Academic Curriculum Vitæ of Andrea Janes

Personal information

Name:	Andrea Alexander Janes
Birthday and place:	22.04.1975 in München (D)
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Education since leaving school

- November 2001: Master of Science degree in Informatics and Economics (*Wirtschaftsinformatik* in German) at the Technical University of Vienna, Austria. Austrian title: *Mag. rer. soc. oec.*.
- August 2014: Doctor of technology degree 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). I obtained my doctorate with distinction. Austrian title: *Dr. techn.*.
- January 2020: Habilitation as associate professor in Italy in the field of *Sistemi di elaborazione delle informazioni (09/H1)*, i.e., Information processing systems.
- April 2021: Habilitation as associate professor in Italy in the field of *Informatica (01/B1)*, i.e., Computer Science.

Present appointment

Job title:	Hochschullehrer (Senior Lecturer)
Start/end:	Since 1.11.2022
Employer:	FHV Vorarlberg University of Applied Sciences
Place of work:	Dornbirn, Austria
Brief description of responsibilities:	Teaching in the area of software engineering. 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 good 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.

Professional experience

This section lists my professional experience.

From/to	Job title	Organization	A[1]	Responsibilities
15.4.98–15.9.98	F[2]	IBM, Austria[3]		Integration testing of the speech recognition software *IBM ViaVoice*.
8.9.98–31.10.98	F	Philips Speech Processing Solutions, Austria[4]		Setup of a testing strategy and integration testing for the speech recognition software *Philips Dragon Naturally Speaking*.
8.3.99–2.11.01	F	Widder, Austria[5]		Software development, e.g., *NT4US*, the development of automatic installation tools to install in an unattended way more than 1000 computers for Philips.
1.7.99–31.7.03	F	CompuNet, Italy[6]		Design and development of the medical software components for dentists, as well as the coordination of the software development team.
1.2.01–17.01.02	F	Ivoclar, Italy[7]		Training courses for the staff in Microsoft Word, Excel, and Access.
11.3.02–10.3.05	CO[8]	unibz[9]	7	Participation in research projects, development of research prototypes and their evaluation.
17.11.03–16.11.06	AR[10]	unibz	7	Same responsibilities as an CO, in addition: development of new research questions, publication of results.
1.11.05–28.2.07	RTD[11]	unibz	7	Same responsibilities as an AR, in addition: teaching as lecturer or teaching assistant in various courses, supervision of students working on their thesis, primary investigator or participant of research projects.
1.3.07–30.11.07	PM[12]	EOS Solutions, Italy[13]		Analysis of organizational processes and adaptation of ERP installations, coordination with software developers, introduction of ERP software to organizations.
1.4.07–31.5.07	CO	unibz	7	(see description for CO above)
15.6.07–14.8.07	CO	unibz	7	(see description for CO above)
10.12.07–31.12.07	CO	unibz	7	(see description for CO above)

[1] The academic level is reported using the European qualifications framework for lifelong learning (EQF), see https://en.wikipedia.org/wiki/European_Qualifications_Framework
[2] Freelancer
[3] IBM Österreich Internationale Büromaschinen Gesellschaft m.b.H., https://www.ibm.com/at-de
[4] Philips Speech Processing Solutions, https://www.dictation.philips.com
[5] Widder, https://www.widder.at
[6] CompuNet, https://compunet-it.com
[7] Ivoclar Italia, https://www.ivoclarvivadent.it/
[8] Project collaboration (contratto di collaborazione a progetto)
[9] Free University of Bozen-Bolzano, https://www.unibz.it
[10] Research grant (assegno di ricerca)
[11] Researcher with a fixed-term contract according to the *legge Moratti* (art. 1, comma 14, l. 230/05).
[12] Project manager
[13] EOS Solutions, https://www.eos-solutions.it

From/to	Job title	Organization	A	Responsibilities
1.1.08–31.12.08	CO	unibz	7	(see description for CO above)
1.9.08–31.10.08	CO	unibz	7	(see description for CO above)
15.1.09–31.3.11	RTD	unibz	7	(see description for RTD above)
1.6.09–30.6.09	CO	unibz	7	(see description for CO above)
15.3.11–14.6.11	CO	unibz	7	(see description for CO above)
1.4.11–31.3.14	RTD	unibz	7	(see description for RTD above)
1.5.14–31.3.17	RTD	unibz	8	(see description for RTD above)
1.4.17–31.8.18	RTDa[14]	unibz	8	(see description for RTD above)
1.9.19–31.8.21	RTDa	unibz	8	(see description for RTD above)
1.9.21–31.10.22	RTDa	unibz	8	(see description for RTD above)
since 1.11.22	HL[15]	fhv[16]	8	(see current appointment)

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.

Course	Role[17]	BSc	MSc	SG[18]	Ac. year	ECTS
Contemporary Software Development	L, TA		×		19/20, 20/21, 21/22, 22/23	6
Software Development: from the idea to the product	L			×	20/21	3
Application Engineering for Business Informatics	L, TA	×			19/20, 20/21, 21/22	6
Systems Engineering	L	×			19/20	6
Internet and Mobile Services[19]	L	×			18/19	6
Project Management and Professional Ethics[20]	L	×			18/19	3
Software Factory	L, TA		×		17/18, 18/19	8
Software Process Management	L		×		14/15, 15/16, 16/17	8
Architectures of Digital Systems	L, TA	×			11/12, 12/13, 14/15, 15/16, 16/17	8
Project and Team work management	L	×			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	×			09/10, 10/11	4
Requirements and Design of Software Systems	L, TA		×		09/10, 10/11, 13/14	8
Technology Assessment	TA	×			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, 07/08	4
Internet Technologies II	TA	×			06/07, 07/08	4

[14] Researcher with a fixed-term contract according to the *legge Gelmini* (art. 24, comma 3-a, l. 240/10).
[15] Hochschullehrer (Lecturer)
[16] Vorarlberg University of Applied Sciences
[17] Lecturer (L) or Teaching Assistant (TA). 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.
[18] Studium Generale
[19] Together with Panagiotis Symeonidis
[20] Together with Christian Mörtl

Course	Role	BSc	MSc	SG	Ac. year	ECTS
Requirements Engineering	L		×		05/06	4
Laboratorio di tecnologie informatiche	L		×		05/06, 06/07	4
Software per la didattica dell'informatica	L		×		05/06, 06/07	4
Didattica dell'Informatica I	L		×		06/07	4
Software Engineering Project	TA	×			04/05, 05/06	8
Programming Project	TA	×			02/03, 03/04	8
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 research and it challenges me to be concise, clear, and to point out the practical value of what I research. It is my goal not primarily to show to students "how something has to be done", but to explain them the intentions behind specific methodologies, how they can be supported, and what might obstruct them. Through case studies I aim to develop the students' problem solving strategies, through reading of academic papers I want to prepare them to be able to demystify research and to encourage them to use the results of research in their future work.

Unfortunately, I observe that teaching is more and more relying on using slide presentations in which knowledge is pre-packaged for students in easy-to-digest pieces. My current experience with this approach is rather negative: I observe that students often just study the slides without understanding the context of the subject; moreover, they are not prepared to filter information they need from the available one. 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. Blended learning is not used just as a teaching method, but as a method to train students to cope with the flood of information available today.

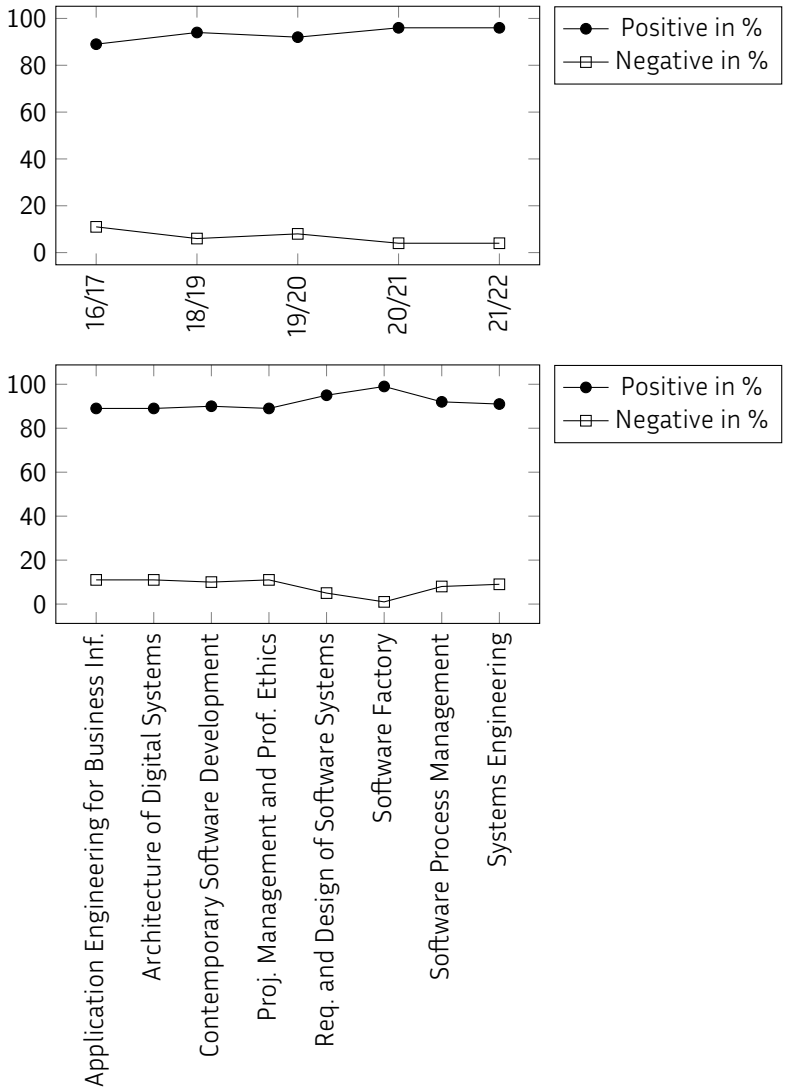
To evaluate a student's work, I evaluate which learning objectives a student achieved. In my courses—most of the time—learning objectives consist of skills (and not only knowledge), a student is supposed to acquire. I assess their achievements with a final exam; I prefer to see the lab as a "safe space", in which students are not evaluated but free to try out things and to learn.

The highlights of my personal achievements in teaching are:

– Teaching evaluations: My teaching evaluations are usually more than 80% positive and are obtained through questionnaires evaluating various aspects of a course at the end of the course, before the exam.

  The first chart shows the overall evaluation over all courses in the last years. The second chart shows the overall evaluation for each course[21]

[21] For courses taught at the Free University of Bozen-Bolzano, the overall evaluation by course was obtained through the "Professor Dashboard" of the Free University of Bozen-Bolzano, selecting the detailed course evaluations, the "lectureship" evaluation type, all presence categories, all question groups, and all questions.



– Thesis supervision: The PhD students I supervised, together with the title of their theses, and the year of completion are:

Name[22], Title	C[23]	Yr.
S. S., *Optical Flow Estimation*		22
S. A., *A non-invasive approach to software development analytics*	×	15

The master students I supervised, together with the title of their theses, and the year of completion are:

Name[24], Title	C[25]	E[26]	Yr.
M. V., *Implementation of a database access framework for code generation in a database-first approach (tentative title)*			23
D. M., *Towards a reference architecture for ETL pipelines, validated in the Erlang ecosystem and the DNN context*			23

[22]The name of the student is anonymized, the full name is available upon request.
[23]I supervised this thesis as co-supervisor.
[24]The name of the student is anonymized, the complete name is available upon request.
[25]I supervised this thesis as co-supervisor.
[26]This thesis was written during an Erasmus stay or an international MSc curriculum.

