

# University Academic Curriculum Vitae

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<b>Personal information</b>	Ilenia Fronza Address: Via Buozzi 1, 39100 Bolzano, Italy E-mail: <a href="mailto:ilenia.fronza@unibz.it">ilenia.fronza@unibz.it</a>
<b>Education since leaving school</b>	<ul style="list-style-type: none"><li>• 2012, PhD in Computer Science, Free University of Bozen/Bolzano</li><li>• 2007, Second Level Master in Computational and Systems Biology, The Microsoft Research Centre for Computational and Systems Biology – University of Trento</li><li>• 2006, Master of Science in Mathematics (45/S), University of Trento</li><li>• 2004, Bachelor degree in Mathematics (L32), University of Trento</li></ul> <p>National Scientific Habilitation (ASN)</p> <ul style="list-style-type: none"><li>• 09/H1 - II Fascia (AP), validity: 14.04.2021 – 14.04.2032</li><li>• 01/B1 - II Fascia (AP), validity: 06.02.2023 – 06.02.2034</li></ul>
<b>Present position</b>	Associate Professor Employer: Free University of Bozen/Bolzano, Faculty of Engineering Period: since 01.12.2023 SSD: ING-INF/05
<b>Research interest.</b>	Computing Education Research (CER): Research on all aspects of teaching and learning computing at all levels (from early education to professional contexts), focusing on software engineering education/training, pedagogical approaches, tools, and diversity.
<b>Internal appointments to faculty and university boards</b>	<ul style="list-style-type: none"><li>• Member of the Course Council of the Master in Software Engineering (2020 – present, FC Del. 08.10.20, FC Del. 22.03.23)</li><li>• Member of Mountecos, Competence Center for Mountain Innovation Ecosystems (2022 – present)</li><li>• Member of the commission for Research Quality and Third Mission in the SUA-RD (del. N. 93/2021)</li><li>• Coordinator of the Computing Education Research (CER) of the Software Engineering and Autonomous Systems (SEAS) group (2023 – present)</li><li>• Coordinator of the activities in the STAARR network - Scuole del Trentino – Alto Adige in Rete per la Robotica (2022 – present)</li><li>• Unibz representative at the CINI Laboratory “Informatica e Scuola”</li></ul>

**Professional experience**

<b>From/ to</b>	<b>Job title</b>	<b>Name of academic Institution</b>
Nov. 2006/ Dec. 2006	Research assistant	The Microsoft Research Centre for Computational and Systems Biology, Trento, Italy
Nov. 2007/ Dec. 2007	Research assistant	Free University of Bozen/Bolzano
Apr. 2011/ Apr. 2017	Researcher with fixed term contract (ex art. 1 L. 230/2005)	Free University of Bozen/Bolzano
Apr. 2017/ Apr. 2020	Researcher with fixed term contract (ex art. 24 L.240/2010)	Free University of Bozen/Bolzano
Apr. 2020/ Apr. 2023	Researcher with fixed term contract (ex art. 24 L.240/2010)	Free University of Bozen/Bolzano
April 2023/ Nov. 2023	Researcher with fixed term contract (ex art. 24 L.240/2010)	Free University of Bozen/Bolzano

**Experience in academic teaching**

**Teaching in the academic discipline**

<b>Course</b>	<b>Univer sity</b>	<b>Academic Year(s)</b>	<b>SSD</b>	<b>Degree Course</b>
<b>PhD</b>				
PhD course/seminar 2nd year "Foundations of Research" (10 h)	unibz	21/22 20/21		PhD in Computer Science
<b>Master</b>				
Seminar in Software Engineering Advances	unibz	23/24	ING-INF/05	Software Engineering (LM-18)
Research Methods and Technology Transfer	unibz	23/24 22/23 21/22 20/21	INF/01	Software Engineering for Information Systems (LM-18)
Empirical Software Engineering Research	unibz	18/19 17/18	INF/01	European Master in Software Engineering (LM-18)
Seminars in Software and IT Engineering	unibz	18/19	INF/01	Computer Science (LM-18)
<b>Bachelor</b>				
Software Engineering	unibz	14/15 15/16	ING-INF/05	Computer Science and Engineering (L8-L31)
Software Engineering and Software Project	unibz	11/12 12/13 13/14	ING-INF/05	Computer Science and Engineering (L8-L31)
Elementi di Informatica per la Comunicazione	unibz	14/15	INF/01	Communication Sciences (L-20)

<b>Lab</b>				
Functional and Logic Programming Languages	unibz	11/12 12/13	INF/01 ING-INF/05	Computer Science (LM-18)
Machine Learning: Algorithms and Applications	unibz	10/11	INF/01	Computer Science and Engineering (L8-L31)
Software metrics	unibz	09/10 10/11	ING-INF/05	Computer Science and Engineering (L8-L31)

