpenSym</u> '20; <u>PROFES</u> '17, '18, '19, '20, '21, '22, '23; <u>QUATIC</u> '19, '20, '21, '23; <u>SATTOSE</u> '19; <u>SCAM</u> '22, '23; <u>SEAA</u> '15, '18, '22, '23; <u>SEDA</u> '14; <u>SOSE</u> '23; <u>SSP</u> 'https://www.performance-symposium.org/2023/; <u>TechDebt</u> '21, '22, '23; <u>XP</u> '15, '18, '19, '20.
- I reviewed papers from the following journals:

Year/s	Journal
′13–′19	International Journal of Software Engineering and Knowledge
	Engineering (IJSEKE)
since '14	Information and Software Technology (IST)
	Software Quality Journal (SQJ)
	Empirical Software Engineering (EMSE)
since '18	Journal of Software: Evolution and Process
′19–′23	IEEE Access
	Journal of Systems and Software (JSS)
	ACM Transactions on Services Computing (TSC)
	ACM Transactions on Interactive Intelligent Systems (TiiS)
	Expert Systems with Applications
sicne '22	IEEE Transactions on Software Engineering (TSE)

- I have a reviewer profile on https://www.webofscience.com/wos/author/ record/398087 and https://orcid.org/0000-0002-1423-6773.
- Since 2021, I am a reviewer for innovation, research, and development projects submitted to the Autonomous Province of Bozen/Bolzano in the context of the provincial law 14/2006 since 2021.

#### Memberships

Associazione Gruppo di Informatica (GRIN)<sup>29</sup>

# Research and scholarship

This section lists research stays and visits abroad, summarizes significant achievements in research and scholarship, and lists obtained research grants.

#### Research stays and visits abroad

Date/s	Description
9.10.06-	- Since I did my doctorate in Klagenfurt, Austria, from 2002 to 2014 while
14.7.14	working at unibz, I often had longer stays at the University of Klagenfurt. As part of my doctorate, I collaborated with Carinthian companies to conduct studies on how my research tools worked or how they needed to be adapted to achieve the desired research goal.
30.7.12- 16.8.12	Research stay in Tarrytown, USA, to establish and conduct research collaborations with organizations in the New York area.
21.7.13-	Research stay in San Francisco, USA, to establish and conduct research
13.8.12	collaborations with organizations in the San Francisco area.
2.2.15-	Research stay at the Technical University of Tampere, Finland, Department
22.2.15	of Pervasive Computing, collaborating with T. M. <sup>30</sup> and K. S. to develop
	new ways to monitor the development process.

<sup>&</sup>lt;sup>29</sup>http://www.grin-informatica.it/opencms/opencms/grin

 $<sup>^{30}</sup>$ The name of the researcher is anonymized, the full name is available upon request.

Date/s	Description
6.5.15-	Research stay at the Technical University of Tampere, Finland, Department
15.5.15	of Pervasive Computing, collaborating with T. M. and K. S. to develop new
	ways to monitor the development process.
1.6.15-	Research stay at the Software Competence Center Hagenberg, Department
30.11.15	of Software Analytics and Evolution, collaborating with J. P. to study how
	to extract knowledge from source code.
16.9.18-	Research stay at the Technical University of Tampere, Finland, Department
20.9.18	of Pervasive Computing, to discuss possible collaborations the software
	engineering research group of K. S. and D. T
14.6.22-	Research stay at the University of Tampere, Finland, collaborating with
24.6.22	K. S. and D. T. on fault detection methods within microservice
	architectures.
6.9.22-	Research stay at the University of Tampere, Finland, collaborating with
13.9.22	V. L. and D. T. on open tracing tools and on microservice architectures.
since	Senior lecturer at the FHV Vorarlberg University of Applied Science in
1.11.22	Vorarlberg, Austria.

### Summary of significant achievements in research and scholarship

So far, I published 22 journal papers, 79 conference papers, 1 book chapter, and 1 monograph. The latter was accessed more than 24000 times on Springer<sup>31</sup>.

To date, my work has been cited 1948 times according to Google Scholar<sup>32</sup> (h-index: 22) and 1045 times according to Scopus<sup>33</sup> (h-index: 16). I obtained €816281,10 in research funds.

Please find the highlights of my research and scholarship below.

Yr/s.	Description
<sup>'</sup> 05-14	I participated in the creation of a <u>non-invasive measurement approach</u> (i.e.,
	a way to measure that does not disturb the development team during
	measurement) for software. My main contribution is the measurement of
	software development processes and is documented in my doctoral thesis.
′12	I <u>coined the expression</u> the dark side of Agile software development to
	describe an extreme view on Agile development, published in the paper of
	the same name in the 2012 ACM international symposium on New ideas,
	new paradigms, and reflections on programming and software.
′14	I transferred the experience gained from developing non-invasive
	measurement techniques to the development of a measurement-based
	approach to Lean Software Development published in 2014 in form of the
	monograph of 393 pages titled Lean Software Development In Action.
'12	Best paper award for the paper Improving the identification of traceability
	links between source code and requirement at the 18th International
	Conference on Distributed Multimedia Systems (DMS 2012).
'16	Best paper award for the paper An Android Kernel Extension to Save Energy
	Resources Without Impacting User Experience at the 13th International
	Conference on Mobile Web and Intelligent Information Systems (MobiWis
	2016).

<sup>&</sup>lt;sup>31</sup>https://link.springer.com/book/10.1007/978-3-642-00503-9

<sup>32</sup> https://scholar.google.com/citations?user=8lYoEEQAAAAJ

<sup>33</sup> https://www.scopus.com/authid/detail.uri?authorId=7003421075

- Together with Roberto Confalonieri, I <u>designed</u>, <u>developed</u>, <u>and evaluated a website for technology transfer</u> (the current web site of the Smart Data Factory<sup>34</sup>) presenting: 1) <u>30 collaboration offers</u> from various researchers of the faculty of computer science, including the description of the offer, inputs, outputs, costs, and contacts. 2) <u>24 past projects</u> useful for companies as an example of our research describing the overall goal of the project, the specific objectives, key technologies, applications, and contacts. 3) the <u>mission</u> of the Smart Data Factory. 4) the skills of the faculty (presenting 13 <u>research groups</u> describing their mission, relevance, research topics, key technologies, applications, and contact). 5) the <u>developed collaboration</u> <u>process between academia and industry</u>. 6) collaboration opportunities for job-seekers, students, and companies. 7) contacts and news of the Smart Data Factory team.
- '20 ACM Distinguished Paper Award at ICSE 2020 for the paper Big Code != Big Vocabulary: Open-Vocabulary Models for Source code at the ACM/IEEE 42nd International Conference on Software Engineering (ICSE 2020).
- '21 Nominated for best Paper Award (top three papers) for the paper A
  Multivariate Characterization and Detection of Software Performance
  Antipatterns at the ACM/SPEC International Conference on Performance
  Engineering (ICPE 2021).
- Winner, together with D. F. 35, B. S., and E. H. of the Hackathon Challenge of the Progress Group using genetic algorithms and simulated annealing at the South Tyrol Free Software Conference (SFSCon 2022).
- 723 <u>Top Ten downloaded paper</u> on SSRN's list for CompSciRN: Other Computing Methodology (Topic)<sup>36</sup> and Computing Methodology eJournal<sup>37</sup> of the paper titled *Microservice Anti-Patterns and Bad Smells. How to Classify, and How to Detect Them. A Tertiary Study* during the time period of Dec 15, 2022–Feb 13, 2023

#### Research grants

The following table lists the research grants I received as Principal Investigator (PI), in that case I list myself as the first award holder, or as Co-PI.