Name Title	C	E	Yr.
F. P., *Extending a data-driven application with Event Sourcing*			22
D. S., *Configurable and resource efficient framework for data and command transmission over LoRaWAN*	×		22
T. K., *Log diagnosis and error detection in the field of electric mobility*			22
L. F., *Generation of Nutritional Natural Language Comments for Recipes*		×	22
B. K., *Interactively Learning of Personalised Constraints for Food Recommendations*		×	22
A. V., *Damage Detection of Powertrains based on Acoustic Signatures*			20
L. S., *Bug or not bug: commit classification using weak supervision*	×		20
G. S. S., *Designing and Implementing a Scalable and Modular Microservice Architecture for Smart Cities*			20
G. R., *Application of the edge computing paradigm for the deployment of a camper prediction system: a Case Study*	×		20
A. M., *The Electronic Health Record (EHR) of South Tyrol – A Case Study*			19
D. F., *Identifying Microservices in a Monolithic Application: A Process Mining Approach*			18
Y. K., *Relating Business Data from the Specification Level to Respective Associated Variables and Accessor Methods in the Source Code*	×	×	16
H. K. V. T., *An empirical investigation on the relationship between refactoring and software bugs*	×	×	16
M. M., *Analyzing user interface activities using process mining*			16
D. J., *Ensuring relevance in semantic search system development*			15
S. K., *A method for performing indoor positioning using Bluetooth beacons*	×		15
P. P., *Implementation and Analysis of an Energy Saving Kernel-Level Extension in Android OS*			15
P. D., *Software quality strategies of SMEs: an Open Source approach*			15
S. C., *SmartMetering using IBM BlueMix*			15
A. K., *Managing Dependencies and Business Goal Alignment in Software Measurement Programs*			15
S. S., *Privacy e confidenzialità in un app per la sanità digitale*			15
M. M., *Detecting bad smells in meetings using active RFID tags*			13
R. G., *Automatic extraction of competences of developers*	×		13
K. M., *Landscape Optimization by offering virtualized data access methods using SAP In Memory technology*	×	×	13
D. H., *Improving automated requirement traceability in modified code*	×		12

The bachelor students I supervised, together with the title of their theses, and the year of completion are:

Name[27], Title	C[28]	Yr.
L. T. *Development of a Sensor-based Portable Data Collection System for Climbers*		22

[27] The name of the student is anonymized, the complete name is available upon request.

[28] I supervised this thesis as co-supervisor.

Name Title	C	Yr.
D. S. *Analysis of Support Tickets: a Case Study*		22
B. S. *Proposing Microservice Cuts in a Monolith: a Process Mining Approach*		22
C. C. *HelpArt: a Walk-through to Help Artisans Envisioning the Internet of Things*		22
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
L. S. *Integrated data management with Autodesk Vault, SAP ERP, and coolOrange powerGate: a case study*		20
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
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
C. S. *Method Name Suggestions: An Open Vocabulary Approach*	×	19
H. W. *Visitor Guidance Supported by a Robotic Concierge for the NOI Technology Park*		19
S. C. *Evaluating Microservice Design Choices using Load Testing*		19
F. T. *Design and Implementation of a robotic concierge for the NOI Techpark*		19
M. M. K. *InteGrate: An App based solution for new school children from different countries to integrate and adjust in German schools in South Tyrol*		19
M. E. S. *Evaluation And Tool Support For The REUSE Compliance Of GitHub Repositories*		19
M. G. *Visualizing Contextual Information within Visual Studio Code*	×	19
P. F. *Design, Implementation, and Evaluation of a Flashcard Learning App to Learn Shortcuts*	×	19
M. P. *A study on presence detection in guestrooms through multiple sensors on a single device*		18
M. M. *Design, Implementation, and Evaluation of a Technology Transfer Platform*	×	18
D. M. *Booster: A Peer-to-Peer Network Interface Balancer*		18
L. S. *Estimating the costs of a new climbing route: a genetic algorithm approach*		18
A. R. *G-Splint: Blender Addon for analysis of 3D scans and autonomous modeling of splints*	×	18
R. N. *PentDB: A management information system for churches*		17
M. Z. *A User Interface for an IDE Command Recommender System*		16
J. G. *SURF: Ein System für die Unterstützung von Reorganisationsmaßnahmen basierend auf FTE-Optimierungspotenzialen*		16
D. O. *Software-Qualitätssteigerung durch End-Benutzer-generierte Regressionstests*		16

Name Title	C	Yr.
W. F. *Refactoring of a Management Software for the Kurhaus Meran*		16
S. M. *Selecting technologies to implement a distributed web-based communication platform in.a startup*		16
J. G. *A modular architecture for a treemap-based dashboard*		15
B. G. *Extreme Technical Debt*		15
S. S. *Privacy e confidenzialità in un'App per la sanità digitale*		15
S. S. *Mobile Webanwendung für die Vermittlung kultureller Veranstaltungen im Rahmen des Kulturportals Südtirol*		15
F. P. *Abgleich der Inhalte und Einstellungen zwischen Facebook und Wordpress: ein erster Schritt zur Unterstützung von Multichannel-Marketing im Internet*		14
S. K. *Analysis and comparison of methods to minimize energy consumption in Android Kernels*	×	14
S. P. *Messung und Darstellung des Energieverbrauchs von Android Applikationen*		14
P. M. *Non-Invasive Cost Accounting for Kanban Teams*		14
M. M. *RescueEye: an unmanned aerial vehicle to get pictures of an accident scene before rescuers arrive*		14
V. H. *Autocomplete for CNC-Programmers*		14
D. F. *Vertical Life: Migration einer Android Anwendung in iOS*		14
M. B. *Mobile Sales: eine mobile Applikation für die Auftragsverwaltung für Handelsvertreter*		13
M. M. *Online–Plattform für die Vermittlung von Gelegenheitsarbeiten für die Generation 50Plus*		13
P. G. *FireAlarm Mobile: Die Entwicklung eines Alarmiersystems für die Feuerwehren Südtirols*		13
P. P. *Dashboarding in Microsoft Design Language (formerly known as Metro Design)*		13
R. V. *Using LEGO NXT robots for children education*	×	12
F. O. *Dube: A Web Application for the Distribution and Update of Data Processing and Visualization Components*		12
M. C. *Extracting and Representing Application Dependencies from Software Process Data*	×	06
T. W. *Misurazione non-invasiva per la stima dell'effort di requisiti espressi in linguaggio naturale*	×	06

I also supervised students in Bressanone for the Faculty of Education at the "Scuola per la specializzazione dell'educazione secondaria"[29] (SISS). The students I supervised, together with the title of their theses, and the year of completion are:

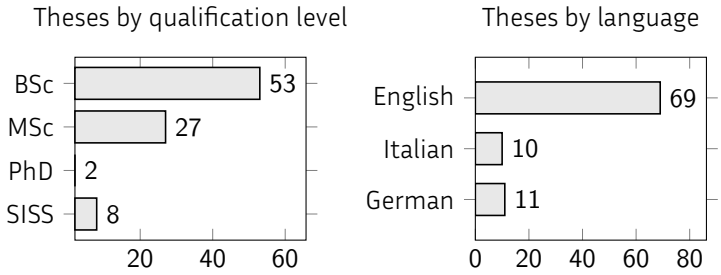
Name[30], Title	Yr.
L. M. *Il modello relazionale per le basi di dati*	07
M. N. *Didattica assistita da strumenti per presentazioni multimediali nella comune pratica d'aula: funzioni, scope e passaggio dei parametri*	07
M. V. *Le certificazioni informatiche nel contesto scolastico*	07
A. C. *L'algebra di Boole*	06
G. C. *La crittografia: principali metodologie e applicazioni*	06
C. M. F. *L'8086 e la programmazione assembly*	06
G. C. *Introdurre la programmazione ai principianti: un approccio tramite Logo e Java*	06

[29] In English: *School for the spezialization of secondary education*

[30] The name of the student is anonymized, the complete name is available upon request.

Name Title	Yr.
G. F. *I reati informatici*	06

So far, I supervised 90 theses. The following charts show their distribution by qualification level and language.



- Best teacher award: I was nominated for the best teacher award at the Faculty of Computer Science in 2013 and 2014, based on the votes of the students and I won it in 2017.
- Studium Generale: In 2020, I taught the course *Software Development: from the idea to the product* for the Studium Generale, an interdisciplinary study programme available to the general public, 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*.
- Career opportunities in business informatics: In my former high school, from 2013, 2020, and 2022 I gave a talk to explain which career opportunities exist within the area of business informatics.
- JuniorUni: In 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 also went to various elementary and middle schools of South Tyrol to teach programming concepts (instructions, loops, and conditions) to entire school classes using Lego robots.
- Internship opportunity for high school students: In 2018, 2019, 2021, and 2022, I hosted high school students from the high schools Galileo Galilei, Max Valier, and Franz Kafka. In these years we worked together on various projects, e.g., a software to match voting preferences with political opinions for the newsmagazine FF or on software to track climbers for the project SALSA.
- EURAC Junior Science Camp: In 2013, the EURAC Junior Science Camp was an initiative to introduce 17–18 year old high school students to different fields of science. I held a 1-day workshop on robot programming in June 2013.
- Long Night of Research: In 2012, in the context of the JuniorUni I participated to the *Long Night of Research* and programmed together with elementary and middleschool children a LEGO robot so that it can navigate through a map and reach the programmed destination.

- **Postgraduate supervision (PhD level)**

  In the last 5 years (2017–2022), I supervised 1 PhD student in the subject area Computer Vision.

Other academic In this section, I summarize the internal and external appointments, as

responsibilities well as responsibilities for organizing conferences and seminars.

– **Internal appointments to faculty and university boards**

Organization	Year/s	Responsibilities
unibz	04	Participation to the development of the new European Master curriculum in Software Engineering.
unibz	14	Participation to the development of the new Bachelor curriculum in Business Informatics.
unibz	08-14	Member of the PhD committee of the PhD in Computer Science (cycles 24–29).
unibz	09-13	Study plan advisor helping students in the development of their study career.
unibz	14-22	Commission member for the dissertation defences for the bachelor and master degrees conferred by the Faculty of Computer Science.
unibz	17-22	Member of the Smart Data Factory[31], a group of the Faculty of Computer Science conducting applied research and technology transfer within the NOI Technology park[32].
unibz	19	Organizer of the Xmas Party of the Faculty of Computer Science involving students and staff.
unibz	20	Coordinator of the working group *Computer Programming* to review course presentation forms, avoiding overlap in content and ensuring continuity between BSc and MSc courses.
unibz	20-22	Member of the High Performance Computing Task Force of the Faculty of Computer Science.
unibz	20-21	Member of the PhD committee of the PhD in Advanced Systems Engineering (cycle 36).
unibz	21-22	Member of the Working group for third mission of the Faculty of Computer Science.
unibz	21-22	Tutor for the Bachelor in Informatics and management of Digital Business[33].
unibz	22	Initiator and Contact person for the Memorandum of understanding between the unibz and the Provincial Institute of Statistics of the Autonomous Province of Bolzano/Bozen ASTAT.

– **External appointments at national and international level**

Organization	Year/s	Responsibilities
Univ. of Maribor, Slovenia	13	External commission member for the master defense of Marko Gasparic.
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 Salzburg Business School, Salzburg, Austria	20	Teacher of the module *Praxis-Workshop – Big Data im eigenen Unternehmen* (Practical workshop - Big Data in your own company), together with Diego Calvanese.

[31] https://smart.inf.unibz.it
[32] https://noi.bz.it
[33] The duties of a tutor are listed at https://guide.unibz.it/en/study-career/computer-science/tutoring/.

Organization	Year/s	Responsibilities
INNOS, Lienz, Austria	20	Teacher of the module *Datenmanagement mit Microservices*[34] during the webinar Datenbanken und deren effiziente Verwendung[35].
NOI Techpark, Italy	19–22	Member of the *Digital Community Meeting* to exchange experiences between the research institutions present at the NOI Technology park, such as the Free University of Bolzano-Bozen, EURAC Research and Fraunhofer Italia, and companies and start-ups from NOI Techpark working in the digital field.
Province of Bozen-Bolzano, Italy	14	Teacher for a course organized for the IT requirements management office of the Province of Bozen-Bolzano, Italy for the subjects *Requirements engineering* and *KPI management*.
Province of Bozen-Bolzano, Italy	since 2021	Reviewer for innovation, research, and development projects submitted to the Autonomous Province of Bozen/Bolzano in the context of the provincial law 14/2006.
INFORTE.fi[36], Finland	22	Invited Speaker for the summer school *Promote your research in Industry and Academia*.