**Didactic initiative with interdisciplinary character related to the academic discipline**

<b>Course</b>	<b>University</b>	<b>Academic Year(s)</b>	<b>SSD</b>	<b>Degree Course</b>
<b>Master</b>				
Research Methods	unibz	19/20	M-FIL/02	European Master in Software Engineering (LM-18)
<b>Bachelor</b>				
Scientific Writing and Communication (IT)	unibz	21/22 20/21 19/20	M-FIL/02	Computer Science (L-31)
Project and Teamwork Management (IT)	unibz	23/24 22/23 21/22 20/21 19/20	M-FIL/02	Computer Science (L-31)
Presentation and Communications and Scientific Writing (IT)	unibz	18/19	M-FIL/02	Computer Science and Engineering (L-8, L-31)
Project Management and Professional Ethics (IT)	unibz	17/18 15/16	M-FIL/02	Computer Science and Engineering (L8-L31)
Project and Teamwork Management	unibz	14/15	M-FIL/02	Computer Science and Engineering (L8-L31)
<b>Lab</b>				
Analysis	unibz	16/17 10/11	MAT/05	Computer Science and Engineering (L8-L31)

**Postgraduate supervision**

- One student (36th cycle, Computer Science)

### **Thesis supervision (Bachelor and Master)**

- 8 theses: 6 Bachelor and 2 Master (Computer Science, PAS42A sez. Italiana); several Free Choice and Compulsory Projects

### **Teaching commissioned by public administration and industry**

- "Programming and its potential for education", training for high school teachers (60 participants), 6 hours, commissioned by the school IISS Galilei, BZ (2023)
- "Technology and education", training for high school teachers (60 participants), 8 hours, commissioned by the school IIS Battisti, BZ (2023)
- "Math and coding", webinar series for middle school teachers, commissioned by Rizzoli Education (October 2022)
- "Coding and educational robotics", training for high school teachers, 16 hours, commissioned by the school IISS G. Galilei (2021)
- "Teaching Computational Thinking using Scratch", training for 20 primary school teachers, 15 hours, commissioned by Provincia Autonoma di Bolzano - Dipartimento Istruzione e Formazione italiana (2016).

### **Other teaching activities**

- Studium Generale (unibz study programme available to the public)
  - Introduction to programming, 18 hours (2021)
- European Social Fund projects:
  - Training on Agile Software Development – Delivered using Agile Approaches (TASTE, 2019/2021), 31 employees, 5 local companies.
  - Innovative CS teaching methods to foster key competences (TANDEM-2020 and TANDEM-2021), 43 teachers.
  - TowArd Computational Thinking in the Schools (TACITuS – 2014/2015), 141 K-12 students
  - Summer of IT Entrepreneurship (SITE – 2014/2016)

### **Significant personal achievements in teaching**

- Collaboration on a frequent basis with the Ministry of Education and Merit
- In 2021, AICA mentioned one of my projects with schools among the best practices for online teaching<sup>1</sup>
- In 2018, MIUR recognized MobileDev<sup>2</sup> (unibz coding camp for high school students) as one of the best "Alternanza Scuola-Lavoro" projects in Italy<sup>3</sup>.

### **Other academic responsibilities**

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

- Member of the Course Council of the Master in Software Engineering (2020 – present, FC Del. 08.10.20, FC Del. 22.03.23)
- Member of Mountecos, Competence Center for Mountain Innovation Ecosystems (2022 – present)
- Member of the commission for Research Quality and Third Mission in the SUA-RD (del. N. 93/2021)
- RTD representative to Faculty Council (2021-2022, 2022-2023)
- Member of the working group for the definition of Digital Education Hub & Teaching Learning Centre at unibz (FC 14.07.2022)
- Member of the PhD Committee (del. N. 64/2012 – 2018)
- Study plan advisor for the BSc course Informatics and Management of Digital Business (FC del. N. 25/2019 – 2020)

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<sup>1</sup> <https://www.aicanet.it/-/scuola-digitale-le-best-practice-della-didattica-a-distanza>

<sup>2</sup> <https://mobiledev.inf.unibz.it>

<sup>3</sup> <http://www.altoadige.it/economia/unibz-accoglie-le-giovani-promesse-dell-informatica-1.1740884>

- Study plan advisor for the Master in Software Engineering for Information Systems (2020-2023)
- Member of the work group to propose guidelines for the writing/evaluating reports/theses (March 2019).
- Coordinator of Faculty activities in local schools (del. N. 03/2015). In November 2018, the Faculty Council expressed its gratitude for my continuous commitment to the schools of South Tyrol, particularly in the context of activities aimed at promoting computational thinking and interest in issues related to CS among the school population.
- Delegate for the collaboration with high schools (Dean's decree N. 30/20.12.2018)
- Coordinator of the Computing Education Research (CER) of the Software Engineering and Autonomous Systems (SEAS) group (2023 – present)
- Coordinator of the Software Engineering Training and Education area of the Software and Systems Engineering (SwSE) group (2017 – 2023)
- Coordinator of the activities in the STAARR network - Scuole del Trentino – Alto Adige in Rete per la Robotica (2022 – present)
- Unibz representative at the CINI Laboratory "Informatica e Scuola"<sup>4</sup>

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

- Member of the "Comitato Tecnico Scientifico per i percorsi quadriennali", Intendenza Scolastica Italiana, Provincia di Bolzano (2021 - present)
- Member of the "Comitato per il PNRR Scuola", IISS G. Galilei, Bolzano (2022 – present)
- Member of the working group "Sfide e opportunità del gaming per la diffusione delle competenze digitali" established by the "Dipartimento per la trasformazione digitale" with Telefono Azzurro Onlus (2022 – present)
- Member of the working group created by the "Intendenza scolastica italiana" (Provincia Autonoma di Bolzano) to write the "Piano Provinciale per la Scuola Digitale" 2023-2026 (2023 – present)
- Member of the group ACM-SIGITE "K-12 Outreach Committee" to create a repository of K-12 outreach activities and programs (2016-2018)