Date <sup>38</sup>	Award holder(s)	Funding body	Title	Receive	d amount
1.5.11	Andrea Janes	Commissioned	Allineamento processi a	alla	3 957.38
		research	strategia per miglioram	iento	
			continuo processi PA		
			(lanusPA)		
21.7.11	Andrea Janes		Risk Management and		3 000.00
		research	Communication on Loc		
			Regional Level (RimaCo		
1.6.14	Andrea Janes	unibz	Embedded Software QU	JAlity	9 000.00
			(ESQUA)		
22.5.15	Andrea Janes,	Euregio	Joint seminar series <i>Em</i>	,	7000.00
	,	Mobility Fund <sup>39</sup>	Software Engineering (.	JESE)	
	Fabio Massacci				
22.5.15	Andrea Janes,	Euregio	visiting Local companiE	s to	9 000.00
	Michael Felderer,	Mobility Fund	chAnge the stuDents'		
	Fabio Massacci		pERception of the local	. IT	
			landscape (LEADERIT)		

<sup>34</sup>https://smart.inf.unibz.it

<sup>&</sup>lt;sup>35</sup>The name of the participant is anonymized, the full name is available upon request.

<sup>&</sup>lt;sup>36</sup>https://papers.ssrn.com/sol3/topten/topTenResults.cfm?groupingId=3191602&netorjrnl=jrnl

<sup>&</sup>lt;sup>37</sup>https://papers.ssrn.com/sol3/topten/topTenResults.cfm?groupingId=3191574&netorjrnl=jrnl

<sup>&</sup>lt;sup>38</sup>Date on which the research grant was awarded.

<sup>&</sup>lt;sup>39</sup> http://www.europaregion.info/it/euregio-mobilitaetsfonds.asp

Date	Award holder(s)			ed amount
22.5.16	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund	Joint seminar series <i>Empirical</i> Software Engineering (JESE2)	7500.00
22.5.16	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund	visiting Local companiEs to chAnge the stuDents' pERception of the local IT	7500.00
30.5.16	Andrea Janes	unibz	landscape (LEADERIT2) Value based test case prioritization and random test	20 000.00
1.7.16	Davide Taibi, Andrea Janes	unibz	case generation (VBT) Recommendation Techniques for Software Quality Improvement in Small Medium Enterprises (SQuaSME)	20 000.00
6.7.17	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund	Predictive modeling in software and security engineering (PROSE)	10 800.00
6.7.17	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund	Participation to summer schools (SUMMER)	10 800.00
31.8.17	Ricci Francesco, Andrea Janes	Commissioned research	Internet of Things for Climbers (IoTforC)	5 000.00
11.9.18	Andrea Janes		Provisioning 4.0 (Pro4)	9 400.00
1.1.19	Andrea Janes	European Regional Development Fund <sup>40</sup>	Sensors and data for sports activity analysis (SALSA)	458 316.25
1.4.19	Anton Dignös, Andrea Janes		Survey on Databases in South Tyrol (SDST)	10 800.00
15.1.19	Andrea Janes	unibz	User interaction based obsolete feature identification and maintenance vs. removal cost estimation (REACT)	3 381.79
16.1.19	Panagiotis Symeonidis, Andrea Janes	Commissioned research	Recommender for TV Shows (RecTV)	10 000.00
24.1.19	Angelika Peer, Andrea Janes	Commissioned research	NOIx - Service robot demonstrator for the NOI Techpark (NOIx)	39 600.00
1.10.19	Romain Robbes, Andrea Janes	unibz	ADaptive software VERBosity 1 (ADVERB)	00.000.00
11.20	Panagiotis Symeonidis, Andrea Janes	unibz	Privacy-preserving Explainable AI for Health (HealthExplAI)	4 775.68
1.1.20	Andrea Janes	Commissioned research	Recommender for TV Shows (RecTV)	10 000.00
1.7.20	Andrea Janes, Matteo Camilli	unibz	Mining user-intensive applications to support value-based engineering decisions (VAMPIRE)	6 450.00
1.1.21	Matteo Camilli, Andrea Janes	unibz	Automated Performance and Scalability Analysis of Microservices Systems (AMPERE)	25 000.00

<sup>40</sup> https://ec.europa.eu/regional\_policy/en/funding/erdf/

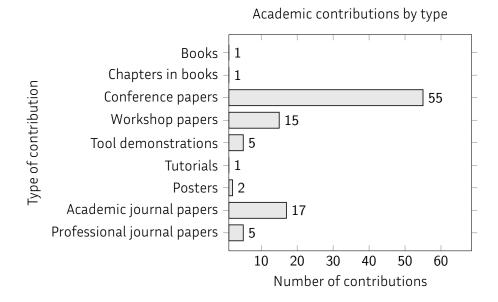
Date	Award holder(s)	Funding body	Title	Received amount
21.1.22	•		Capture-Store-and-repl	
	Andrea Janes	research	with GUI testing to defi usage profiles and auto testing in a staging environment (Oberalp2	mate
1.11.22	Andrea Janes	Commissioned research	Development of a user interface for robots interacting with hotel g (TEMI)	15 000.00 guests

Total funding received so far: €816 281.10.

Publications (in chronological order, starred if significant publication) <u>Order of authors</u>: as it is practice in mathematical fields<sup>41</sup>, I think that joint research is a sharing of ideas and skills that cannot be attributed to individuals separately. Determining which person contributed which ideas is often meaningless because the ideas grow from complex discussions among all partners. Therefore, I personally prefer to name authors in alphabetical order. The citation style follows the APA (American Psychology Association) style, 7th edition<sup>42</sup>.

#### **Overview**

While simply counting papers is not a comprehensive indicator of academic output, the statistics about published articles are presented here as a means of providing an overview. A comprehensive evaluation of a researcher should include multiple criteria and consider the broader impact of their work.