– **Responsibilities for organizing conferences and seminars**:

From/to	Event	Responsibilities
4.12.11–6.12.11	2011 Alpine Software Engineering Workshop, Corvara, Italy (ASEW)	Organizing committee member
2.12.12–4.12.12	2012 Alpine Software Engineering Workshop, Ortisei, Italy (ASEW)	Organizing committee member
6.5.14–9.5.14	10th International Conference on Open Source Systems, San Jose, Costa Rica (OSS)	PC member & PhD Symposium chair
22.9.14–23.9.14	3rd International Conference on Software Engineering for Defence Applications, Rome, Italy (SEDA)	PC member & Program chair
25.5.15–29.5.15	16th International Conference on Agile Software Development, Helsinki, Finland (XP)	PC member (Estimations in the 21st Century Software Engineering)
26.8.15–28.8.15	41st Euromicro Conference on Software Engineering and Advanced Applications, Funchal, Madeira, Portugal (SEAA)	PC member (Software Value Management)
28.4.16–29.4.16	1st Joint Seminar in Empirical Software Engineering at the Free University of Bozen-Bolzano (JESE)	Organizer
6.12.16–6.12.16	2016 Alpine Software Engineering Workshop: Random-Based Testing, Bolzano, Italy (ASEW)	Organizer
22.4.17–26.4.17	1st International Workshop on Monitoring in Large-Scale Software Systems, L'Aquila, Italy (MOLS)	PC member

[34] In English: *Data management with microservices*
[35] In English: *Databases and their efficient use*
[36] http://inforte.jyu.fi

From/to	Event	Responsibilities
18.5.17–19.5.17	2nd Joint Seminar in Empirical Software Engineering at the University of Innsbruck (JESE)	Co-organizer
21.5.17–26.5.17	1st International Workshop on Microservices for Agile software development (WMSA)	Co-organizer
6.7.17–6.7.17	8th Workshop on Computer Science Research meets Business, Bolzano, Italy: Data Science, How to Create added Value from Data	Organizing committee member
3.9.17–6.9.17	1st International Conference on Lean and Agile Software Development, Prague, Czech Republic (LASD)	PC member
4.9.17–7.9.17	2017 Summer School on Software Engineering, Bolzano, Italy (SESchool)	Organizing committee member
21.9.17–23.9.17	3rd Joint Ontology Workshops, Episode 3: The Tyrolean Autumn of Ontology, Bozen-Bolzano, Italy (JOWO)	Track co-chair (Data meets Applied Ontologies)
29.11.17–1.12.17	18th International Conference on Product-Focused Software Process Improvement, Innsbruck, Austria (PROFES)	PC member (Full Papers) & Session chair
21.5.18–25.5.18	19th International Conference on Agile Software Development, Porto, Portugal (XP)	PC member (Research Papers)
28.8.18–31.8.18	44th Euromicro Conference on Software Engineering and Adv. Applications, Prague, Czech Republic (SEAA)	PC member (Monitoring Large-Scale Software Systems)
9.9.18–12.9.18	2nd International Conference on Lean and Agile Software Development, Poznań, Poland (LASD)	PC member
9.9.18–12.9.18	2018 Summer School on Software Engineering, Bolzano, Italy (SESchool)	Organizing committee member
23.9.18–29.9.18	34th International Conference on Software Maintenance and Evolution, Madrid, Spain (ICSME)	PC member (Artifacts)
28.11.18–30.11.18	19th International Conference on Product-Focused Software Process Improvement, Wolfsburg, Germany (PROFES)	PC member (Full Research and Industry Papers)
21.5.19–25.5.19	20th International Conference on Agile Software Development, Montréal, Canada (XP)	PC member (Research Paper)
8.7.19–10.7.19	12th Seminar on Advanced Techniques & Tools for Software Evolution, Bolzano, Italy (SATToSE)	PC member, Hackaton chair & Session chair
1.9.19–4.9.19	3rd International Conference on Lean and Agile Software Development, Leipzig University, Leipzig, Germany (LASD)	PC member
10.9.19–12.9.19	2019 Summer School on Software Engineering, Bolzano, Italy (SESchool)	Organizing committee member
11.9.19–13.9.19	12th International Conference on the Quality of Information and Communications Tech., Ciudad Real, Spain (QUATIC)	PC member (Quality Aspects in Software Maintenance and Comprehension)

From/to	Event	Responsibilities
30.9.19–4.10.19	35th IEEE International Conference on Software Maintenance and Evolution, Cleveland, Ohio, USA (ICSME)	PC member (Short Papers)
27.11.19–29.11.19	20th International Conference on Product-Focused Software Process Improvement, Barcelona, Catalunya, Spain (PROFES)	PC member (Full Research and Industry Papers)
15.1.20–3.6.20	Reality Check: IT students meet companies, a bi-monthly event, organized together with the 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	Organizer
8.6.20–12.6.20	21st International Conference on Agile Software Development, Copenhagen, Denmark (XP)	PC member (On-site Research)
1.7.20–3.7.20	6th International School on Software Engineering, Bolzano, Italy (ISESchool)	Organizing committee member
26.8.20–27.8.20	16th International Symposium on Open Collaboration, Madrid, Spain (OpenSym)	PC member (OpenSym 2020 New Ideas and Emerging Research)
6.9.20–9.9.20	4th International Conference on Lean and Agile Software Development, Sofia, Bulgaria (LASD)	PC member
8.9.20–11.9.20	13th International Conference on the Quality of Information and Communications Technology (QUATIC)	PC member (Human and Artificial Intelligences for Software Evolution)
11.11.20–11.11.20	18. Anwenderkonferenz zu Softwarequalität, Test und Innovation, Bolzano, Italy (ASQT)	PC member
25.11.20–27.11.20	21st Int. Conference on Product-Focused Software Process Improvement, Turin, Italy (PROFES)	PC member (Full Research Papers and Short Papers)
23.1.21–23.1.21	5th International Conference on Lean and Agile Software Development, online (LASD)	PC member
23.5.21–24.5.21	4th International Conference on Technical Debt, online (TechDebt)	PC member (Tool Papers)
7.6.21–8.6.21	Summer School in HPC and AI, Bolzano, Italy	Organizing committee member
8.9.21–11.9.21	14th International Conference on the Quality of Information and Communications Technology, online (QUATIC)	PC member (Software Evolution)
25.11.21–26.11.21	22nd Int. Conference on Product-Focused Software Process Improvement, Turin, Italy (PROFES)	PC member (Full Research Papers and Short Papers)
11.11.21–11.11.21	19. Anwenderkonferenz zu Softwarequalität, Test und Innovation, Bolzano, Italy (ASQT)	PC member
27.10.21–27.10.21	2nd Workshop on Data for Smart Health, Bolzano, Italy (D4SH)	Session chair (Industry and Public Governance)

From/to	Event	Responsibilities
22.1.22–22.1.22	6th International Conference on Lean and Agile Software Development, Sofia, Bulgaria (LASD)	PC member
17.5.22–18.5.22	5th International Conference on Technical Debt, Pennsylvania, USA (TechDebt)	PC member (Tool Papers) & Session chair (Machine Learning for Technical Debt)
31.8.22–2.9.22	Euromicro Conference on Software Engineering and Advanced Applications, Maspalomas, Gran Canaria, Spain (SEAA)	Track co-chair (Cloud Native And Dev Ops)
19.9.22–23.9.22	International Symposium on Empirical Software Engineering and Measurement, Helsinki, Finland (ESEM)	PC member (Registered Reports)
2.10.22–7.10.22	38th IEEE International Conference on Software Maintenance and Evolution, Limassol, Cyprus (ICSME)	PC member (New Ideas and Emerging Results and Registered Reports)
21.11.22–24.11.22	23rd International Conference on Product-Focused Software Process Improvement, Jyväskylä, Finland (PROFES)	Track co-chair (Doctoral Symposium) & PC member
14.6.23–16.6.23	27th International Conference on Evaluation and Assessment in Software Engineering, Oulu, Finland (EASE)	Track co-chair (Short Papers and Posters)
27.3.23–2.4.23	7th International Conference on Lean and Agile Software Development (Track on Lean and Agile Software Development at the 38th ACM/SIGAPP Symposium On Applied Computing), Tallinn, Estonia (LASD)	PC member
15.7.23–15.7.23	49th Euromicro Conference on Software Engineering and Advanced Applications (SEAA)	Track co-chair (Emerging Computing Technologies)
13.3.23–17.3.23	20th IEEE International Conference on Software Architecture, l'Aquila, Italy (ICSA)	PC member (Posters)
14.5.23–20.5.23	4th Workshop on Gender Equality, Diversity, and Inclusion in Software Engineering, Melbourne, Australia (GE@ICSE)	Workshop co-chair
14.5.23–15.5.23	International Conference on Technical Debt, Melbourne, Australia (TechDebt)	PC member
26.3.24–29.3.24	31st International Conference on Software Analysis, Evolution and Reengineering, Rovaniemi, Finland (SANER)	Track co-chair (Industrial Papers)

- **Editorial and reviewing activities**:
  - In the last years, I reviewed papers from the following conferences and workshops (being member of the program commitee): ARTE '22; ASQT '20, '21; ESEM '22; ICSA '23; ICSME '18, '19, '23; LASD '17, '18, '19, '20, '21, '22, '23; MOLS '17; OSS '14; OpenSym '20; PROFES '17, '18, '19, '20, '21, '22; QUATIC '19, '20, '21; SATToSE '19; SEAA '15, '18, '22, '23; SEDA '14; TechDebt '21, '22, '23; XP '15, '18, '19, '20.
  - I reviewed papers from the following journals:

Since	Journal
2013	International Journal of Software Engineering and Knowledge Engineering
2014	Information and Software Technology
2016	Software Quality Journal
2018	Empirical Software Engineering
2018	Journal of Software: Evolution and Process
2019	IEEE Access
2020	Journal of Systems and Software
2020	ACM Transactions on Services Computing
2021	ACM Transactions on Interactive Intelligent Systems
2021	Expert Systems with Applications

- I have a reviewer profile on https://publons.com/researcher/2438992/andrea-a-janes/ (under *Peer review summary*).
- I have a reviewer profile on https://orcid.org/0000-0002-1423-6773 (under *Peer review*).
- 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)[37]

Research and scholarships

In this section, I first summarize the current research and scholarship, then of the previous 5 years. I continue summarizing significant achievements in research and scholarship as well as research grants and contracts.

- **Summary of current research and scholarship**

  Motivation: Measurement is a necessary step to assess and to improve the current software development practice. A methodical approach to measurement is needed to introduce quality and performance management instruments that rely on it. This is particularly true for software engineering because the outcome of this process is invisible[38][39] and therefore, it is difficult to understand progress and to reason about software.

  Problem statement: Unfortunately, it costs to design, implement, and maintain measurement infrastructures and it costs to convert the collected data into information and knowledge to use it for decision-making. Moreover, it also costs not to measure, and an organization has to constantly minimize the risk of having too much or too little data.

  Approach: In the previous years I worked on ways to automatically collect, integrate, and visualize data obtained from traces that are

[37] http://www.grin-informatica.it/opencms/opencms/grin

[38] Norman E. Fenton and Shari Lawrence Pfleeger. Software Metrics: A Rigorous and Practical Approach. PWS Publishing, 2nd edition, 1998.

[39] Royal Academy of Engineering and British Computer Society. The Challenges of Complex IT Projects: The Report of a Working Group from the Royal Academy of Engineering and the British Computer Society. The Royal Academy of Engineering, 2004.

left behind by developers and users: modifications to code and documents, commits, the interaction with development environments, web sites, and applications in general. My scientific work aims to understand which decisions I can support using the automatically collected data and how to analyze and how to provide feedback in a productive manner to adapt the software development process to the goals of the organization. In respect to the problem mentioned above, I concentrate on a) reducing the costs of measurement and b) improving the understanding of *how much* measurement is enough.