#### **Responsibilities for organizing conferences/seminars/exhibitions**

Steering committee of national/international conferences:

- Convegno ITAliano sulla Didattica dell'INFOmatica (ITADINFO 2023), conference organized by the CINI Lab "Informatica e scuola", Bari, 13-15.10.2023
- Local Organization Chair of the 16th European Conference on Technology Enhanced Learning (EC-TEL 2021), Bolzano/online, 20-24.09.2021
- Agile track - Agile open innovation at SFScon 2019, Bolzano, 15.11.2019
- Systems of Assessments for Computational Thinking Learning workshop (TACKLE 2019) at EC-TEL 2019 (Delft, Netherlands, 17.09.2019)
- MIUR event: Convegno residenziale "Elaborazioni simulazioni prove di Matematica e Fisica e sperimentazione delle griglie di valutazione", Free University of Bolzano, 4-7.02.2019.
- Systems of Assessments for Computational Thinking Learning workshop (TACKLE 2018) at EC-TEL 2018 (Leeds, United Kingdom, 03.09. 2018)
- Alpine Software Engineering Workshop (ASEW'12), Corvara, 2012.
- Alpine Software Engineering Workshop (ASEW'11), Corvara, 2011.
- 4th International Symposium on Empirical Software Engineering and Measurement (ESEM'10, 16-17.09.2010, Bolzano).

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<sup>4</sup> <https://www.consorzio-cini.it/index.php/it/lab-informatica-e-scuola/organizzazione-e-nodi>

Steering committee of doctoral schools

- Software Engineering Summer School, Free University of Bozen-Bolzano 2011, 2017, 2018, 2019, 2021.

Steering committee of exhibitions

- Unibz representative in the steering committee of the "[Le mille e una scienza](#)" (2022, 2023), science festival in Bolzano, promoted by "Department for Youth Policies" of the Autonomous Province of Bolzano

Organization of seminars

- "Eccellenze in Alternanza" for academic staff, teachers, and directors. Speakers: dr. Brancaccio and dr. Galdino (MIUR), 10.09.18, Bolzano.
- "The effectiveness of peer-tutoring", high school students, teachers, school directors. Speaker: dr. Brancaccio (MIUR), 13.09.21, Bolzano

## Memberships

### Guest Editor

- Journal of Systems and Software, special issue on "Software Engineering Education in the era of Hybrid Work". 2023. Guest editors: Ilenia Fronza (Free University of Bolzano, Italy), Ita Richardson (LERO, Ireland), Outi Sievi-Korte (Tampere University, Finland), Xiaofeng Wang (unibz).
- Cutter IT Journal, special issue on Making managerial dashboards meaningful, January 2013

### Referee for several international journals and conferences

- Among the most relevant ones: Journal of Systems and Software (Elsevier), Information Retrieval Journal (Springer), Transactions on Emerging Topics in Computing (IEEE), Journal of Logical and Algebraic Methods in Programming (Elsevier), Computer Science Education (Taylor and Francis), Scandinavian Journal of Educational Research, Computers and Educations (Elsevier), Frontiers in Computer Science, SIGCSE Technical Symposium, SIGITE conference, ACM Global Computing Education Conference (CompEd), conference on Innovation and Technology in Computer Science Education (ITiCSE), International Conference on Agile Software Development (XP), International Conference on Product-Focused Software Process Improvement (PROFES)

**Program Committee** of several international conferences/workshops. Among the most relevant ones (last five years):

- Convegno ITAliano sulla Didattica dell'INFOrmatica (ITADINFO 2023)
- 1st Cyber Security Education for Academia and Company (CSE4AC) workshop, co-located with IS-EUD 2023
- 27th annual conference on Innovation and Technology in Computer Science Education (ITiCSE 2023)
- 23rd International Conference on Agile Software Development (XP2023)
- 4th International Workshop on Education through Advanced Software Engineering and Artificial Intelligence (EASEAI 2022)
- International Conference on Product-Focused Software Process Improvement (PROFES 2022)
- 23rd ACM Annual Conference on Information Technology Education (SIGITE 2022)
- 27th annual conference on Innovation and Technology in Computer Science Education (ITiCSE 2022)
- 23rd International Conference on Agile Software Development (XP2022)
- 26th annual conference on Innovation and Technology in Computer Science Education (ITiCSE 2021)

- 22nd International Conference on Agile Software Development (XP2021)
- 52nd ACM Technical Symposium on Computer Science Education (SIGCSE TS 2021)
- 3rd International Workshop on Education through Advanced Software Engineering and Artificial Intelligence (EASEAI 2021)
- International Conference on Product-Focused Software Process Improvement (PROFES 2021)
- 22nd ACM Annual Conference on Information Technology Education (SIGITE 2021)
- 2nd International Workshop on Education through Advanced Software Engineering and Artificial Intelligence (EASEAI 2020)
- 1st International Workshop on Education through Advanced Software Engineering and Artificial Intelligence (EASEAI 2019)
- 6th International Symposium From Data to Models and Back (DataMod 2017)