#### **Books**

\* 1. Andrea Janes & Giancarlo Succi (2014). Lean Software Development In Action. Springer. https://doi.org/10.1007/978-3-642-00503-9

#### Chapters in books

<sup>&</sup>lt;sup>41</sup>http://www.ams.org/profession/leaders/CultureStatement04.pdf

<sup>&</sup>lt;sup>42</sup>See e.g., https://guides.library.uq.edu.au/referencing/apa7

1. Andrea Janes (2018). Non-distracting, Continuous Collection of Software Development Process Data. In Nalepa G., Baumeister J. (Eds.), Synergies Between Knowledge Engineering and Software Engineering. Advances in Intelligent Systems and Computing, vol. 626. (pp. 275–294). Springer. https://doi.org/10.1007/978-3-319-64161-4\_13

#### Conference papers

- 1. Andrea Janes, Barbara Russo, & Giancarlo Succi (2002, November 05). Use of Pair Programming for Experience Exchange in a Distributed Internship Project [Workshop paper]. 17th ACM SIGPLAN conference on Object-oriented programming, systems, languages, and applications: Workshop on Pair Programming Explored (00PSLA), Seattle, MA, USA.
- 2. Andrea Janes (2003, May 25–29). Measuring the Effectiveness of Agile Methodologies Using Data Mining, Knowledge Discovery and Information Visualization [Conference paper]. 4th International Conference on Extreme Programming and Agile Processes in Software Engineering (XP), Genova, Italy. https://doi.org/10.1007/3-540-44870-5\_79
- 3. Alberto Sillitti, Andrea Janes, Giancarlo Succi, & Tullio Vernazza (2003, May 9). Non-invasive Measurement of the Software Development Process [Workshop paper]. 1st International Workshop on Remote Analysis and Measurement of Software Systems (RAMS), Portland, OR, USA.
- 4. Alberto Sillitti, Andrea Janes, Tullio Vernazza, & Giancarlo Succi (2003, June 23–26). *Measures for Mobile Users* [Conference paper]. International Conference on Software Engineering Research and Practice (SERP), Las Vegas, NV, USA.
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- \* 12. Vilc Queupe Rufino, Mateus Schulz Nogueira, Alberto Avritzer, Daniel Sadoc Menasché, Barbara Russo, Andrea Janes, Vincenzo Ferme, André van Hoorn, Henning Schulz, & Cabral Lima (2020). Improving Predictability of User-Affecting Metrics to Support Anomaly Detection in Cloud Services. *IEEE Access*, 8, 198152–198167. https://doi.org/10.1109/ACCESS.2020.3028571
- \* 13. Matteo Camilli, Andrea Janes, & Barbara Russo (2022). Automated test-based learning and verification of performance models for microservices systems. *Journal of Systems and Software, 187*, 111225. https://doi.org/10.1016/j.jss.2022.111225
- \* 14. Alberto Avritzer, Ricardo Britto, Catia Trubiani, Matteo Camilli, Andrea Janes, Barbara Russo, André van Hoorn, Robert Heinrich, Martina Rapp, Jörg Henß, & Ram Kishan Chalawadi (2022). Scalability testing automation using multivariate characterization and detection of software performance antipatterns. *Journal of Systems and Software, 193*, 111446. ht tps://doi.org/10.1016/j.jss.2022.111446
  - 15. Stefano Savian, Mehdi Elahi, Andrea Janes, & Tammam Tillo (2023). Benchmarking Equivariance for Deep Learning Based Optical Flow Estimators. Signal Processing: Image Communication, 111, 116892. https://doi.org/10.1016/j.image.2022.116892
  - Samuel Runggaldier, Gabriele Sottocornola, Andrea Janes, Fabio Stella, Markus Zanker (2023). Booker Prediction from Requests for Quotation via Machine Learning Technquies. *Tourism and Hospitality Manage-ment*, 29(1), 25-43. https://doi.org/10.20867/thm.29.1.3
  - 17. Andrea Janes, Xiaozhou Li, & Valentina Lenarduzzi (2023). Open Tracing Tools: Overview and Critical Comparison. *Journal of Systems and Software*, (in press).

#### Journal papers in professional journals

- 1. Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2013). Effective dashboard design. *Cutter IT Journal, 26*(1), 17-24. https://www.cutter.com/article/effective-dashboard-design-417046
- 2. Saulius Astromskis, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2013). Supporting governance in disciplined agile delivery using non-invasive measurement and process mining. *Cutter IT Journal, 26*(11), 25–29. https://www.cutter.com/article/supporting-governance-disciplined-agile-delivery-using-noninvasive-measurement-and-process
- 3. Saulius Astromskis, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2013). Implementing organization-wide Gemba using noninvasive process mining. *Cutter IT Journal, 26*(4), 32–36. https://www.cutter.com/article/implementing-organization-wide-gemba-using-noninvasive-process-mining-417146

- 4. Andrea Janes (2015). Supporting Software Infrastructure Management through Dashboards. *Cutter IT Journal, 28*(5), 34–39. https://www.cutter.com/article/supporting-software-infrastructure-management-through-dashboards-470241
- 5. Andrea Janes (2015). Practical Lean Software Development for Micro-Enterprises. *Cutter IT Journal, 28*(6), 30–35. https://www.cutter.com/article/practical-lean-software-development-microenterprises-470271

#### Self-archived preprint articles

- Sadaf Moaveninejad, Andrea Janes (2022). Climbing Routes Clustering Using Energy-Efficient Accelerometers Attached to the Quickdraws [Journal paper in preparation]. CoRR abs/2211.02680, https://doi.org/10.4 8550/arXiv.2211.02680
- Sadaf Moaveninejad, Andrea Janes (2023). Lowering Detection in Sport Climbing Based on Orientation of the Sensor Enhanced Quickdraw [Journal paper in preparation]. CoRR abs/2301.10164, https://doi.org/10.485 50/arXiv.2301.10164

# Publications about the applicant

To date, my work has been cited 1948 times according to Google Scholar<sup>43</sup> and 1045 times according to Scopus<sup>44</sup>.

Looking at the local and online landscape, I group publications (intended as web sites, blogs, and podcasts about my work) into publications about my research activities, technology transfer activities, and public engagement activities. The latter two are so called *Third mission* activities, I use the third mission definition of the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR)<sup>45</sup>.

#### Publications about my research activities

- JAXenter.de (16.11.12): Zwischen Cowboy-Codern und Agile-Gurus: Willkommen zum 'Dark Manifesto for Agile Software Development'<sup>46</sup>
- svenpet.com (21.11.12): Beyond Scrum Is Agile dead?<sup>47</sup>
- zukunftsarchitekten-podcast.de (27.8.13): ZAO61 Scrummerfall Wenn SCRUM scheitert<sup>48</sup>
- Research Institute for Symbolic Computation at the Johannes Kepler Universität Linz (28.8.15): Landeskorrespondenz Nr. 165 vom 28. August 2015<sup>49</sup>
- academia.bz.it (11.1.16): Bugbuster. Ovvero il liquidatore di bachi informatici<sup>50</sup>
- Südtiroler Wirtschaftszeitung (20.5.16): Weg von der Bananensoftware<sup>51</sup>
- eventil.com (6.8.19): XTC: Dark Aaile<sup>52</sup>

<sup>&</sup>lt;sup>43</sup>https://scholar.google.com/citations?user=8lYoEEQAAAAJ

<sup>44</sup>https://www.scopus.com/authid/detail.uri?authorId=7003421075

<sup>&</sup>lt;sup>45</sup>https://www.anvur.it/wp-content/uploads/2018/11/SUA-TM\_Lineeguida.pdf.