In general, I am interested in the construction of complex (many components) and complicated (interacting, intricate components) software in such a way that modifiability remains high and maintenance costs remain low. To solve this, I am studying innovative software development approaches (e.g., microservices), constantly investigating new ways to measure the application construction process, and how to evaluate the output (e.g., architecture or performance). Since my doctorate, one focus of my research is on Lean/Agile Methods as a way to obtain these goals.

Results: My current results show how data, which can be collected automatically, can help to improve the software construction process or to automate parts of it. Not only to reason about how to improve the development process but also to reason about the profitability of development investments (e.g., comparing the usage intensity of a component with the development effort of the same component) or the creation of a Lean culture within the organization based on measurement and the removal of unnecessary activities.

– **Summary of research and scholarship during the previous 5 years**

In the previous five years, I applied the approach of measuring software production without the necessary intervention of the involved programmers to other areas: I extended the concept to the user interface[40], to minimize energy consumption in Android kernels[41], and performance measurement[42][43][44].

I explored the usage of various machine learning algorithms within

[40] Saulius Astromskis, Andrea Janes, Michael Mairegger: A process mining approach to measure how users interact with software: an industrial case study. ICSSP 2015: 137–141

[41] Luis Corral, Anton B. Georgiev, Andrea Janes, Stefan Kofler: Energy-Aware Performance Evaluation of Android Custom Kernels. GREENS 2015: 1–7

[42] Alberto Avritzer, Daniel S. Menasché, Vilc Queupe Rufino, Barbara Russo, Andrea Janes, Vincenzo Ferme, André van Hoorn, Henning Schulz: PPTAM: Production and Performance Testing Based Application Monitoring. ICPE Companion 2019: 39–40

[43] Alberto Avritzer, Vincenzo Ferme, Andrea Janes, Barbara Russo, André van Hoorn, Henning Schulz, Daniel S. Menasché, Vilc Queupe Rufino: Scalability Assessment of Microservice Architecture Deployment Configurations: A Domain-based Approach Leveraging Operational Profiles and Load Tests. J. Syst. Softw. 165: 110564 (2020)

[44] Vilc Queupe Rufino, Mateus Schulz Nogueira, Alberto Avritzer, Daniel Sadoc Menasché, Barbara Russo, Andrea Janes, Vincenzo Ferme, André van Hoorn, Henning Schulz, Cabral Lima: Improving Predictability of User-Affecting Metrics to Support Anomaly Detection in Cloud Services. IEEE Access 8: 198152–198167 (2020)

the area of software engineering, e.g., recommender systems[45], process mining[46] and natural language processing[47]. Lately, I work on the construction of tools that can be used in a DevOps setting to conduct performance testing[48] for software constructed using a microservice architecture and to identify anti-patterns[49].

My research is inherently applied, since I validate the developed approaches in real-life settings. Technology transfer (intended as trasferring research outcomes to industry) is a side-effect of my research. In addition, since 2017 I participate in the setup and development of the "Smart Data Factory" (SDF), a group at the NOI technology park with the goal to promote academica-industry collaborations between the Faculty of Computer Science of the Free University of Bozen-Bolzano and the local industry.

Through various research projects I realized how difficult the collaboration between academia and industry is, which obstacles need to be resolved, and how such collaborations can be (still) carried out.

– **Research stays and visits abroad**

From/to	Description
9.10.06–14.7.14	As I pursued my doctorate in Austria from 2002 to 2014, I was regularly visiting the University Klagenfurt to attend lectures and—in collaboration with Carinthian companies—to conduct studies how my research tools are working or how they had to be adapted to fulfill 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.
21.7.13–13.8.12	Research stay in San Francisco, USA, to establish and conduct research collaborations with organizations in the San Francisco area.
2–22.2.15	Research stay at the Technical University of Tampere, Finland, Department of Pervasive Computing, collaborating with Tommi Mikkonen and Kari Systä to develop new ways to monitor the development process.
6–15.5.15	Research stay at the Technical University of Tampere, Finland, Department of Pervasive Computing, collaborating with Tommi Mikkonen and Kari Systä to develop new ways to monitor the development process.

[45] Marko Gasparic, Andrea Janes: What recommendation systems for software engineering recommend: A systematic literature review. J. Syst. Softw. 113: 101–113 (2016)

[46] Andrea Janes, Fabrizio Maria Maggi, Andrea Marrella, Marco Montali: From Zero to Hero: A Process Mining Tutorial. PROFES 2017: 625–629

[47] Romain Robbes, Andrea Janes: Leveraging small software engineering data sets with pre-trained neural networks. ICSE (NIER) 2019: 29–32

[48] https://github.com/pptam/pptam-tool

[49] Alberto Avritzer, Vincenzo Ferme, Andrea Janes, Barbara Russo, André van Hoorn, Henning Schulz, Daniel S. Menasché, Vilc Queupe Rufino: Scalability Assessment of Microservice Architecture Deployment Configurations: A Domain-based Approach Leveraging Operational Profiles and Load Tests. J. Syst. Softw. 165: 110564 (2020)

From/to	Description
1.6.15–30.11.15	Research stay at the Software Competence Center Hagenberg, Department of Software Analytics and Evolution, collaborating with Dr. Josef Pichler to study how to extract knowledge from source code.
16–20.9.18	Research stay at the Technical University of Tampere, Finland, Department of Pervasive Computing, to discuss possible collaborations the software engineering research group of Kari Systä and Davide Taibi.
14–24.6.22	Research stay at the University of Tampere, Finland, collaborating with Kari Systä and Davide Taibi on fault detection methods within microservice architectures.
6–13.9.22	Research stay at the University of Tampere, Finland, collaborating with Valentina Lenarduzzi and Davide Taibi on open tracing tools and on microservice architectures.

– **Summary of significant achievements in research and scholarship**

Year	Description
2021	Nominated for best Paper Award (top three papers) for the paper with the title *A Multivariate Characterization and Detection of Software Performance Antipatterns* at the ACM/SPEC International Conference on Performance Engineering (ICPE 2021).
2020	ACM Distinguished Paper Award for ICSE 2020 for the paper with the title *Big Code != Big Vocabulary: Open-Vocabulary Models for Source code* at the ACM/IEEE 42nd International Conference on Software Engineering (ICSE 2020).
2016	Best paper award for the paper with the title *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).
2012	Best paper award for the paper with the title *Improving the identification of traceability links between source code and requirement* at the 18th International Conference on Distributed Multimedia Systems (DMS 2012).
2014	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*.
2012	I coined the expression *the dark side of Agile software development", which describes an extreme view on Agile development, published in a paper at OOPSLA (Andrea Janes, Giancarlo Succi: "The dark side of agile software development*, Proceedings of the ACM international symposium on New ideas, new paradigms, and reflections on programming and software, 2012) and on the web site http://darkagilemanifesto.org. With this view I want to remind practitioners about the original ideas of Agile development.

Year	Description
2005-14	I participated in the creation of a non-invasive measurement approach (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. Most of the software developed during my research is released open source on https://github.com/ajanes/squirrel.

– **Research grants**

Date granted	Award Holder(s)	Funding body	Title	Amount received
1.5.11	Andrea Janes	Commissioned research	Allineamento processi alla strategia per Miglioramento continuo processi PA (lanusPA)	3957,38
21.7.11	Andrea Janes	Commissioned research	Risk Management and Communication on Local and Regional Level (RimaComm)	3000,00
1.6.14	Andrea Janes	unibz	Embedded Software QUAlity (ESQUA)	9000,00
22.5.15	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund[50]	Joint seminar series 'Empirical Software Engineering' (JESE)	7000,00
22.5.15	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund	visiting Local companiEs to chAnge the stuDents' pERception of the local IT landscape (LEADERIT)	9000,00
22.5.16	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund	Joint seminar series 'Empirical 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 landscape (LEADERIT2)	7500,00
30.5.16	Andrea Janes	unibz	Value based test case prioritization and random test case generation (VBT)	20000,00
1.7.16	Davide Taibi, Andrea Janes	unibz	Recommendation Techniques for Software Quality Improvement in Small Medium Enterprises (SQuaSME)	20000,00
6.7.17	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund	Predictive modeling in software and security engineering (PROSE)	10800,00
6.7.17	Andrea Janes, Michael Felderer, Fabio Massacci	Euregio Mobility Fund	Participation to summer schools (SUMMER)	10800,00
31.8.17	Ricci Francesco, Andrea Janes	Commissioned research	Internet of Things for Climbers (IoTforC)	5000,00

[50] http://www.europaregion.info/it/euregio-mobilitaetsfonds.asp

Date granted	Award Holder(s)	Funding body	Title	Amount received
11.9.18	Andrea Janes	Commissioned research	Provisioning 4.0 (Pro4)	9400,00
1.1.19	Andrea Janes	European Regional Development Fund[51]	Sensors and data for sports activity analysis (SALSA)	458316,25
1.4.19	Anton Dignös, Andrea Janes	Commissioned research	Survey on Databases in South Tyrol (SDST)	10800,00
15.1.19	Andrea Janes	unibz	User interaction based obsolete feature identification and maintenance vs. removal cost estimation (REACT)	3381,79
16.1.19	Panagiotis Symeonidis, Andrea Janes	Commissioned research	Recommender for TV Shows (RecTV)	10000,00
24.1.19	Angelika Peer, Andrea Janes	Commissioned research	NOIx - Service robot demonstrator for the NOI Techpark (NOIx)	39600,00
1.10.19	Romain Robbes, Andrea Janes	unibz	ADaptive software VERBosity (ADVERB)	100000,00
1.7.20	Andrea Janes, Matteo Camilli	unibz	Mining user-intensive applications to support value-based engineering decisions (VAMPIRE)	6450,00
1.1.21	Matteo Camilli, Andrea Janes	unibz	Automated Performance and Scalability Analysis of Microservices Systems (AMPERE)	25000,00
1.2.22	Andrea Janes	Commissioned research	Development of a chatbot interface for robots (TEMI)	15000,00
21.1.22	Barbara Russo, Andrea Janes	Commissioned research	Capture-Store-and-replay with GUI testing to define usage profiles and automate testing in a staging environment (Oberalp2021)	10000,00

Total funding received: €801505,42

Publications (in chronological order, starred if significant publication)

Order of authors: as it is practice in some research fields (e.g., mathematics[52]), 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.

[51] https://ec.europa.eu/regional_policy/en/funding/erdf/
[52] http://www.ams.org/profession/leaders/CultureStatement04.pdf

Citation style: APA (American Psychology Association), 7th edition[53].