#### **Programme chair**

- Industry-Paper Track Chair, International Conference on Product-Focused Software Process Improvement (PROFES), Jyväskylä, Finland, 21-23.11.2022
- Systems of Assessments for Computational Thinking Learning workshop (TACKLE 2019) at EC-TEL 2019
- Systems of Assessments for Computational Thinking Learning workshop (TACKLE 2018) at EC-TEL 2018

#### **Research and scholarships**

#### **Principal Investigator / Research manager**

<b>From - To</b>	<b>Title</b>	<b>Funding Body</b>	<b>Funding (€)</b>	<b>Notes</b>
Oct. 2023 – Oct. 2027	Promoting crOss-cutting digital Skills through Europe-wide non-Conventional leArning experiences (OSCAR)	European Commission Erasmus+ Forward Looking Projects	Total: 1.493.185 unibz: 381.990	
Oct. 2023 – Oct. 2025	Learning Informatics (LIN)	PRIN 2022	44813.00	unibz unit PI
Jun. 2022 – Jun. 2023	SWAP	Associazione Nazionale Comuni Italiani (ANCI)	65000.00	Co-I
2023	Near Misses 2022 For the project proposal: “Leaning informatics”, Call: PRIN	Free University of Bozen-Bolzano.	40000.00	

From - To	Title	Funding Body	Funding (€)	Notes
Sep. 2022 – Sep. 2025	Ecosistemi Territoriali per l’Innovazione (I-NEST)  Spoke 1: Ecosystems for Mountain Innovations	NRRP, Mission 4, Component 2 Investment 1.4, funded from the European Union – Next Generation EU	Spoke1: 8.36M  unibz: 3.99M	Coordinator of the research topic RT1A: Mountain Social Life
Jan. 2022 – Mar. 2023	Metodi per l’insegnamento dell’informatica nella scuola (INFO-DIDA)	Ministero dell’Università e della Ricerca PANN20_00690	100000.00 (CINI)	unibz unit PI
Nov. 2018 – Jul. 2022	5G for Connected and Automated Car Mobility in the European Union (5G-CARMEN)	H2020-ICT-2018-2020	127500.00	unibz unit Co-I
Sep. 2020 – Aug. 2022	MeasUring End-user-produced Software quality (MUESLI)	Free University of Bozen-Bolzano, RTD call 2020	3200,00	
Oct. 2019 – Sep. 2021	Defining practices and priorities of end-users in the robotics domain (EINSTEIN)	Free University of Bozen-Bolzano, RTD call 2019	4000,00	
Sep. 2018 – Apr. 2021	Exploring agile ways of teaching Agile (AGILE)	Free University of Bozen-Bolzano, RTD call 2018	10000.00	
Feb. 2021 – Jun. 2021	Innovative CS teaching methods to foster key competences (TANDEM-2021)	European Social Fund	6559.00	
Dec. 2019 – Mar. 2021	Innovative CS teaching methods to foster key competences (TANDEM)	European Social Fund	8624.00	
Feb. 2020 – Aug. 2021	Training on Agile Software Development - Delivered using Agile Approaches (TASTE)	European Social Fund	48860.00	

From - To	Title	Funding Body	Funding (€)	Notes
Oct. 2017 – Mar. 2020	Combining Computational thiNking didAcTics and Software engineering in K-12 (COCONATS)	Free University of Bozen-Bolzano, ID call 2017 (CS and Education)	162000.00	
Sep. 2017 – Feb. 2019	Towards effective visualization of learning for agile software development teams (STARGATE)	Free University of Bozen-Bolzano, RTD call 2017	9990.00	
Nov. 2017 – Jun. 2017	Teaching computational thinking and Software Engineering principles in K-12	Liceo Pascoli (Bolzano). Del. 98/2017, 09.11.2017	1850.00	
Jun. 2016 – Dec. 2016	Computational Thinking Assisted Language Learning (ctALL)	Free University of Bozen-Bolzano, RTD call 2016	7800.00	
Jan. 2016 – Dec. 2016	Green software for drone energy consumption optimization (green4 drones)	Free University of Bozen-Bolzano	8595.80	
Nov. 2013 – Mar. 2015	TowArd Computational Thinking in the Schools (TACITuS)	European Social Fund	90890.30	PI from Nov. 2014
Jan. 2014 – May 2015	Summer of IT Entrepreneurship (SITE)	European Social Fund	152950.00	PI from Nov. 2014

#### Team member

From - To	Title	Funding Body	Funding (€)	PI
Sep. 2022 – Sep. 2025	Ecosistemi Territoriali per l'Innovazione (I-NEST)  Spoke 1: Ecosystems for Mountain Innovations	NRRP, Mission 4, Component 2 Investment 1.4, funded from the European Union – Next Generation EU	Spoke1: 8.36M  unibz: 3.99M	Coordinator of the research topic RT1A: Mountain Social Life