<sup>&</sup>lt;sup>46</sup>https://jaxenter.de/zwischen-cowboy-codern-und-agile-gurus-willkommen-zum-quotdark-manifesto-for-agile-sof tware-developmentquot-4176

<sup>&</sup>lt;sup>47</sup>https://svenpet.com/2012/11/21/beyond-scrum-is-agile-dead/

<sup>&</sup>lt;sup>48</sup>https://zukunftsarchitekten-podcast.de/2013/08/za061-scrummerfall-wenn-scrum-scheitert/

<sup>&</sup>lt;sup>49</sup>https://risc.jku.at/wp-content/uploads/2018/05/kompatscher.pdf

<sup>50</sup> https://issuu.com/unibz/docs/a72\_1/2

<sup>&</sup>lt;sup>51</sup>https://swz.it/weg-von-der-bananen-software/

<sup>52</sup> https://eventil.com/events/xtc-topic-tbd-be87becb-8d24-49a0-8928-06992b9fed0d

- noi.bz.it (16.11.18): The REUSE initiative<sup>53</sup>
- noi.bz.it (16.11.18): Elixir, the hipster programming language<sup>54</sup>
- holdreich.net (15.12.18): Join the dark side, we have a Dark Agile Manifesto<sup>55</sup>
- noi.bz.it (15.11.19): Raising the Developer Awareness of Critical Code<sup>56</sup>
- noi.bz.it (15.11.19): Personas-Driven Approach to Test Case Generation<sup>57</sup>
- noi.bz.it (16.11.19): API Fluency: remembering APIs to become more effective<sup>58</sup>
- noi.bz.it (13.11.20): One year with Pepper<sup>59</sup>
- noi.bz.it (12.11.20): IoT in climbing: Non-invasive activity tracking 60
- infoq.com (30.7.21): Cliff Berg and Raj Nagappan on Agile 2: the Next Iteration of Agile<sup>61</sup>
- noi.bz.it (12.11.21): Climbing route clustering using energy efficient sensors<sup>62</sup>
- noi.bz.it (12.11.21): Tracking climbers using stereo cameras<sup>63</sup>
- noi.bz.it (13.11.21): Continuous Performance Testing using locust.io (and a call for data)<sup>64</sup>
- content.intland.com (25.1.22): Dark Agile Manifesto: Criticism of Agile Development<sup>65</sup>
- inforte.fi (7.7.22): Promote your research in Industry and Academia<sup>66</sup>
- talkbystudents.turkuamk.fi (29.8.22): Problems in Quality and Productivity of Agile Software Development in Theory and Practice: How to Overcome Them<sup>67</sup>
- noi.bz.it (11.11.22): Scalability assessment applied to microservice architectures<sup>68</sup>
- noi.bz.it (12.11.22): Industry-academia collaborations: experiences and pitfalls<sup>69</sup>

#### Publications about technology transfer activities (Third mission)

- academia.bz.it (19.12.17): Die Techies kommen! Attenti α quei nerd! The Rise of the Techies!<sup>70</sup>
- idw-online.de (11.5.20): Gesundheitsüberwachung von Covid-19-Patienten:
   Applikation reCOVeryaID der unibz könnte Krankenhäuser entlasten<sup>71</sup>
- Dolomiten (26.5.20): Handy-App gegen Infektionsherde

<sup>&</sup>lt;sup>53</sup>https://www.sfscon.it/talks/the-reuse-initiative/

<sup>&</sup>lt;sup>54</sup>https://www.sfscon.it/talks/elixir-the-hipster-programming-language/

<sup>55</sup> http://www.holdreich.net/join-the-dark-side-we-have-a-dark-agile-manifesto

<sup>&</sup>lt;sup>56</sup>https://www.sfscon.it/talks/raising-the-developer-awareness-of-critical-code/

<sup>57</sup> https://www.sfscon.it/talks/personas-driven-approach-to-test-case-generation/

<sup>58</sup> https://www.sfscon.it/talks/api-fluency/

<sup>&</sup>lt;sup>59</sup>https://www.sfscon.it/talks/one-year-with-pepper/

<sup>60</sup> https://www.sfscon.it/talks/iot-in-climbing/

<sup>&</sup>lt;sup>61</sup>https://www.infoq.com/podcasts/agile-next-iteration/

<sup>62</sup> https://www.sfscon.it/talks/climbing-route-clustering-using-energy-efficient-sensors/

<sup>63</sup> https://www.sfscon.it/talks/tracking-climbers-using-stereo-cameras/

<sup>&</sup>lt;sup>64</sup>https://www.sfscon.it/talks/continuous-performance-testing-using-locust-io-and-a-call-for-data/

<sup>65</sup> https://content.intland.com/blog/agile/dark-agile-manifesto-anti-agile-manifesto-criticism-of-agile

<sup>&</sup>lt;sup>66</sup>http://inforte.jyu.fi/events/promote-your-research-in-industry-and-academia

<sup>&</sup>lt;sup>67</sup>https://talkbystudents.turkuamk.fi/master-school/problems-in-quality-and-productivity-of-agile-software-develop ment-in-theory-and-practice-how-to-overcome-them/

<sup>&</sup>lt;sup>68</sup>https://www.sfscon.it/talks/scalability-assessment-applied-to-microservice-architectures/

<sup>&</sup>lt;sup>69</sup>https://www.sfscon.it/talks/industry-academia-collaborations-experiences-and-pitfalls/

<sup>&</sup>lt;sup>70</sup>https://issuu.com/unibz/docs/academia-77

<sup>71</sup> https://idw-online.de/en/news757273

- unibz.it (5.11.20): Monitorare la salute dei pazienti Covid-19 a casa? Si può con reCOVeryaID<sup>72</sup>
- noi.bz.it (5.11.20): Covid-19: neue App zur Entlastung von Ärzten und Krankenhäusern<sup>73</sup>
- Il Fatto Nisseno (5.11.20): Covid, reCOVeryaID: l'app per monitorare i pazienti a casa<sup>74</sup>
- BitMAT (5.11.20): Monitorare la salute dei pazienti Covid-19? Non serve l'ospedale se c'è reCOVeryaID<sup>75</sup>
- insalutenews.it (5.11.20): Come monitorare la salute dei pazienti Covid. Ecco la app che controlla da remoto il decorso dell'infezione<sup>76</sup>
- Vanity Fair (6.11.20): Telemedicina, ecco la piattaforma per aiutare i medici di base ai tempi del Covid<sup>77</sup>
- unibz.it (9.11.20): COVID-19: Applikation reCOVeryaID könnte Krankenhäuser entlasten<sup>78</sup>
- Impresa Sanità (10.11.20): Assistenza Medica da remoto con reCOVeryaID
- INNOS (3.12.20): Datenmanagement mit Microservices<sup>80</sup>
- Südtirol Panorama (7.7.21): reCOVeryaID Digitales Gesundheitstool