- **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**

✶ 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, Nov 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 (OOPSLA), Seattle, MA, USA.
2. 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.
3. 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.
4. Alberto Sillitti, Andrea Janes, Giancarlo Succi, & Tullio Vernazza (2003, September 1–6). *Collecting, Integrating and Analyzing Software Metrics and Personal Software Process Data* [Conference paper]. 29th Euromicro Conference (EUROMICRO), Belek-Antalya, Turkey. https://doi.org/10.1109/EURMIC.2003.1231611
5. Andrea Janes, Barbara Russo, Paolo Zuliani, & Giancarlo Succi (2003, May 25–29). *An Empirical Analysis on the Discontinuous Use of Pair Programming* [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_26
6. Michela Dall'Agnol, Andrea Janes, Giancarlo Succi, & Enrico Zaninotto (2003, May 25–29). *Lean Management – A Metaphor for Extreme Programming?* [Conference paper]. 4th International Conference on Extreme Programming and Agile

[53] See e.g., https://guides.library.uq.edu.au/referencing/apa7

Processes in Software Engineering (XP), Genova, Italy. https://doi.org/10.1007/3-540-44870-5_4
7. 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
8. Andrea Janes (2004, April 1–3). *Providing decision-making support using non-invasive business process metrics collection* [Workshop paper]. Alpine Software Engineering Workshop (ASEW), Heiligenblut, Austria.
9. Alberto Sillitti, Andrea Janes, Giancarlo Succi, & Tullio Vernazza (2004, April 5–7). *Monitoring the Development Process with Eclipse* [Conference paper]. 2004 International Conference on Information Technology: Coding and Computing (ITCC), Las Vegas, NV, USA. https://doi.org/10.1109/ITCC.2004.1286609
10. Alberto Sillitti, Andrea Janes, Giancarlo Succi, & Tullio Vernazza (2004, June 21–24). *Measuring the Architecture Design Process* [Conference paper]. 2004 International Conference on Software Engineering Research and Practice (SERP), Las Vegas, NV, USA.
11. Andrea Janes, Barbara Russo, & Giancarlo Succi (2004, September 28–30). *Using non-invasive measurement techniques in agile software development: a SWOT analysis* [Conference paper]. XLII Congresso Annuale AICA (AICA), Benevento, Italy.
12. Raimund Moser, Andrea Janes, Barbara Russo, Alberto Sillitti, & Giancarlo Succi (2005, October 5–7). *Prom: Taking an echography of your software process* [Conference paper]. XLIII Congresso Annuale AICA (AICA), Udine, Italy.
13. Andrea Janes, Marco Scotto, Alberto Sillitti, & Giancarlo Succi (2006, April 24–27). *A Perspective on Non Invasive Software Management* [Conference paper]. 2006 IEEE Instrumentation and Measurement Technology Conference (IMTC), Sorrento, Italy. https://doi.org/10.1109/IMTC.2006.328379
14. Andrea Janes & Giancarlo Succi (2008, July 1–3). *Non-invasive software process data collection for expert identification* [Conference paper]. 2008 International Conference on Software Engineering and Knowledge (SEKE), Redwood City, CA, USA.
15. Emanuele Danovaro, Andrea Janes, & Giancarlo Succi (2008, October 19–23). *Jidoka in Software Development* [Conference paper]. 23rd Annual ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Nashville, TN, USA. https://doi.org/10.1145/1449814.1449874
16. Andrea Janes & Giancarlo Succi (2009, October 25–29). *To pull or not to pull* [Conference paper]. 24rd Annual ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Orlando, Florida, USA. ht

tps://doi.org/10.1145/1639950.1640052
17. Saulius Astromskis & Andrea Janes (2011, Apr 22). *Towards a GQM model for IS development process selection* [Conference paper]. 16-toji tarpuniversitetine magistrantu ir doktorantu konferencija (MAG&DOKIT), Kaunas, Lithuania.
18. Saulius Masteika, Aleksandras V. Ruthkauskas, & Andrea Janes (2012, February 26–28). *Continuous futures data series for back testing and technical analysis* [Conference paper]. 3rd International Conference on Financial Theory and Engineering (CEBMM), Singapore. http://www.ipedr.com/vol29/48-CEBMM2012-R00003.pdf
19. Rosella Gennari, Gabriella Dodero, & Andrea Janes (2012, Apr 20). *Junior University Workshops for Children* [Workshop paper]. 3rd International Workshop Teaching Robotics, Teaching with Robotics Integrating Robotics in School Curriculum (TRTR), Riva del Garda, Italy.
20. Saulius Astromskis, Andrea Janes, & Alireza Rezaei Mahdiraji (2012, June 2–9). *Egidio: A Non-Invasive Approach for Synthesizing Organizational Models* [Tool demonstration]. 34th International Conference on Software Engineering (ICSE), Zürich, Switzerland. https://doi.org/10.1109/ICSE.2012.6227062
21. Luis Corral, Andrea Janes, Tadas Remencius, Juri Strumpflohner, & Jelena Vlasenko (2012, September 10–13). *A Novel Application of Open Source Technologies to Measure Agile Software Development Process* [Conference paper]. 8th IFIP WG 2.13 International Conference on Open Source Systems (OSS), Hammamet, Tunisia. https://doi.org/10.1007/978-3-642-33442-9_28
22. Danila Piatov, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2012, September 10–13). *Using the Eclipse C/C++ Development Tooling as a Robust, Fully Functional, Actively Maintained, Open Source C++ Parser* [Conference paper]. 8th IFIP WG 2.13 International Conference on Open Source Systems (OSS), Hammamet, Tunisia. https://doi.org/10.1007/978-3-642-33442-9_45
23. Daniel Hanspeter, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2012, August 9–11). *Semi-automatic requirement tracing in modified code: An Eclipse Plugin* [Tool demonstration]. 18th International Conference on Distributed Multimedia Systems (DMS), Miami Beach, FL, USA.
24. Daniel Hanspeter, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2012, August 9–11). *Improving the identification of traceability links between source code and requirements* [Conference paper]. 18th International Conference on Distributed Multimedia Systems (DMS), Miami Beach, FL, USA.
25. Luis Corral, Andrea Janes, & Tadas Remencius (2012, August 27–29). *Potential advantages and disadvantages of multiplatform development frameworks – A vision on mobile environments* [Workshop paper]. International Workshop on

Service Discovery and Composition in Ubiquitous and Pervasive Environments (SUPE), Niagara Falls, Ontario, Canada.
26. Andrea Janes & Giancarlo Succi (2012, October 19–26). *The Dark Side of Agile Software Development* [Conference paper]. ACM international symposium on New ideas, new paradigms, and reflections on programming and software (SPLASH), Tucson, AZ, USA. https://doi.org/10.1145/2384592.2384612
27. Ilenia Fronza, Andrea Janes, Alberto Sillitti, Giancarlo Succi, & Stefano Trebeschi (2013, May 25). *Cooperation wordle using pre-attentive processing techniques* [Workshop paper]. International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE), San Francisco, CA, USA. https://doi.org/10.1109/CHASE.2013.6614732
28. Saulius Astromskis, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2013, June 27–29). *Andon for dentists* [Conference paper]. 25th International Conference on Software Engineering and Knowledge Engineering (SEKE), Boston, MA, USA.
29. Andrea Janes, Danila Piatov, Alberto Sillitti, & Giancarlo Succi (2013, June 25–28). *How to calculate software metrics for multiple languages using Open Source parsers* [Conference paper]. 9th IFIP WG 2.13 International Conference on Open Source Software (OSS), Koper-Capodistria, Slovenia. https://doi.org/10.1007/978-3-642-38928-3_20
30. Andrea Janes, Sarunas Marciuska, Alessandro Sarcià, & Giancarlo Succi (2013, June 27–29). *Domain Analysis in Combination with Extreme Programming to Address Requirements Volatility Problems* [Conference paper]. International Conference on Software Engineering and Knowledge Engineering (SEKE), Boston, MA, USA.
31. Saulius Astromskis, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2013, August 8–10). *Supporting CMMI assessment using distributed, non-invasive measurement and process mining* [Conference paper]. 19th International Conference on Distributed Multimedia Systems (DMS), Brighton, UK.
32. Andrea Janes & Giancarlo Succi (2013, September 19–20). *The Dark Side of Agile Software Development, First results* [Conference paper]. Anwenderkonferenz für Softwarequalität, Test und Innovation (ASQT), Graz, Austria.
33. Marko Gasparic, Andrea Janes, Marjan Hericko, & Giancarlo Succi (2013, October 7–11). *Metrics based recommendation system for software engineering* [Conference paper]. Information Society multiconference on Collaboration, Software and Services in Information Society (CSS), Ljubljana, Slovenia.
34. Ilenia Fronza, Nabil El Ioini, Andrea Janes, Alberto Sillitti, Giancarlo Succi, & Luis Ricardo Corral Velazquez (2014, May 7–9). *Se dovessi dare un voto a questo laboratorio, darei nove – Introduzione del Computational Thinking nella scuola secondaria di primo grado: risultati dell'esperienza* [Conference paper]. 28th edition of DIDAttica inforMATICA, Nuovi processi e

paradigmi per la didattica (DIDAMATICA), Napoli, Italy.
35. Andrea Janes, Tadas Remencius, Alberto Sillitti, & Giancarlo Succi (2014, May 6–9). *Towards Understanding of Structural Attributes of Web APIs Using Metrics Based on API Call Responses* [Conference paper]. 10th IFIP WG 2.13 International Conference on Open Source Software (OSS), San José, Costa Rica. https://doi.org/10.1007/978-3-642-55128-4
36. Saulius Astromskis, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2014, August 27–29). *An Approach to Non-Invasive Cost Accounting* [Conference paper]. 40th Euromicro Conference on Software Engineering and Advanced Applications (EUROMICRO), Verona, Italy. https://doi.org/10.1109/SEAA.2014.53
37. Marko Gasparic, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2015, January 4–6). *An analysis of a project reuse approach in an industrial setting* [Conference paper]. 14th International Conference on Software Reuse (ICSR), Miami, FL, USA. https://doi.org/10.1007/978-3-319-14130-5_12
38. Luis Corral, Anton B. Georgiev, Andrea Janes, & Stefan Kofler (2015, May 18). *Energy-Aware Performance Evaluation of Android Custom Kernels* [Workshop paper]. 4th IEEE/ACM International Workshop on Green and Sustainable Software (GREENS), Florence, Italy. https://doi.org/10.1109/GREENS.2015.8
39. Andrea Janes (2015, April 16–17). *A Guide to Lean Software Development in Action* [Conference paper]. Anwenderkonferenz für Softwarequalität, Test und Innovation (ASQT), Graz, Austria. https://doi.org/10.1109/ICSTW.2015.7107412
40. Saulius Astromskis, Andrea Janes, & Michel Mairegger (2015, August 24–26). *A Process Mining Approach to Measure How Users Interact with Software: An Industrial Case Study* [Conference paper]. 11th International Conference on Software and Systems Process (ICSSP), Talinn, Estonia. https://doi.org/10.1145/2785592.2785612
41. Andrea Janes (2015, August 24–26). *Squirrel: an architecture for the systematic collection of software development data in microenterprises to support Lean Software Development* [Poster]. 11th International Conference on Software and Systems Process (ICSSP), Talinn, Estonia. https://doi.org/10.1145/2785592.2794404
42. Davide Taibi, Andrea Janes, & Valentina Lenarduzzi (2016, May 24–27). *Towards a Lean Approach to Reduce Code Smells Injection: An Empirical Study* [Conference paper]. 17th International Conference in Software Engineering, and Extreme Programming (XP), Edinburgh, UK. https://doi.org/10.1007/978-3-319-33515-5_30
43. Marko Gasparic, Andrea Janes, & Francesco Ricci (2016, May 24–27). *Development Tools Usage Inside Out* [Conference paper]. 17th International Conference in Software Engineering, and Extreme Programming (XP), Edinburgh, UK. https://doi.org/10.1007/978-3-319-33515-5_28

44. Luis Corral, Ilenia Fronza, Nabil El Ioini, Andrea Janes, & Peter Plant (2016, May 16–17). *Preserving energy resources using an Android kernel extension: a case study* [Conference paper]. International Conference on Mobile Software Engineering and Systems (MOBILESoft), Austin, TX, USA. https://doi.org/10.1145/2897073.2897124
45. Luis Corral, Ilenia Fronza, Nabil El Ioini, Andrea Janes, & Peter Plant (2016, August 22–24). *An Android Kernel Extension to Save Energy Resources Without Impacting User Experience* [Conference paper]. 13th International Conference on Mobile Web and Intelligent Information Systems (MobiWIS), Vienna, Austria. https://doi.org/10.1007/978-3-319-44215-0_1
✴ 46. Marko Gasparic, Andrea Janes, Francesco Ricci, & Marco Zanellati (2017, March 13–16). *GUI Design for IDE Command Recommendations* [Conference paper]. 22nd International Conference on Intelligent User Interfaces (IUI), Limassol, Cyprus. https://doi.org/10.1145/3025171.3025200
47. Andrea Janes (2017, March 13–17). *Test Case Generation and Prioritization: A Process-Mining Approach* [Workshop paper]. IEEE International Conference on Software Testing, Verification and Validation Workshops (ICSTW), Tokyo. https://doi.org/10.1109/ICSTW.2017.11
48. Andrea Janes, Valentina Lenarduzzi, & Alexandru Cristian Stan (2017, April 22–26). *A Continuous Software Quality Monitoring Approach for Small and Medium Enterprises* [Conference paper]. 8th ACM/SPEC on International Conference on Performance Engineering (ICPE), L'Aquila, Italy. https://doi.org/10.1145/3053600.3053618
49. Katsiaryna Labunets, Andrea Janes, Michael Felderer, & Fabio Massacci (2017, May 20–28). *Teaching predictive modeling to junior software engineers - seminar format and its evaluation: poster* [Poster]. 39th International Conference on Software Engineering (ICSE), Buenos Aires, Argentina. https://doi.org/10.1109/ICSE-C.2017.62
50. Davide Taibi, Valentina Lenarduzzi, Claus Pahl, & Andrea Janes (2017, May 22–26). *Microservices in agile software development: a workshop-based study into issues, advantages, and disadvantages* [Workshop paper]. 18th International Conference in Software Engineering and Extreme Programming Scientific Workshops (XP), Cologne, Germany. https://doi.org/10.1145/3120459.3120483
51. Davide Taibi, Valentina Lenarduzzi, Andrea Janes, Kari Liukkunen, & Muhammad Ovais Ahmad (2017, May 22–26). *Comparing Requirements Decomposition Within the Scrum, Scrum with Kanban, XP, and Banana Development Processes* [Conference paper]. 18th International Conference in Software Engineering and Extreme Programming (XP), Cologne, Germany. https://doi.org/10.1007/978-3-319-57633-6_5
52. Daniele Gadler, Michael Mairegger, Andrea Janes, & Barbara