From - To	Title	Funding Body	Funding (€)	PI
Sep. 2022 – Feb. 2025	Startup Digi-Dojo: A Digital Space Supporting All-Remote Startups towards a Sustainable Way of Working	Free University of Bozen-Bolzano	96600	X. Wang
Oct. 2012 – Oct. 2015	Joint MSc in Software Engineering (JMSE)	EACEA (European Commission)	20000.00	B. Russo
Aug. 2012 – Aug. 2014	AQUAS	Autonomous Province of Bolzano	16000	A. Sillitti
Mar. 2014 – Mar. 2016	Integrated Design and Evolution of Adaptive Systems (IDEAS)	MIUR - PRIN	72000	G. Succi
Jul. 2013 – Jul. 2014	QUAlity of Mobile apps (QUAM)	Free University of Bozen-Bolzano		A. Sillitti
Jun. 2015 – Jun. 2016	Database and Information System Technologies for Advanced Novel Tasks (DISTANT)	Free University of Bozen-Bolzano	33500	S. Helmer
Jun. 2014 – Jun. 2016	Embedded Software QUAlity (ESQUA)	Free University of Bozen-Bolzano	33500	A.A. Janes
Jun. 2014 – Jun. 2016	FUnctional and Non-functional properties of Virtual Machines (FUN-VM)	Free University of Bozen-Bolzano	4400	B. Russo
Sep. 2013 – Aug. 2015	Optimization of the execution of self-adaptive, self-healing, and self-recovery software applications for energy saving	Free University of Bozen-Bolzano	25638	B. Russo
Dec. 2008 – Jun. 2010	IT needs of SMES (ITSME)	Free University of Bozen-Bolzano	22500	A. Sillitti

From - To	Title	Funding Body	Funding (€)	PI
Oct. 2009 – Mar. 2011	Software Process Improvement for SMEs (SPISME)	Free University of Bozen-Bolzano	19000	A. Sillitti
Oct. 2012 – Oct. 2015	Double degree Masters in Software Engineering (DDMSE)	MOY Mediterranean Office of Youth	45100	B. Russo

#### Research collaborations with industry and public administrations

From - To	Title	Funding Body	Funding (€)	Notes
Oct. 2023 – Oct. 2027	Promoting crOss-cutting digital Skills through Europe-wide non-Conventional leArning experiences (OSCAR)	European Commission Erasmus+ Forward Looking Projects	Total: 1.493.185 unibz: 305.592	PI: Ilenia Fronza PA: Ministry of Education and Merit (Italy); Intendenza scolastica italiana BZ (Italy); Diputacion Provincial de Castellon (Spain)
Sep. 2022 – Sep. 2025	Ecosistemi Territoriali per l'Innovazione (I-NEST)  Spoke 1: Ecosystems for Mountain Innovations	NRRP, Mission 4, Component 2 Investment 1.4,  EU – Next Generation EU	Spoke1: 8.36M unibz: 3.99M	Coordinator of the research topic RT1A: Mountain Social Life
Jul. 2023 - present	CS teaching material for middle schools (INFMAT23)	Rizzoli editore	280.00	Industry partner: Rizzoli Editore
Oct. 2022 – Nov. 2022	Learning coding through mathematics in middle school (INFMAT). Definition of a first set of activities to accompany the mathematics textbook	Rizzoli editore	400.00	Industry partner: Rizzoli Editore

From - To	Title	Funding Body	Funding (€)	Notes
Jun. 2022 – Jun. 2023	SWAP	Associazione Nazionale Comuni Italiani (ANCI)	65000	Public Administration: Comune di Bolzano PI: S. Baroncelli  Co-I: Ilenia Fronza
Nov. 2018 – present	5G for Connected and Automated Car Mobility in the European Union (5G-CARMEN)	H2020-ICT-2018-2020	Unibz: 127500	22 industry partners, e.g., Deutsche Telecom, BMW, A22, TIM, Nokia Coord.: FBK, TN  unibz unit Co-I: Ilenia Fronza
Nov. 2017 – Jun. 2017	Teaching computational thinking and Software Engineering principles in K-12	Liceo Pascoli (Bolzano). Del. 98/2017, 09.11.2017	1850	Public Administration: High School Pascoli
2012-2013	Development of the patent: System and method for determining context	Nokia Finland	/	Industry partner: Nokia Finland Pub. N: US 20150154285, 04/06/15/EP2817735, 31/12/14

Note: the table only shows projects **funded by** PA/industry or having PA/industry partners. Many other projects (in the table "Research grants and third-party funding") involved public administration (e.g., schools for teacher training) and companies in the project activities.

### Significant achievements

- Top downloaded article in IET Software (in 2021) during its first 12 months of publication <https://doi.org/10.1049/sfw2.12019>
- Recipient of the unibz "Near misses 2022" bonus for research project proposals that were submitted within highly competitive calls and evaluated very positively but not funded due to budget restrictions of the funding agency. Project proposal: Leaning informatics, Call: PRIN.
- Patent with Nokia (Finland). Title: System and method for determining context. Inventors and Assignees: J. Saarinen, L. Karkkainen, M. Terho, I. Fronza, A. Janes, A. Sillitti, G. Succi. Publication number: US20150154285, 04/06/2015 / EP2817735, 31/12/2014. Application number: 14/378,015 <https://www.google.com/patents/US20150154285>
- Triennial (2018-2020) award for the academic activity at the Free University of Bozen-Bolzano. Awarding criteria include research, teaching, and third mission.
- Triennial (2015-2018) award for the academic activity at the Free University of Bozen-Bolzano. Awarding criteria include research, teaching, and third mission.