#### Publications about public engagement activities (Third mission)

- blikk.it (6.5.12): Roboter 1A und 1B<sup>81</sup>
- unibz.it (15.5.13): JuniorUni willkommen in der Welt der Forschung<sup>82</sup>
- Dolomiten (16.5.13): JuniorUni: Tür auf für kleine Forscher<sup>83</sup>
- unibz.it (27.9.13): Tag zwei des Innovation Festivals<sup>84</sup>
- unibz.it (27.3.15): Was macht die Kuh den ganzen Tag?<sup>85</sup>
- unibz.it (25.3.16): Mit der JuniorUni am Bauernhof<sup>86</sup>
- unibz.it (14.2.17): Coding to win the Google Contest<sup>87</sup>
- unibz.it (26.2.18): Google Hash Code 2018: our students code to win<sup>88</sup>
- unibz.it (13.4.18): JuniorUni am NOI Techpark: wie funktionieren Roboter?
- stol.it (26.2.19): Südtirols IT-Profis tüfteln für Google<sup>90</sup>

<sup>&</sup>lt;sup>72</sup>https://www.unibz.it/de/news/136722-gesundheitsueberwachung-von-covid-19-patienten-mit-der-applikation-rec overyaid

<sup>&</sup>lt;sup>73</sup>https://noi.bz.it/de/artikel/covid-19-neue-app-zur-entlastung-von-aerzten-und-krankenhaeusern

<sup>74</sup> https://www.ilfattonisseno.it/2020/11/covid-recoveryaid-lapp-per-monitorare-i-pazienti-a-casa/

<sup>75</sup> https://www.sanita-digitale.com/2020/11/05/monitorare-la-salute-dei-pazienti-covid-19-non-serve-lospedale-se-c e-recoveryaid/

<sup>&</sup>lt;sup>76</sup>https://www.insalutenews.it/in-salute/come-monitorare-la-salute-dei-pazienti-covid-ecco-la-app-che-controlla-d a-remoto-il-decorso-dellinfezione/

<sup>&</sup>lt;sup>77</sup>https://www.vanityfair.it/benessere/salute-e-prevenzione/2020/11/06/covid-telemedicina-piattaforma-aiuto-medici-di-base

<sup>&</sup>lt;sup>78</sup>https://www.unibz.it/de/news/136731-covid-19-applikation-recoveryaid-koennte-krankenhaeuser-entlasten

<sup>79</sup> https://www.impresasanita.it/it/articles/20201108/assistenza\_medica\_da\_remoto\_con\_recoveryaid

<sup>80</sup> https://www.innos.at/webinar-datenbanken-und-deren-effiziente-verwendung/

<sup>81</sup> https://www.blikk.it/forum/blog.php?bn=rp\_msmartin&lab=1328906890&id=1336308986

<sup>82</sup> https://www.unibz.it/de/news/76408-junioruni-willkommen-in-der-welt-der-forschung

<sup>83</sup> https://www.sciencesouthtyrol.net/blob/76427,,,UNIBZ,1,-1.pdf

<sup>84</sup>https://www.unibz.it/de/news/78284-tag-zwei-des-innovation-festivals

<sup>85</sup> https://www.unibz.it/de/news/88871-was-macht-die-kuh-den-ganzen-tag

<sup>86</sup> https://www.unibz.it/de/news/116896-mit-der-junioruni-am-bauernhof

<sup>&</sup>lt;sup>87</sup>https://www.unibz.it/de/news/121756-coding-to-win-the-google-contest

<sup>88</sup> https://www.unibz.it/de/news/127641-google-hash-code-2018-our-students-code-to-win

<sup>89</sup> https://www.unibz.it/de/news/128124-junioruni-am-noi-techpark-wie-funktionieren-roboter

<sup>&</sup>lt;sup>90</sup>https://www.stol.it/Artikel/Wirtschaft/Lokal/Suedtirols-IT-Profis-tuefteln-fuer-Google

- unibz.it (19.6.19): Hands-on demo of the robot Pepper<sup>91</sup>
- noi.bz.it (15.11.19): Pepper, a robot to welcome guests at the NOI Techpark
- noi.bz.it (29.10.20): Hallo, ich bin Pepper: Der freundliche Roboter im NOI Techpark<sup>93</sup>
- tageszeitung.it (15.11.22): Die Siegerprojekte<sup>94</sup>

#### Further data

This section, illustrates the presentations at scientific conferences over past 3 years, summarizes my participation to research projects, lists invited talks at organizations or non-scientific events, and the participation to training events.

# Presentations at scientific conferences over the past 3 years (conference papers)

- 2020, August 26–28: Towards an Approach to Identify Obsolete Features based on Importance and Technical Debt [Conference paper, selected].
   46th Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Portoroz, Slovenia. https://doi.org/10.1109/SEAA5122 4.2020.00070
- 2021, April 19–23: A Multivariate Characterization and Detection of Software Performance Antipatterns [Conference paper, selected]. ACM/SPEC International Conference on Performance Engineering (ICPE), Virtual. ht tps://doi.org/10.1145/3427921.3450246
- 2021, March 22–26: PPTAM<sup>\(\lambda\)</sup>: What, Where, and How of Cross-domain Scalability Assessment [Conference paper, selected]. 18th International Conference on Software Architecture (ICSA), Stuttgart, Germany. https://doi.org/10.1109/ICSA-C52384.2021.00016
- 2022, August 22–24: Introducing Data Science Techniques into a Company Producing Electrical Appliances [Workshop paper, selected]. 33rd International Conference on Database and Expert Systems Applications Workshops (DEXA), Vienna, Austria. https://link.springer.com/chapter/10.1 007/978-3-031-14343-4\_20
- 2022, May 21–22: Microservices Integrated Performance and Reliability Testing [Conference paper, selected]. IEEE/ACM International Conference on Automation of Software Test (AST), Pittsburgh, PA, USA. https://doi.org/10.1145/3524481.3527233
- 2022, August 22–24: A Technology Transfer Portal to Promote Industry-Academia Collaboration in South-Tyrol [Workshop paper, selected]. 33rd International Conference on Database and Expert Systems Applications Workshops (DEXA), Vienna, Austria. https://doi.org/10.1007/978-3-031-1 4343-4\_21
- 2022, October 02-07: CATTO: Just-in-time Test Case Selection and Execution [Tool demonstration, selected]. 38th IEEE International Conference on Software Maintenance and Evolution (ICSME), Limassol, Cyprus. https://doi.org/10.1109/ICSME55016.2022.00059