Russo (2017, November 9–10). *Mining Logs to Model the Use of a System* [Conference paper]. ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM), Toronto, ON, Canada. https://doi.org/10.1109/ESEM.2017.47

53. Andrea Janes, Fabrizio Maria Maggi, Andrea Marrella, & Marco Montali (2017, November 29-–December 1). *From Zero to Hero: A Process Mining Tutorial* [Tutorial]. 18th International Conference on Product-Focused Software Process Improvement (PROFES), Innsbruck, Austria. https://doi.org/10.1007/978-3-319-69926-4_55
54. Andrea Janes, Michael Mairegger, & Barbara Russo (2018, September 3–7). *code_call_lens: raising the developer awareness of critical code* [Tool demonstration]. 33rd ACM/IEEE International Conference on Automated Software Engineering (ASE), Montpellier, France. https://doi.org/10.1145/3238147.3240488
55. ✴ Alberto Avritzer, Vincenzo Ferme, Andrea Janes, Barbara Russo, Henning Schulz, & André van Hoorn (2018, September 24—28). *A Quantitative Approach for the Assessment of Microservice Architecture Deployment Alternatives by Automated Performance Testing* [Conference paper]. 12th European Conference on Software Architecture (ECSA), Madrid, Spain. https://doi.org/10.1007/978-3-030-00761-4_11
56. Alberto Avritzer, Daniel S. Menasché, Vilc Queupe Rufino, Barbara Russo, Andrea Janes, Vincenzo Ferme, André van Hoorn, & Henning Schulz (2019, April 7–11). *PPTAM: Production and Performance Testing Based Application Monitoring* [Tool demonstration]. ACM/SPEC International Conference on Performance Engineering (ICPE), Mumbai, India. https://doi.org/10.1145/3302541.3311961
57. Romain Robbes, Mircea Lungu, & Andrea Janes (2019, May 27). *API fluency* [Conference paper]. 41st International Conference on Software Engineering: New Ideas and Emerging Results (ICSE-NIER), Montreal, QC, Canada. https://doi.org/10.1109/ICSE-NIER.2019.00033
58. Romain Robbes & Andrea Janes (2019, May 27). *Leveraging small software engineering data sets with pre-trained neural networks* [Conference paper]. 41st International Conference on Software Engineering: New Ideas and Emerging Results (ICSE-NIER), Montreal, QC, Canada. https://doi.org/10.1109/ICSE-NIER.2019.00016
59. Andrea Janes & Barbara Russo (2019, October 27–30). *Automatic Performance Monitoring and Regression Testing During the Transition from Monolith to Microservices* [Workshop paper]. IEEE International Symposium on Software Reliability Engineering Workshops (ISSREW), Berlin, Germany. https://doi.org/10.1109/ISSREW.2019.00067
60. ✴ Rafael-Michael Karampatsis, Hlib Babii, Romain Robbes, Charles Sutton, & Andrea Janes (2020, June 27–July 19). *Big code != big*

vocabulary: open-vocabulary models for source code [Conference paper]. 42nd International Conference on Software Engineering (ICSE), Seoul, South Korea. https://doi.org/10.1145/3377811.3380342

61. Rafael-Michael Karampatsis, Hlib Babii, Romain Robbes, Charles Sutton, & Andrea Janes (2020, June 27–July 19). *Open-vocabulary models for source code* [Conference paper]. 42st International Conference on Software Engineering: New Ideas and Emerging Results (ICSE-NIER), Seoul, South Korea. https://doi.org/10.1145/3377812.3390806
62. Andrea Janes & Valentina Lenarduzzi (2020, August 26–28). *Towards an Approach to Identify Obsolete Features based on Importance and Technical Debt* [Conference paper]. 46th Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Portoroz, Slovenia. https://doi.org/10.1109/SEAA51224.2020.00070
✶ 63. Panagiotis Symeonidis, Andrea Janes, Dmitry Chaltsev, Philip Giuliani, Daniel Morandini, Andreas Unterhuber, Ludovik Coba, & Markus Zanker (2020, September 22–26). *Recommending the Video to Watch Next: An Offline and Online Evaluation at YOUTV.de* [Conference paper]. 14th ACM Conference on Recommender Systems (RECSYS), Virtual. https://doi.org/10.1145/3383313.3412257
64. Iustina Ivanova, Marina Andrić, Andrea Janes, Francesco Ricci, & Floriano Zini (2020, October 25–29). *Climbing Activity Recognition and Measurement with Sensor Data Analysis* [Conference paper]. International Conference on Multimodal Interaction (ICMI), Virtual. https://doi.org/10.1145/3395035.3425303
65. Iustina Ivanova, Marina Andrić, Sadaf Moaveninejad, Andrea Janes, Francesco Ricci (2020, October 16). *Video and Sensor-Based Rope Pulling Detection in Sport Climbing* [Workshop paper]. 3rd International Workshop on Multimedia Content Analysis in Sports (MMSports), Seattle, WA, USA. https://doi.org/10.1145/3422844.3423058
66. Alberto Avritzer, Matteo Camilli, Andrea Janes, Barbara Russo, Catia Trubiani, André van Hoorn, Jasmin Jahić & Ricardo Britto (2021, March 22–26). *PPTAM$^{\lambda}$: What, Where, and How of Cross-domain Scalability Assessment* [Conference paper]. 18th International Conference on Software Architecture (ICSA), Stuttgart, Germany. https://doi.org/10.1109/ICSA-C52384.2021.00016
✶ 67. Alberto Avritzer, Ricardo Britto, Catia Trubiani, Barbara Russo, Andrea Janes, Matteo Camilli, André van Hoorn, Robert Heinrich, Martina Rapp & Jörg Henß (2021, April 19–23). *A Multivariate Characterization and Detection of Software Performance Antipatterns* [Conference paper]. ACM/SPEC International Conference on Performance Engineering (ICPE), Virtual. https://doi.org/10.1145/3427921.3450246

✴ 68. Hlib Babii, Julian Aron Prenner, Laurin Stricker, Anjan Karmakar, Andrea Janes, & Romain Robbes (2021, May 25–28). *Mining Software Repositories with a Collaborative Heuristic Repository* [Conference paper]. 43rd International Conference on Software Engineering: New Ideas and Emerging Results (ICSE-NIER), Madrid, Spain. https://doi.org/10.1109/ICSE-NIER52604.2021.00030

69. Giuseppe Di Fatta, Andrea Janes, Paola Lecca, Fabrizio Maria Maggi, Marco Montali, & Floriano Zini (2022, February 10). *AI for Medicine and Health @ Bozen-Bolzano* [Workshop paper]. Convegno Nazionale CINI sull'Intelligenza Artificiale: Workshop AI per la Medicina e la Salute (Ital-IA), Torino, Italy.

70. Matteo Camilli, Antonio Guerriero, Andrea Janes, Barbara Russo, Stefano Russo (2022, May 21–22). *Microservices Integrated Performance and Reliability Testing* [Conference paper]. IEEE/ACM International Conference on Automation of Software Test (AST), Pittsburgh, PA, USA. https://doi.org/10.1145/3524481.3527233

71. Roberto Confalonieri, Andrea Janes (2022, August 22–24). *A Technology Transfer Portal to Promote Industry-Academia Collaboration in South-Tyrol* [Workshop paper]. 33rd International Conference on Database and Expert Systems Applications Workshops (DEXA), Vienna, Austria. https://doi.org/10.1007/978-3-031-14343-4_21

72. Tim Kreuzer, Andrea Janes (2022, August 22–24). *Introducing Data Science Techniques into a Company Producing Electrical Appliances* [Workshop paper]. 33rd International Conference on Database and Expert Systems Applications Workshops (DEXA), Vienna, Austria. https://link.springer.com/chapter/10.1007/978-3-031-14343-4_20

73. Dario Amoroso d'Aragona, Fabiano Pecorelli, Simone Romano, Giuseppe Scanniello, Maria Teresa Baldassarre, Andrea Janes, & Valentina Lenarduzzi (2022, October 02-07). *CATTO: Just-in-time Test Case Selection and Execution* [Tool demonstration]. 38th IEEE International Conference on Software Maintenance and Evolution (ICSME), Limassol, Cyprus (In press).

74. James Cusick, Alberto Avritzer, Allen Tse, & Andrea Janes (2022, October 31 – November 3). *Automated Dependability Assessment in DevOps Environments* [Conference paper]. 33rd IEEE International Symposium on Software Reliability Engineering: Industry Track (ISSRE), Charlotte, North Carolina, USA (In press).

75. Stefano Savian, Pietro Morerio, Alessio Delbue, Andrea Janes, Tammam Tillo (2023, January 3–7). *Towards Equivariant Optical Flow Estimation with Deep Learning* [Conference paper]. IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), Waikoloa, Hawaii, USA (In press).

– **Journal Papers in refereed academic journals**

1. Alberto Sillitti, Andrea Janes, Giancarlo Succi, & Tullio Vernazza (2004). Measures for Mobile Users: an Architecture. *Journal of System Architecture: the EUROMICRO Journal, 50*(7), 365–444. https://doi.org/10.1016/j.sysarc.2003.09.005
2. Andrea Janes, Marco Scotto, Witold Pedrycz, Barbara Russo, Milorad Stefanovic, & Giancarlo Succi (2006). Identification of defect-prone classes in telecommunication software systems using design metrics. *Information Sciences, 176*(24), 3711–3734. https://doi.org/10.1016/j.ins.2005.12.002
3. Luis Corral, Andrea Janes, & Tadas Remencius (2012). Potential advantages and disadvantages of multiplatform development frameworks – a vision on mobile environments. *Procedia Computer Science, 10*, 1202–1207. https://doi.org/10.1016/j.procs.2012.06.173
4. Andrea Janes, Tadas Remencius, Alberto Sillitti, & Giancarlo Succi (2013). Managing changes in requirements: an empirical investigation. *Journal of Software: Evolution and Process, 25*(12), 1273–1283. https://doi.org/10.1002/smr.1602
5. Saulius Astromskis, Andrea Janes, Alberto Sillitti, & Giancarlo Succi (2014). Continuous CMMI Assessment using Non-invasive Measurement and Process Mining. *International Journal of Software Engineering and Knowledge Engineering, 24*(9), 1255–1272. https://doi.org/10.1142/S0218194014400117
6. Marko Gasparic & Andrea Janes (2016). What recommendation system recommend: A systematic literature review. *Journal of Systems and Software, 113*, 101–113. https://doi.org/10.1016/j.jss.2015.11.036
7. Saulius Astromskis, Gabriele Bavota, Andrea Janes, Barbara Russo, & Massimiliano Di Penta (2017). Patterns of developers behaviour: A 1000-hour industrial study. *Journal of Systems and Software, 132*, 85–97. https://doi.org/10.1016/j.jss.2017.06.072
8. Marko Gasparic, Andrea Janes, Francesco Ricci, Gail C. Murphy, & Tural Gurbanov (2017). A graphical user interface for presenting integrated development environment command recommendations: Design, evaluation, & implementation. *Information & Software Technology, 92*, 236–255. https://doi.org/10.1016/j.infsof.2017.08.006
9. Davide Taibi, Andrea Janes, & Valentina Lenarduzzi (2017). How developers perceive smells in source code: A replicated study. *Information & Software Technology, 92*, 223–235. https://doi.org/10.1016/j.infsof.2017.08.008
10. Alberto Avritzer, Vincenzo Ferme, Andrea Janes, Barbara Russo, André van Hoorn, Henning Schulz, Daniel S. Menasché, & Vilc Queupe Rufino (2020). Scalability Assessment of Microservice Architecture Deployment Configurations: A Domain-based Approach Leveraging Operational Profiles and Load Tests. *Journal of Systems and Software, 165*, 110564. https://doi.org/10.1016/j.jss.2020.110564
11. 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

12. 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
13. Stefano Savian, Mehdi Elahi, Andrea Janes, & Tammam Tillo (2022). Benchmarking Equivariance for Deep Learning Based Optical Flow Estimators. *Signal Processing: Image Communication*, 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

Publications about the applicant

As of 2022, on **Google Scholar**[54], 1715 and on **Scopus**[55] 960 papers are citing my work.