- Short-listed for “Best Paper award”: Adil, M., Fronza, I., Sievi-Korte, O., and Pahl, C. (2023) Architecture Design Decisions in Distributed Teams: an Assessment of Tool Support. In: 25th International Conference on Enterprise Information Systems (ICEIS)
- Short-listed for “Best Paper award”: Fronza, I., Corral, L., Iaccarino, G., Bartoli, L., and Pahl, C. (2022) Work-From-Anywhere Skills: Aligning Supply and Demand Starting from High Schools. In: 14th International Conference on Computer Supported Education - Volume 2. DOI: 10.5220/0010984300003182
- Short-listed for “Best Paper award”: Fronza, I., Corral, L., Iaccarino, G., Bartoli, L., and Pahl, C. (2022) Work-From-Anywhere Skills: Aligning Supply and Demand Starting from High Schools. In: 14th International Conference on Computer Supported Education - Volume 2. DOI: 10.5220/0010984300003182
- Best paper award: Fronza, I., Hellas, A., Ihantola, P., Mikkonen, T. (2019). An Exploration of Cognitive Shifting in Writing Code In: 2019 ACM Global Computing Education Conference, CompEd 2019. vol. 1, p. 65-71, New York:ACM, doi: 10.1145/3300115.3309522
- Best paper award: Fronza, I., Ioini, N.E., Corral, L., Moroder, M., Moroder, M. 2017. Monitoring multicopters energy consumption. In Proc. of the 6th Annual Conf. on Research in Information Technology (RIIT 2017), 29-34. DOI: 10.1145/3125649.3125657
- Best paper award: Corral, L., Fronza, I., El Ioini, N., Janes, A., and Plant, P. 2016. An Android Kernel Extension to Save Energy Resources without Impacting User Experience. In Proceedings of the 13th Int. Conf. on Mobile Web and Intelligent Information Systems (MobiWIS’16), LNCS 9847, pp. 3-17, Springer Int. Publ. DOI: [10.1007/978-3-319-44215-0\\_1](https://doi.org/10.1007/978-3-319-44215-0_1)
- Short-listed for “Best Paper award”: Fronza, I. and Gallo, D. 2016. Towards mobile assisted language learning based on Computational Thinking. Int. Conference on Web-based Learning (ICWL’16), ICWL 2016, LNCS 10013, pp. 141-150, 2016, Springer Int. Publ., ISBN 978-3-319-47439-7. DOI: 10.1007/978-3-319-47440-3\_16

### **Publications about the applicant**

- Progetto SWAP: gli studenti aiutano gli anziani ad usare le tecnologie. Alto Adige, 18.02.2023
- Interview at RAI TV Alto Adige (12.11.2022, ch. 808), interview during the TV show dedicated to the festival “Le mille e una scienza”
- Interview at “Zeppelin” radio RAI Alto Adige, topic: third mission initiatives (MobileDev and Alla Scoperta dell’Informatica), 08.09.2022
- 170 studenti\*esse delle superiori imparano a creare app, uninews, 13.09.2022
- Avere successo per me è fare ciò che si ama, Donna del mese at [Frauen Museum](https://www.frauenmuseum.de/de/ausstellungen/ausstellung-2022/ausstellung-2022-1), July 2022
- Tra didattica e ricerca, una sfida che appassiona. Alto Adige, 16.02.2022
- Unibz, lezione di scienze per mille ragazzini. Alto adige, 05.09.2021
- Rendezvous mit dem Traumberuf: Oberschüler\*innen schnuppern Uniluft, [Uninews](https://www.uninews.it/2021/10/27/rendezvous-mit-dem-traumberuf-projecttage-fuer-ober-schueler-stolit-12-11-2021/), 27.10.2021
- Rendezvous mit dem Traumberuf: Projecttage für Oberschüler. Stol.it. 12.11.2021
- Eureka premia i piccolo scienziati. Alto adige, 14.11.2021
- Piccoli geni, il concorso Eureka. Alto adige, 03.10.2021
- Al via MobileDev: 111 ragazzi a lezione per creare app sociali. Alto Adige, 14.09.2021

- Il Galilei assieme a unibz: un'app per monitorare movida e assembramenti. Alto Adige, June 2021
- Eureka, ragazzi e scienza. La classe che ha sviluppato la app cerca defibrillatori. Alto Adige, May 2021
- Scuola digitale, le best practice della didattica a distanza. [AICA](#), Jan. 2021.
- Unibz lancia il corso di ginnastica online per bambini. [AltoAdige innovazione](#), April 2020.
- #ichmachesportzuhause und #ioprogrammoacasa. [UniNews](#), April 2020.
- App "sociali". Gli studenti delle superiori imparano a programmarle a MobileDev. [UniNews](#), September 2020.
- Oberschüler entwickeln gesellschaftsrelevante App. [Stol.it](#), Sep. 2020.
- Progetto Lub e Galilei, sarà presentato negli Usa. [Alto Adige](#), August 2020.
- #COVID19: #ichmachesportzuhause und #ioprogrammoacasa - Sport und Spiel von Dozenten der unibz. [Der Vinschger](#), March 2020:
- Coronavirus: Uni Bozen hilft Kindern zu Hause. [Südtirol News](#), April 2020:
- #ioprogrammoacasa: #ioprogrammoacasa: Online-Programmierangebot für Kinder in Zeiten von Covid -19, [Südtirol News](#), March 2020.
- Unibz lancia #ioprogrammoacasa, il corso online di programmazione per bambini. [AltoAdigeinnovazione](#), March 2020.
- Coronavirus, bambini, ecco i tutorial per la ginnastica a casa dell'Università di Bolzano. [Alto Adige](#), April 2020.
- Computational Thinking day ([CTday](#)) 2018, 13.06.2018:
- Alternanza scuola-lavoro: premiato Arlin Bria, [uninews](#), 08.05.2018:
- Leaving languages out of technological projects is short-sighted, [Academia](#)
- Unibz accoglie le giovani promesse dell'informatica, [Alto Adige](#), 11.09.18
- MobileDev: aperte le iscrizioni alla scuola estiva di informatica, Alto Adige, 29.05.2018
- MobileDev tra i migliori progetti di alternanza, [uninews](#), 11.09.2018,
- Schülervideos ausgezeichnet, Wiku, 13.06.2018
- Concorso per i migliori video, Corriere dell'Alto Adige, 15.06.2018
- Computational Thinking Day a Bolzano, [uninews](#), 13.06.2017
- Alternanza scuola-lavoro con MobileDev2017, [uninews](#), 14.09.2017
- Ilenia Fronza nominata referente nazionale per l'Alternanza Scuola-Lavoro, [uninews](#), 25.09.2017,
- Premio a ricerca sul consumo energetico dei droni, [uninews](#), 09.11.2017
- Academia, "Prepararsi al futuro con il pensiero computazionale", 2016
- Alto Adige, "Programming starts in high schools", May 2015
- Il salto, "You are an open (face)book", June 2014