<sup>&</sup>lt;sup>91</sup>https://www.unibz.it/it/events/132239-hands-on-demo-of-the-robot-pepper

<sup>92</sup> https://www.sfscon.it/talks/pepper-a-robot-to-welcome-guests-at-the-noi-techpark/

<sup>93</sup>https://noi.bz.it/de/magazine-innovazione/pepper-humanoider-roboter-künstliche-intelligenz

<sup>94</sup>https://www.tageszeitung.it/2022/11/15/die-siegerprojekte-2/

 2022, October 31 – November 3: Automated Dependability Assessment in DevOps Environments [Workshop paper, selected]. 2022 IEEE International Symposium on Software Reliability Engineering Workshops (ISSREW), Charlotte, North Carolina, USA. https://doi.org/10.1109/ISSREW 55968.2022.00046

# Presentations at scientific conferences over the past 3 years (keynotes, tutorials, or journal first presentations)

- Andrea Janes, Dainius Jocas, Giancarlo Succi, & Alberto Sillitti (2013, October 26–31). Diving into Dalvik [Tutorial]. International Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH), Indianapolis, IN, USA. https://2013.splashcon.org/track/splash-2013-Tutorials
- Marina Andric, Iustina Ivanova, Francesco Ricci and Andrea Janes (2021, September 13–17). Predicting the Perceived Difficulty Grades of Climbing Routes [Presentation at the Industry Track]. European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD), Virtual. https://2021.ecmlpkdd.org/index.htm l@p=2243.html
- Alberto Avritzer, Barbara Russo, Catia Trubiani, Matteo Camilli, André van Hoorn & Andrea Janes (2021, October 25–28). Continuous Dependability Assessment and Improvement in DevOps [Tutorial]. 32nd International Symposium on Software Reliability Engineering (ISSRE), Wuhan, China. https://2020.issre.net/tutorials.html
- Alberto Avritzer, Barbara Russo, Catia Trubiani, Matteo Camilli, André van Hoorn, & Andrea Janes (2022, March 12–15). Continuous Architecture Deployment Assessment and Improvement in DevOps [Presentation at the Architecture in Practice Track]. 19th International Conference on Software Architecture (ICSA), Hawaii, USA. https://doi.org/10.1109/ICSA-C 54293.2022.00007
- Alberto Avritzer, Barbara Russo, Matteo Camilli, Andrea Janes, André van Hoorn, & Catia Trubiani (2022, September 19–23). Verification and Validation of Microservice Systems [Tutorial]. 16th European Conference on Software Architecture (ECSA), Prague, Czech Republic. https://conf.researchr.org/details/ecsa-2022/ecsa-2022-workshops-tutorials/3/Verification-and-Validation-of-Microservice-Systems
- Matteo Camilli, Andrea Janes, & Barbara Russo (2023, March 13–17). Automated test-based learning and verification of performance models for microservices systems [Journal first presentation]. 20th IEEE International Conference on Software Architecture (ICSA), L'Aquila, Italy.
- Andrea Janes (2023, July 12). Automated performance monitoring and regression testing [Invited talk]. 21. Anwenderkonferenz zu Softwarequalität, Test und Innovation (ASQT), Bozen, Italy. https://asqt.cicero-software.com/tagungsprogramm/
- Andrea Janes (2023, October 10–12). Microservice performance engineering [Keynote]. 5th International Conference on Microservices (MI-CROSERVICES), Pisa, Itay. https://www.conf-micro.services/2023/keynotes/

#### Participation to research projects

In addition to the research projects in which I was Principal Investigator and <u>Co-Principal Investigator</u> (see "Research grants" above), I contributed <u>as an</u> <u>Investigator</u> to the following research projects:

Date/s	Funding body	Title
1.6.02-31.10.03	EU <sup>95</sup> (FP5)	Network for Agile Methodologies Experience (NAME)
1.11.02–31.5.07	MIUR <sup>96</sup> (FIRB)	Metodologie Agili per la Produzione del Software (MAPS)
1.11.03-31.10.07	EU (Interreg)	Software District (SWD)
1.1.04-30.6.06	EU (FP6)	Consortium for studying, evaluating, and supporting
		the introduction of Open Source software and Open
		Data Standards in the Public Administration (COSPA)
1.10.05-30.4.07	unibz	Experimentation of Agile Practices in concrete
		development Infrastructures (ASPRE)
1.10.06-31.3.08	unibz	Experimental Study of the Software Development
		Environment (ESSDE)
1.3.08-30.9.10	EU (FP7)	NESSI Open Framework – Reference Architecture
		(NEXOF-RA)
1.12.08-30.6.10		IT needs of SMES (ITSME)
1.10.09-31.3.11	unibz	Software Process Improvement for SMEs (SPISME)
1.6.10-31.10.11	unibz	Open Source processes for SMEs (OSP)
1.7.10 – 31.12.11	unibz	Web Service Certification (WSC)
1.7.10 – 31.12.11	unibz	Software Development support with Open Source
		tools (SDOS)
1.7.12-31.7.13	unibz	Quality In Open Source Software (QOSS)
1.8.12-31.8.14	Autonomous	Automazione della QUAlità della produzione
	Province of	Software (AQUAS)
	Bozen-Bolzano	1
	Italy	<u>.</u>
1.9.12-30.4.15	EU (Interreg)	Energy aware computing (EN-ACT)
1.7.13-30.6.14	unibz	QUAlity of Mobile apps (QUAM)
1.9.13-31.5.15	Euregio	Summer of IT Entrepreneurship (SITE)
1012 21215	Mobility Fund <sup>9</sup>	
1.9.13-31.3.15	Euregio	Teaching Computational thinking in high schools
1.9.13-31.8.15	Mobility Fund	(TACITUS)
1.9.13-31.8.15	unibz	Optimization of the execution of self-adaptive,
		self-healing, and self-recovery software applications
1.6.14-31.5.15	unibz	for energy saving
1.0.14-31.5.15	unioz	FUnctional and Non-functional properties of Virtual
1.9.15-28.2.17	unibz	Machines (FUN-VM) Mining Users' Reviews to Support the Release
1.9.15-26.2.17	UTITOZ	• • • • • • • • • • • • • • • • • • • •
1.10.18-30.9.21	uniba	Planning of Mobile Apps (RPMA)
1.10.16-30.9.21	UTITOZ	Software Architecture Recommendation system
1.2.20-28.2.22	IIIIa Tuominan	built on DEsign Change History (SARDECH) Software Rejuvenation (SORE)
1.2.20-20.2.22	Foundation	Software Rejuveriation (SORE)
1.3.22-28.2.26	FFG <sup>98</sup>	Plattform für technikgestützte Pflege und
1.3.22-20.2.20	110	Betreuung von zu Hause lebenden Menschen mit
		Demenz (TeleCareHub)
1.9.22–31.8.26	Academy of	Multimodal Fusion based Anomaly Detection for
1.J.LL J1.U.LU	Finland	Improving Microservice-based System (grant n.
	iiiiaiiu	349488) (MUFANO)
		- 15 150) (MOTAITO)