Looking at the local and online landscape, I can group publications (intended as web sites, blogs, and podcasts about my work) into the following topics:

– **About my research, talks, and visits**

1. JAXenter.de (16.11.12): *Zwischen Cowboy-Codern und Agile-Gurus:*

[54] https://scholar.google.com/citations?user=8lYoEEQAAAAJ
[55] https://www.scopus.com/authid/detail.uri?authorId=7003421075

Willkommen zum 'Dark Manifesto for Agile Software Development'[56]

2. svenpet.com (21.11.12): *Beyond Scrum – Is Agile dead?*[57]
3. zukunftsarchitekten-podcast.de (27.8.13): *ZA061 – Scrummerfall – Wenn SCRUM scheitert*[58]
4. Research Institute for Symbolic Computation at the Johannes Kepler Universität Linz (28.8.15): *Landeskorrespondenz Nr. 165 vom 28. August 2015*[59]
5. academia.bz.it (11.1.16): *Bugbuster. Ovvero il liquidatore di bachi informatici*[60]
6. Südtiroler Wirtschaftszeitung (20.5.16): *Weg von der Bananensoftware*[61]
7. noi.bz.it (16.11.18): *The REUSE initiative*[62]
8. noi.bz.it (16.11.18): *Elixir, the hipster programming language*[63]
9. holdreich.net (15.12.18): *Join the dark side, we have a Dark Agile Manifesto*[64]
10. noi.bz.it (15.11.19): *Raising the Developer Awareness of Critical Code*[65]
11. noi.bz.it (15.11.19): *Pepper, a robot to welcome guests at the NOI Techpark*[66]
12. noi.bz.it (15.11.19): *Personas-Driven Approach to Test Case Generation*[67]
13. noi.bz.it (16.11.19): *API Fluency: remembering APIs to become more effective*[68]
14. noi.bz.it (13.11.20): *One year with Pepper*[69]
15. noi.bz.it (12.11.20): *IoT in climbing: Non-invasive activity tracking* [70]
16. INNOS (3.12.20): *Datenmanagement mit Microservices*[71]
17. noi.bz.it (12.11.21): *Climbing route clustering using energy efficient sensors*[72]
18. noi.bz.it (12.11.21): *Tracking climbers using stereo cameras*[73]
19. noi.bz.it (13.11.21): *Continuous Performance Testing using locust.io*

[56] https://jaxenter.de/zwischen-cowboy-codern-und-agile-gurus-willkommen-zum-quotdark-manifesto-for-agile-software-developmentquot-4176
[57] https://svenpet.com/2012/11/21/beyond-scrum-is-agile-dead/
[58] https://zukunftsarchitekten-podcast.de/2013/08/za061-scrummerfall-wenn-scrum-scheitert/
[59] https://risc.jku.at/wp-content/uploads/2018/05/kompatscher.pdf
[60] https://issuu.com/unibz/docs/a72_1/2
[61] https://swz.it/weg-von-der-bananen-software/
[62] https://www.sfscon.it/talks/the-reuse-initiative/
[63] https://www.sfscon.it/talks/elixir-the-hipster-programming-language/
[64] http://www.holdreich.net/join-the-dark-side-we-have-a-dark-agile-manifesto
[65] https://www.sfscon.it/talks/raising-the-developer-awareness-of-critical-code/
[66] https://www.sfscon.it/talks/pepper-a-robot-to-welcome-guests-at-the-noi-techpark/
[67] https://www.sfscon.it/talks/personas-driven-approach-to-test-case-generation/
[68] https://www.sfscon.it/talks/api-fluency/
[69] https://www.sfscon.it/talks/one-year-with-pepper/
[70] https://www.sfscon.it/talks/iot-in-climbing/
[71] https://www.innos.at/webinar-datenbanken-und-deren-effiziente-verwendung/
[72] https://www.sfscon.it/talks/climbing-route-clustering-using-energy-efficient-sensors/
[73] https://www.sfscon.it/talks/tracking-climbers-using-stereo-cameras/

(and a call for data)[74]

20. noi.bz.it (11.11.22): *Scalability assessment applied to microservice architectures*[75]
21. noi.bz.it (12.11.22): *Industry-academia collaborations: experiences and pitfalls*[76]
22. infoq.com (30.7.21): *Cliff Berg and Raj Nagappan on Agile 2: the Next Iteration of Agile*[77]
23. eventil.com (6.8.19): *XTC: Dark Agile*[78]
24. talkbystudents.turkuamk.fi (29.8.22): *Problems in Quality and Productivity of Agile Software Development in Theory and Practice: How to Overcome Them*[79]
25. inforte.fi (7.7.22): *Promote your research in Industry and Academia*[80]
26. content.intland.com (25.1.22): *Dark Agile Manifesto: Criticism of Agile Development*[81]

– **About my involvement in projects at the NOI Technology park**

1. unibz.it (19.6.19): *Hands-on demo of the robot Pepper*[82]
2. Südtirol Panorama (7.7.21): *reCOVeryaID – Digitales Gesundheitstool*(Website not avaiable)
3. noi.bz.it (29.10.20): *Hallo, ich bin Pepper: Der freundliche Roboter im NOI Techpark*[83]
4. unibz.it (5.11.20): *Monitorare la salute dei pazienti Covid-19 a casa? Si può con reCOVeryaID*[84]
5. noi.bz.it (5.11.20): *Covid-19: neue App zur Entlastung von Ärzten und Krankenhäusern*[85]
6. Il Fatto Nisseno (5.11.20): *Covid, reCOVeryaID: l'app per monitorare i pazienti a casa*[86]
7. BitMAT (5.11.20): *Monitorare la salute dei pazienti Covid-19? Non serve l'ospedale se c'è reCOVeryaID*[87]
8. insalutenews.it (5.11.20): *Come monitorare la salute dei pazienti Covid. Ecco la app che controlla da remoto il decorso dell'infezione*[88]

[74] https://www.sfscon.it/talks/continuous-performance-testing-using-locust-io-and-a-call-for-data/
[75] https://www.sfscon.it/talks/scalability-assessment-applied-to-microservice-architectures/
[76] https://www.sfscon.it/talks/industry-academia-collaborations-experiences-and-pitfalls/
[77] https://www.infoq.com/podcasts/agile-next-iteration/
[78] https://eventil.com/events/xtc-topic-tbd-be87becb-8d24-49a0-8928-06992b9fed0d
[79] https://talkbystudents.turkuamk.fi/master-school/problems-in-quality-and-productivity-of-agile-software-development-in-theory-and-practice-how-to-overcome-them/
[80] http://inforte.jyu.fi/events/promote-your-research-in-industry-and-academia
[81] https://content.intland.com/blog/agile/dark-agile-manifesto-anti-agile-manifesto-criticism-of-agile
[82] https://www.unibz.it/it/events/132239-hands-on-demo-of-the-robot-pepper
[83] https://noi.bz.it/de/magazine-innovazione/pepper-humanoider-roboter-künstliche-intelligenz
[84] https://www.unibz.it/de/news/136722-gesundheitsueberwachung-von-covid-19-patienten-mit-der-applikation-recoveryaid
[85] https://noi.bz.it/de/artikel/covid-19-neue-app-zur-entlastung-von-aerzten-und-krankenhaeusern
[86] https://www.ilfattonisseno.it/2020/11/covid-recoveryaid-lapp-per-monitorare-i-pazienti-a-casa/
[87] https://www.sanita-digitale.com/2020/11/05/monitorare-la-salute-dei-pazienti-covid-19-non-serve-lospedale-se-ce-recoveryaid/
[88] https://www.insalutenews.it/in-salute/come-monitorare-la-salute-dei-pazienti-covid-ecco-la-app-che-controlla-da-remoto-il-decorso-dellinfezione/

9. Vanity Fair (6.11.20): *Telemedicina, ecco la piattaforma per aiutare i medici di base ai tempi del Covid*[89]
10. unibz.it (9.11.20): *COVID-19: Applikation reCOVeryaID könnte Krankenhäuser entlasten*[90]
11. Impresa Sanità (10.11.20): *Assistenza Medica da remoto con reCOVeryaID*[91]

– **About my involvement organizing events in competitive coding or programming for children and teenagers**

1. blikk.it (6.5.12): *Roboter 1A und 1B*[92]
2. unibz.it (15.5.13): *JuniorUni – willkommen in der Welt der Forschung*[93]
3. Dolomiten (16.5.13): *JuniorUni: Tür auf für kleine Forscher*[94]
4. unibz.it (27.9.13): *Tag zwei des Innovation Festivals*[95]
5. unibz.it (27.3.15): *Was macht die Kuh den ganzen Tag?*[96]
6. unibz.it (25.3.16): *Mit der JuniorUni am Bauernhof*[97]
7. unibz.it (14.2.17): *Coding to win the Google Contest*[98]
8. unibz.it (26.2.18): *Google Hash Code 2018: our students code to win*[99]
9. unibz.it (13.4.18): *JuniorUni am NOI Techpark: wie funktionieren Roboter?*[100]
10. stol.it (26.2.19): *Südtirols IT-Profis tüfteln für Google*[101]

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, *personally* presented)**

1. 2019, May 27: [Conference paper, selected]. 41st International Conference on Software Engineering: New Ideas and Emerging Results (ICSE-NIER), Montreal, QC, Canada. https://doi.org/10.1109/ICSE-NIER.2019.00033
2. 2019, October 27–30: [Workshop paper, selected]. IEEE International Symposium on Software Reliability Engineering

[89] https://www.vanityfair.it/benessere/salute-e-prevenzione/2020/11/06/covid-telemedicina-piattaforma-aiuto-medici-di-base
[90] https://www.unibz.it/de/news/136731-covid-19-applikation-recoveryaid-koennte-krankenhaeuser-entlasten
[91] https://www.impresasanita.it/it/articles/20201108/assistenza_medica_da_remoto_con_recoveryaid
[92] https://www.blikk.it/forum/blog.php?bn=rp_msmartin&lab=1328906890&id=1336308986
[93] https://www.unibz.it/de/news/76408-junioruni-willkommen-in-der-welt-der-forschung
[94] https://www.sciencesouthtyrol.net/blob/76427,,,UNIBZ,1,-1.pdf
[95] https://www.unibz.it/de/news/78284-tag-zwei-des-innovation-festivals
[96] https://www.unibz.it/de/news/88871-was-macht-die-kuh-den-ganzen-tag
[97] https://www.unibz.it/de/news/116896-mit-der-junioruni-am-bauernhof
[98] https://www.unibz.it/de/news/121756-coding-to-win-the-google-contest
[99] https://www.unibz.it/de/news/127641-google-hash-code-2018-our-students-code-to-win
[100] https://www.unibz.it/de/news/128124-junioruni-am-noi-techpark-wie-funktionieren-roboter
[101] https://www.stol.it/Artikel/Wirtschaft/Lokal/Suedtirols-IT-Profis-tuefteln-fuer-Google

Workshops (ISSREW), Berlin, Germany. https://doi.org/10.1109/ISSREW.2019.00067
3. 2021, March 22–26: [Conference paper, selected]. 18th International Conference on Software Architecture (ICSA), Stuttgart, Germany. https://doi.org/10.1109/ICSA-C52384.2021.00016
4. 2021, April 19–23: [Conference paper, selected]. ACM/SPEC International Conference on Performance Engineering (ICPE), Virtual. https://doi.org/10.1145/3427921.3450246
5. 2022, August 22–24: [Workshop paper, selected]. 33rd International Conference on Database and Expert Systems Applications Workshops (DEXA), Vienna, Austria. https://doi.org/10.1007/978-3-031-14343-4_21
6. 2022, October 31 – November 3: [Conference paper, selected]. 33rd IEEE International Symposium on Software Reliability Engineering: Industry Track (ISSRE), Charlotte, North Carolina, USA (In press).