## Further data

### **Presentations at scientific conferences**

- 15<sup>th</sup> International Conference on Computer Supported Education (CSEDU 2023), Prague, 21-23.04.2023
- 44<sup>th</sup> International Conference on Software Engineering: Software Engineering Education and Training (ICSE-SEET 2022)
- 22<sup>nd</sup> Annual Conference on Information Technology Education (SIGITE 2022), online streaming, 21-23.09.2022.
- 21<sup>st</sup> Annual Conference on Information Technology Education (SIGITE 2021), online streaming, 6-9.10.2021.
- 21<sup>st</sup> Annual Conference on Information Technology Education (SIGITE 2020), online streaming, 7-9.10.2020.
- International Conference on Computer Supported Education (CSEDU 2020), online streaming, 2-4.05.2020.
- International Conference on Computing Education Research (Koli calling 2019), 21-24.11.2019, Koli, Finland.

- 20th Annual Conference on Information Technology Education (SIGITE 2019), 3-5.10.2019, Tacoma, WA.
- ACM Global Computing Education Conference (CompEd 2019), 17-19.05.2019, Chengdu, China.
- 2nd Systems of Assessments for Computational Thinking Learning (TACKLE 2019), 17.09.2019, Delft, Netherlands.
- 19th Annual Conference on Information Technology Education (SIGITE 2018), 3-6.10.2018, Fort Lauderdale, Florida.
- 18th Koli Calling International Conference on Computing Education Research (Koli Calling 2018), 22-25.11.2018, Koli, Finland
- Systems of Assessments for Computational Thinking Learning workshop (TACKLE 2018), 03.09.2018, Leeds, United Kingdom
- 49th ACM Technical Symposium on Computer Science Education (ICSOFT 2018), 26-28.07.2018, Porto, Portugal
- 19th International Conference on Enterprise Information Systems (ICEIS 2017), 26-29.04.2017, Porto, Portugal
- 6th Annual Conference on Research in Information Technology (RIIT 2017), 04-07.10.2018, Rochester, NY.
- 15th International Conference on Web-based Learning (ICWL 2016), 27.10.2016, Roma, Italy.
- 17th Annual Conference on Information Technology Education (SIGITE 2016), 30.10.016, Boston, Massachusetts.
- 18th International Conference on Enterprise Information Systems (ICEIS 2016), 25-28.04.2016, Roma, Italy.
- DIDAMATICA 2016, 19.04.2016, Udine, Italy.
- 16th Annual Conference on Information Technology Education (SIGITE 2015), 30.09-03.10.2015, Chicago, Illinois.
- 13th International Conference on Enterprise Information Systems (ICEIS 2011), 08-11.06.2011, Beijing, China.
- International Conference on Software and Systems Process (ICSSP 2011), joint with the 33rd International Conference on Software Engineering (ICSE'11), 21-22.05.2011, Honolulu, Hawaii, USA
- 12th International Conference on Agile Processes in Software Engineering and Extreme Programming (XP'11), 10-13.05.2011, Madrid, Spain.
- 10th International Conference on Agile Processes in Software Engineering and Extreme Programming (XP'09), 25-29.05.09, Pula, Italy.

### **Invited**

- "End-user software engineering: sharing knowledge and capacity", UAQ Mexico, 28.02.2019.
- 49th ACM Technical Symposium on Computer Science Education (SIGCSE 2018), 21-24.02.2018, Baltimore, Maryland, USA.