#### Invited talks at non-scientific events

<sup>&</sup>lt;sup>95</sup>European Union <sup>96</sup>Ministero dell'istruzione, dell'università e della ricerca, in English: *Ministry of education, university and research* 

<sup>97</sup> http://www.europaregion.info/it/euregio-mobilitaetsfonds.asp 98 Österreichische Forschungsförderungsgesellschaft

	•	Venue	Title
Ē	3.3.06	IT Security Day, Bolzano, Italy	/Best Practices der sicheren Programmierung mit .NET
Ï	9.6.09	University of Madrid, Spain	Research topics of the Software Engineering research group at the Faculty of Computer Science and the European Master on
			Software Engineering in Bolzano (Italy), Madrid (Spain) and Oulu (Finland)
	21.11.12	IT & Business Forum, Bolzano, Italy	Intelligente mobilität: Touch design in mobile applications
1	6-21.6.13	EURAC Junior Science Camp	Tutorial on the construction and
		Radein, Italy	programming of a Lego Mindstorm Robot together with 20 high school students
8	3.4.13	Wirtschaftsfachoberschule Franz Kafka, Meran, Italy	Software Projektmanagement Highlights
3	3.7.13	CASE Summer School, Bolzano, Italy	Lean Software Engineering
Ï	.4.14	OBJEKTspektrum Information Days, Stuttgart, Germany	Dark Agile Manifesto: Auf die Ergebnisse kommt es an
	2.4.14	OBJEKTspektrum Information Days,	Dark Agile Manifesto: Auf die Ergebnisse kommt es an
Í	3.4.14	Darmstadt, Germany OBJEKTspektrum Information Days, Köln,	Dark Agile Manifesto: Auf die Ergebnisse kommt es an
		Germany	
1	7.2.15	Blekinge Institute of Technology, Blekinge, Sweden	Non-invasive Software Analytics
	21.11.17	Software Craftsmanship South Tyrol, Bolzano, Italy	Elixir, the hipster language (together with Philip Giuliani and Daniel Morandini)
Î	8.9.18	Tampere University of Technology, Tampere, Finland	Non-distracting, Continuous Collection of Software Development Process Data
Ć	9.11.18	Wirtschaftsfachoberschule Franz Kafka, Meran, Italy	The faculty of Computer Science of the Free University of Bozen-Bolzano about study opportunities in the area of computer science in Bolzano
Ï	6–17.11.18	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	The REUSE Initiative
Ĭ	6–17.11.18	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Elixir, the hipster language
Ï	0.12.18	Ski Safety Innovation	Data, algorithms and models for estimating ythe risk of injury in ski resorts
É	5.7.19	ASTAT, Bolzano, Italy	Table and Graph Design (together with Ilenia Fronza)
Î	5–16.11.19	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	API fluency
Ï	5–16.11.19	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Raising the Developer Awareness of Critical Code (together with Michael Mairegger)
Ï	5–16.11.19	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Pepper, a robot to welcome guests at the NOI technology park (together with François Tronche-Macaire)
99 https://www.whataventure	.com/even	 t/ski-safety-innovation-summi	·
,,	32.74 07011	,,	

Date/s	Venue	Title
15–16.11.19	9 South Tyrolean Free	Personas-Driven Approach to Test Case
	Software Conference	Generation (together with Riccardo Felluga)
222222	(SFSCon), Bolzano, Italy	
12.12.19	Software Developers'	Licensing with REUSE (together with Peter
	Thursday at the NOI Technology Park, Bolzano,	Moser)
	Italy	
14.11.20	South Tyrolean Free	One year with Pepper (together with
	Software Conference	Johannes Brunner)
	(SFSCon), Bolzano, Italy	,
26.10.20	Wirtschaftsfachoberschule	Zukunftschancen mit Wirtschaftsinformatik
	Franz Kafka, Meran, Italy	(future opportunities with business
		informatics)
1.4.21	Software Developers'	locust – the Open Source Load Testing Tool
	Thursday at the NOI	
	Technology Park, Bolzano, Italy	
12.11.21	South Tyrolean Free	Continuous Performance Testing using
12.11.21	Software Conference	locust.io
	(SFSCon), Bolzano, Italy	
23.11.21	NOI Techpark, Italy	Tecnologie ICT per il monitoraggio ed il
		coordinamento dei movimenti umani
	<u></u>	(together with David Massimo)
16.6.22	Tampere University of	Scalability Assessment applied to
	Technology, Tampere, Finland	Microservice Architectures
5-8.9.22	Tampere University,	Technology transfer and applied research in
J 0.J.LL	Tampere, Finland	companies: pearls and pitfalls
18.10.22	Wirtschaftsfachoberschule	Zukunftsperspektiven für
	Franz Kafka, Meran, Italy	Wirtschaftsinformatiker
11.11.22	South Tyrolean Free	Scalability assessment applied to
	Software Conference	microservice architectures
	(SFSCon), Bolzano, Italy	
12.11.22	South Tyrolean Free	Industry-academia collaborations:
	Software Conference	experiences and pitfalls
	(SFSCon), Bolzano, Italy	

### Software I developed

Type	Description
Measurement	Various measurement tools to automatically identify the
tools	interactions of developers and users when interacting with
	Microsoft Windows, Microsoft Visual Studio/Code, MacOS, Eclipse,
	and Microsoft Office.
Infrastructure	All necessary software to use software metrics to drive decisions
tools	within software development teams, including tools for
	deployment, data collection, analysis, and visualization of the
	collected data.
Data	An innovative dashboard, based on pre-attentive processing and
visualization	the GQM+Strategy model to visualize the collected measurements
	in a goal-oriented way.
Robotics	I developed the main application as well as around 30 apps for
	Pepper, the robot welcoming visitors at the NOI Technology Park.
IDE extensions	A set of plug-ins to extend Integrated Development Environments
	to provide feedback to developers directly in the tool in which they
	are working.