– **Presentations at scientific conferences over the past 3 years (presentations without publication)**

1. 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
2. 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.
3. 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.
4. Alberto Avritzer, Barbara Russo, Catia Trubiani, Matteo Camilli, André van Hoorn and 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.
5. 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

– **Participation to research projects**

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

From/to	Funding body	Title
1.6.02–31.10.03	European Union (FP5)	Network for Agile Methodologies Experience (NAME)
1.11.02–31.5.07	Italian Ministry for University and Research (FIRB)	Metodologie Agili per la Produzione del Software (MAPS)
1.11.03–31.10.07	European Union (Interreg)	Software District (SWD)
1.1.04–30.6.06	European Union (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	European Union (FP7)	NESSI Open Framework – Reference Architecture (NEXOF-RA)
1.12.08–30.6.10	unibz	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 Province of Bozen-Bolzano, Italy	Automazione della QUAlità della produzione Software (AQUAS)
1.9.12–30.4.15	European Union (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 Mobility Fund	Summer of IT Entrepreneurship (SITE)
1.9.13–31.3.15	Euregio Mobility Fund	Teaching Computational thinking in high schools (TACITUS)
1.9.13–31.8.15	unibz	Optimization of the execution of self-adaptive, self-healing, and self-recovery software applications for energy saving
1.6.14–31.5.15	unibz	FUnctional and Non- functional properties of Virtual Machines (FUN-VM)
1.9.15–28.2.17	unibz	Mining Users' Reviews to Support the Release Planning of Mobile Apps (RPMA)
1.10.18–30.9.21	unibz	Software Architecture Recommendation system built on DEsign Change History (SARDECH)

From/to	Funding body	Title
1.2.20–28.2.22	Finnish National Grant	Software Rejuvenation (SORE)

– **Invited talks**

From/to	Venue	Title
3.3.06	IT Security Day, Bolzano, Italy	Best Practices der sicheren Programmierung mit .NET.
19.6.09	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.
16–21.6.13	EURAC Junior Science Camp, Radein, Italy	Tutorial on the construction and programming of a Lego Mindstorm Robot together with 20 high school students.
8.4.13	TFO Meran Franz Kafka, Meran, Italy	Software Projektmanagement Highlights.
1.4.14	OBJEKTspektrum Information Days, Stuttgart, Germany	Dark Agile Manifesto: Auf die Ergebnisse kommt es an.
2.4.14	OBJEKTspektrum Information Days, Darmstadt, Germany	Dark Agile Manifesto: Auf die Ergebnisse kommt es an.
3.4.14	OBJEKTspektrum Information Days, Köln, Germany	Dark Agile Manifesto: Auf die Ergebnisse kommt es an.
17.2.15	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).
18.9.18	Tampere University of Technology, Tampere, Finland	Non-distracting, Continuous Collection of Software Development Process Data.
9.11.18	TFO Meran 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.
16–17.11.18	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	The REUSE Initiative.
16–17.11.18	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Elixir, the hipster language.

From/to	Venue	Title
10.12.18	Ski Safety Innovation Summit[102], Val Gardena, Italy	Data, algorithms and models for estimating the risk of injury in ski resorts.
6.7.19	ASTAT, Bolzano, Italy	Table and Graph Design (together with Ilenia Fronza).
15–16.11.19	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	API fluency.
15–16.11.19	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Raising the Developer Awareness of Critical Code (together with Michael Mairegger).
15–16.11.19	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Pepper, a robot to welcome guests at the NOI technology park (together with François Tronche-Macaire).
15–16.11.19	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Personas-Driven Approach to Test Case Generation (together with Riccardo Felluga).
12.12.19	Software Developers' Thursday at the NOI Technology Park, Bolzano, Italy	Licensing with REUSE (together with Peter Moser).
14.11.20	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	One year with Pepper (together with Johannes Brunner).
26.10.20	TFO Meran Franz Kafka, Meran, Italy	Zukunftschancen mit Wirtschaftsinformatik (future opportunities with business informatics).
1.4.21	Software Developers' Thursday at the NOI Technology Park, Bolzano, Italy	locust – the Open Source Load Testing Tool.
12.11.21	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Continuous Performance Testing using locust.io.
23.11.21	NOI Techpark, Italy	Tecnologie ICT per il monitoraggio ed il coordinamento dei movimenti umani (together with David Massimo).
16.6.22	Tampere University of Technology, Tampere, Finland	Scalability Assessment applied to Microservice Architectures.
5–8.9.22	INFORTE.fi Summer School, Tampere, Finland	Technology transfer and applied research in companies: pearls and pitfalls.
18.10.22	TFO Meran Franz Kafka, Meran, Italy	Zukunftsperspektiven für Wirtschaftsinformatiker.
11.11.22	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Scalability assessment applied to microservice architectures.
12.11.22	South Tyrolean Free Software Conference (SFSCon), Bolzano, Italy	Industry-academia collaborations: experiences and pitfalls.

[102] https://www.whataventure.com/event/ski-safety-innovation-summit/2018

– **Software I developed**

Type	Description
Measurement tools	Various measurement tools to automatically identify the interactions of developers and users when interacting with Microsoft Windows, Microsoft Visual Studio/Code, MacOS, Eclipse, and Microsoft Office.
Infrastructure tools	All necessary software to use software metrics to drive decisions within software development teams, including tools for deployment, data collection, analysis, and visualization of the collected data.
Data visualization	An innovative dashboard, based on pre-attentive processing and 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.
Performance testing	A set of tools to conduct, manage, and visualize performance experiments of software using load testing.
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.
Web site of the Smart Data Factory	It might not be the most beautiful one, but the creation of https://smart.inf.unibz.it required the collection of the skills offered by the Faculty of Computer Science of the Free University of Bozen-Bolzano, the elicitation of collaboration opportunities, and the definition of a collaboration process with companies. Moreover, to make it easier for local companies to understand our offering, it is available in Italian, German, and English.

– **Participation to training events**

From/to	Description
8.9.2021	Tutorial at ElixirConf EU: Francesco Cesarini, Erlang Solutions: Architecting Reactive Systems
27.9.2021	Academic training of the Free University of Bozen-Bolzano: Laura Levaggi, Heidrun Demo, Nadia Vicari: Inclusive Teaching @ unibz: Introduction and case studies
28.9.2021	Academic training of the Free University of Bozen-Bolzano: Paolo Mazzucato: Media proficiency in video and radio: a toolbox
29.9.2021	Josep M. Guerrero, Eszter Lukács, Paul Canning: IEEE Authorship and Open Access Symposium for Europe and the Middle East: Best Practices to Get Published to Increase the Exposure and Impact of Your Research

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

[103].

Statement of interest

I begin with the first sentence of the ISERN manifesto[104]: "As a community, we have begun to recognize that software cannot be produced with a standard technology, but needs to be developed with technologies tailored to the goals and characteristics of particular projects. Consequently, software engineering research needs to be performed in an experimental context that allows us to observe and experiment with the technologies in use, understand their weaknesses and strengths, tailor the technologies for the goals and characteristics of particular projects, and package them together with empirically gained experience to enhance their reuse potential in future projects."

It is because I am convinced that software solutions have to be tailored to the goals and characteristics of the particular project, that throughout my studies, my interests were not only in computer science—in the sense of constructing a solution—but also in the business side: the trade-off between solving a problem and the costs of solving it. I always wanted to see the final use or the benefit of a software solution in its target context. This combination, in German speaking countries called "Wirtschaftsinformatik", is a discipline between technical and social sciences. This interest influenced the choice of my master studies, the choice of my doctorate, and also my work in empirical software engineering afterwards.

As a consequence, I am strongly interested in the application of software engineering research that helps organizations to achieve their goals efficiently. I see that particularly small and medium software organizations neglect to measure and reflect how their users interact with their products or how developers construct and maintain products. I believe that measuring and helping to measure usage and construction processes can help organizations to gain substantial benefits.

My work has many synergies with other management disciplines. Measuring "how users use" a given software and combining this with the data "how developers developed" the software contributes to many fields: business administration can find out the cost-benefit ratio of developing a feature; usability engineers can understand how features are used, how features are reached, how users' tasks can be supported; product managers can learn which features are used often/rarely, when they are used, and in which sequence/combination they are used.

My research involves the identification of cost-efficient software production techniques, quality assurance methodologies, as well as the application of foundational aspects of software engineering methods such as testing and fault localization.

The motivation for this is that many software or software-driven

[103] https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2013124521
[104] https://isern.iese.de/isern-manifesto/

companies do not yet feel sufficiently involved into software engineering research conducted at the university level. I know the complaints of many software companies and have a personal interest in the success of the local industry. It is a start, but not enough to provide industrial players with knowledge and insights about innovative, relevant research topics.

To complete the envisioned research my background in Computer Science and Economics ("Wirtschaftsinformatik") is extremely useful: I am able to understand not only technical challenges, but also to understand implications on aspects of the market, business process, production, finance, and accounting. Such understanding is needed to gain a complete picture of the problem at hand and to develop a solution that is applicable in practice.

Particularly my work on Lean Software Development (summarized in the book "Lean Software Development in Action"), in which I developed a measurement oriented approach to software engineering which renounces on distracting developers during the measurement process, is particularly suited to SMEs. My approach to Lean Software Development focuses on instilling a "learning organization", based on the application of software analytics, but using a minimum set of resources.

I am eager to document my findings and to discuss them in the research community. I like to acquire new competences and to develop ideas. Furthermore, I am a good communicator, socially competent, and have an ability to put myself into other people thoughts and actions. I am accurate and goal oriented. I enjoy to teach and to involve students in research. In fact, students are often key to interact with companies as they can do part of the research work on site and act as ambassadors of academia within the companies. This is why involving students in my research is crucial.

Websites about me

- Google Scholar: https://scholar.google.com/citations?user=8lYoEEQAAAAJ
- DPLB: https://dblp.org/pid/04/2902
- Scopus: https://www.scopus.com/authid/detail.uri?authorId=7003421075
- ORCID: https://orcid.org/0000-0002-1423-6773
- Publons: https://publons.com/researcher/2438992/andrea-a-janes/
- ResearchGate: https://www.researchgate.net/profile/Andrea-Janes
- LinkedIn: https://www.linkedin.com/in/ajanes/
- Researchr: https://conf.researchr.org/profile/andreajanes

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	– Cars: B – Boats: Nautical license over 12 miles
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 C1 of the Common European Reference Framework. I self-assess my skills in German as C2. – 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) – English I passed the exam Cambridge Certificate of Advanced English (corresponds to level C1), issued 23.8.11, certificate number 0032350672. Moreover, I passed the English Language Exam C1 of the Language Center of the Free University of Bolzano on the 27.02.18.

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, **November 7, 2022**

Andrea Janes