Type	Description
Web site of the	It might not be the most beautiful one, but the creation of https://
Smart Data	smart.inf.unibz.it required the collection of the skills offered by the
Factory	Faculty of Computer Science of unibz, the elicitation of
	collaboration opportunities, and the definition of a collaboration
	process with companies. Moreover, to allow local companies to
	better understand the available services, descriptions are
	formulated in Italian, German, and English.
Scalability	A set of tools to conduct, manage, and visualize performance
assessment	evaluation of software architectures. This is an ongoing research
	project available on https://github.com/pptam/pptam-tool.
Simulation	A set of tools to simulate the deployment of large-scale
	microservice-based software systems.

### Participation to training events

Date/s	Description	Organizer
28.9.15	Catherine Toomey: English as a medium of instruction.British Council	
	Academic Teaching Excellence (ATE) training course.	
27.9.21	Laura Levaggi, Heidrun Demo, Nadia Vicari: Inclusive	unibz
	Teaching: Introduction and case studies. Academic	
222121222	training.	
28.9.21	Paolo Mazzucato: Media proficiency in video and radi	o:unibz
20 5 22	a toolbox. Academic training.	
26.5.22	Antonio Di Pasquale: Corso di aggiornamento per	unibz
2110 22	preposti <sup>100</sup> . Online training.	
31.10.22	Liisa Postareff, Viivi Virtanen, Telle Hailikari: Constructive Alignment and Assessment. <i>Online</i>	run-eu.eu
	RUN-EU Future and Advanced Skills Academy	
	Workshop.	
2.11.22	Johan Postema, Tanja Eiselen, Frank Weber, Annette	run-eu.eu
L.11.LL	Nußbaumer-Martinovic: Future skills needed by the	ruir eu.eu
	students. Online Future and Advanced Skills Academ	V
	Workshop.	y
17.11.22	Nikolaus Forgó: DSGVO Schulung für Forschungs- und	d Vienna University
	Bildungseinrichtungen <sup>101</sup> . <i>Online training</i> .	,
29.11.22	Margarethe Hochleitner: Gender	fhv
	Medicine/Diversitas—What is it and why do we need it	?.
	Lecture series LGBTIQ* in the context of our time.	
8.12.22	Helen Chadda, Telle Hailikari: Supporting teachers' an	
	students' wellbeing. Online Future and Advanced Skill	ls
	Academy Workshop.	<u>.</u>
10.1.23	Oskar Müller and Heidrun Schöch: Einführung in die	fhv
	Evaluation der Lehre <sup>102</sup> . <i>Online training</i> .	
19.1.23	Edna Fitz: Data protection training: current topics an	dthv
4-0-0-0	updates. Online training.	
1.2.23	Babette Hebenstreit, Angelika Kaufmann-Pauger:	fhv
	Appreciative learning and teaching atmosphere.	
	Teaching Excellence and Lifelong Learning (TELL)	
2.2.23	Center Workshop. Christina Hollosi-Boiger: Betreuung und Begleitung	fhv
۷.۷.۷	studentischer Abschlussarbeiten im Fachbereich	IIIV
	Technik <sup>103</sup> . Subject-specific advanced training modul	٥
	recinik . Subject-specific duvanced training moduli	C.

<sup>100</sup> In English: Workplace safety training
101 In English: GDPR training for research and educational institutions
102 In English: Introduction to the evaluation of teaching
103 In English: Supervision and support of student theses in the field of technology

Date/s	Description	Organizer
22.2.23	Tania Marsh, João Vilaça: ORCID iDs & Persistent	run-eu.eu
	Identifiers in Research. Online Workshop.	
28.2.23	Kazuma Matoba, Fabian A. Rebitzer: Heteronormativit	yfhv
	and queer thinking. Lecture series LGBTIQ* in the	
	context of our time.	
14-15.3.23	Mag. <sup>a</sup> Roswitha Mayr: Hochschuldidaktik <sup>104</sup> . <i>Online</i>	Austrian
	Training.	Association of
		Universities of
		Applied Sciences
21.3.23	Willy Christian Kriz: Kompetenzorientiertes Prüfen <sup>105</sup>	. fhv
	Teaching Excellence and Lifelong Learning (TELL)	
	Center Workshop.	
4.4.23	Fabian Andreas Rebitzer: Diversitätsschulung <sup>106</sup> .	fhv
	Training.	
28-29.11.2	3 University didactics 2 <sup>107</sup> (planned). <i>Training</i> .	fhv

#### Entrepreneurship

I am co-author of the patent "Nokia Corporation, Saarinen J., Kärkkäinen L., Terho M., Fronza I., Janes A., Sillitti A., Succi G.: 'A system and a method for determining context.", publication number: WO/2013/124521, international application number: PCT/FI2012/ 050180, 2013<sup>108</sup>.

### Websites about me

- Google Scholar: https://scholar.google.com/citations?user=8lYoEEQAAAAJ
- DPLB: https://dblp.org/pid/04/2902
- <u>Scopus</u>: https://www.scopus.com/authid/detail.uri?authorId=7003421075
- ORCID: https://orcid.org/0000-0002-1423-6773LinkedIn: https://www.linkedin.com/in/ajanes/
- Researchr: https://conf.researchr.org/profile/andreajanes
- Personal website: https://ajanes.github.io

#### Hobbies

I like to practice several outdoor sports: skiing, ski mountaineering, hiking, wind surfing, and catamaran sailing. I think that many sports, particularly being in the mountains, teach one what it means to prepare for a challenge, work as a team, how to lead, and how to accept help.

#### **Driving license**

- <u>Cars</u>: B
- Boats: Nautical license over 12 miles

<sup>&</sup>lt;sup>104</sup>In English: *University didactics 1* 

<sup>&</sup>lt;sup>105</sup>In English: *Competence oriented examination* 

<sup>&</sup>lt;sup>106</sup>In English: *Diversity training* <sup>107</sup>In English: *University didactics 2* 

<sup>108</sup> https://patentscope.wipo.int/search/en/detail.jsf?docId=W02013124521

#### Language competences

- German Mother tongue. I passed the language examination "A" of the province in Bolzano, which certifies that I am proficient in German at the level <u>C1</u> of the Common European Reference Framework<sup>109</sup>. I self-assess my skills in German as C2. I also speak Bavarian (ISO 639-3 code "bav"), which allows me to interact easily with research partners, companies, and students in South Tyrol, Austria, parts of Switzerland, and Germany.
- Italian I passed the language examination "A" of the province in Bolzano which certifies that I am proficient in Italian at the level C1 of the Common European Reference Framework. I self-assess my Italian skills as C2.
- English I passed the exam Cambridge Certificate of Advanced English (corresponds to level C1), issued 23.8.11, certificate number 00323506-72. Moreover, I passed the English Language Exam C1 of the Language Center of unibz on the 27.02.18. I self-assess my skills in English as C1.

I authorize the processing of my personal data in the curriculum vitae in accordance with Legislative Decree No. 196 of June 30, 2003 and the GDPR (EU Regulation 2016/679).

Dornbirn, July 2, 2023

<sup>109</sup> https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=090000168045bb52