### **Visiting research institutions**

- University of Jyväskylä, Finland, 19-26.02.2023
- University of Helsinki, Finland, 05-21.11.2019
- General Electrics, Queretaro, Mexico, 23.02.2019 – 03.03.2019
- University of Helsinki, Finland, 5-28.06.2018
- Huawei Helsinki, Finland, 04-06.06.2013
- Nokia, Tampere, 24.08.2011 – 01.09.2011
- IBM, White Plains, NY, USA, 24.03.2011 – 31.03.2011
- Nokia, Tampere, Finland, 27.02.2011 – 01.03.2011
- University of Alberta, Edmonton, Canada, 21.03.2008 – 21.06.2008

<b>Entrepreneurship</b>	<b>Patent</b>
	<p>Title: System and method for determining context</p> <p>Description: The invention relates to determining a context of a system so that the system can be controlled, or the context information be used in the system. The context of a system is described with tags or words that characterize e.g., the state of the system, the surroundings of the system and the state of the user. These tags are determined at multiple time instances. The tags are collected over a first-time span and a second time span, and the two (or more) sets of tags are used to determine the context of the system. If the determination using the two sets gives a different result, that is, there is a large distance between the two derived contexts, it is determined that a change in context has occurred. Detecting the change in context can be used to control the system, e.g., by changing the applications presented to the user on the user interface, or by changing the state and/or priority of applications.</p> <p>Inventors and Assignees: Jukka Saarinen, Leo Karkkainen, Mikko Terho, Ilenia Fronza, Andrea Janes, Alberto Sillitti, Giancarlo Succi</p> <p>Publication number: US20150154285, 04/06/2015 / EP2817735, 31/12/2014</p> <p>Application number: 14/378,015</p> <p><a href="https://www.google.com/patents/US20150154285">https://www.google.com/patents/US20150154285</a></p> <p><b>The patent extends the method presented in the following journal article, in which I am first author:</b> Fronza I, Sillitti A, Succi G, Terho M, Vlasenko J (2013). Failure Prediction based on Log Files Using Random Indexing and Support Vector Machines. <i>THE JOURNAL OF SYSTEMS AND SOFTWARE</i>, vol. 86, p. 2-11, doi: 10.1016/j.jss.2012.06.025</p>
<b>Language competence</b>	<ul style="list-style-type: none"> <li>Italian: first language</li> <li>German: B2 <ul style="list-style-type: none"> <li>Goethe Zertifikat</li> <li>Zweisprachigkeitsnachweis, Autonomous Province of Bolzano</li> </ul> </li> <li>English: C1 (CAE)</li> </ul>
<b>Third mission (last 4 years)</b>	<ul style="list-style-type: none"> <li>Unibz representative in the steering committee of the "Le mille e una scienza" (2022, 2023), science festival in Bolzano, promoted by "Department for Youth Policies" of the Autonomous Province of Bolzano</li> <li>Booth "How do smart homes "think"?" for the science festival "Le mille e una scienza" 2023, in collaboration with Research area "Building Physics and Building Energy Systems" in the context of the PNRR-iNEST project.</li> <li>"Alla scoperta dell'informatica" (2021-present): creation of a six-episode web series to attract teens to computing, which is being developed together with six other Italian universities (as part of the CINI Laboratory "Informatica e scuola"). The series has been distributed on the main social networks (<a href="#">Facebook</a>, <a href="#">Instagram</a>, <a href="#">YouTube</a>), for which I am constantly creating content. The series has been one of the finalists of "Cartoons of the bay" 2022 (International Festival of Animation, Transmedia and Interactive Art Forms).</li> <li>Four-hours lab at "Rendezvous mit dem Traumberuf", an event involving students coming from local German schools (27.10.2023, 6 participants)</li> <li>Invited speaker at the unibz Alumni Homecoming event on "Women and technology" (May 2023).</li> <li>Invited speaker at the event "International Day of Women and Girls in Science", Direzione provinciale Scuole primarie e secondarie di primo e secondo grado a carattere statale in lingua italiana, BZ (March 2023)</li> </ul>

- Invited speaker at WeDonne (Sovrintendenza Scolastica, Bolzano), an event dedicated to career and gender issues in CS (March 2023)
- Judge at "Premio Rocca" (2023), CS competition for middle/high school students
- MobileDev (2012-2023), a coding camp for high school students, <https://mobiledev.inf.unibz.it>. The number of participants increased exponentially from 5 participants in 2012 to 180 in 2032. The coding camp has been proposed in face-to-face (2012-2019), online (2020, 2021), and hybrid format (2022-2023).
- GameDev (April-May 2023), a coding camp for high school students, topic: developing video games to raise awareness about cybersecurity. Participants: 85. PNRR activity: Investment 1.6 Active guidance in school-university transition
- "Un viaggio ad ostacoli", interactive activity for middle/high school students at the Festival "Le mille e una scienza" (November 2022). The activity has been organized in collaboration with the school IISS Galilei (BZ), with students as near-peer models.
- Supervision of 30 high school students during their PCTO projects in the context of the SWAP project (2023).
- Eight-hours lab at "Rendezvous mit dem Traumberuf", an event involving students coming from local German schools (27-28.10.2022, Bolzano, 15 participants).
- Judge at "Eureka" (2021-2023), STEM competition for kids, Autonomous Province of Bolzano: <https://milleunascienza.com/giurati-eureka-2022/>
- Judge at the First® Lego® League: semifinal, February 2020; semifinal, 17.04.2021; final, May 2021; semifinal, 29-30.01.2022.
- Judge at [World Robot Olympiad](#), 21.05.2022, Verona
- Judge at [RoboCup Junior 2022](#), 20-23.04.2022, Trento
- Unibz Open day (Masters Evening), 2018 - 2023
- Unibz Open day (Summer edition), 2022
- Computational Thinking and Software Engineering courses in high/middle/elementary schools (2011-2022, about 20/30 hours per year). In agreement with teachers, multidisciplinary activities are tailored to the school type and grade. For example:
  - Computational Thinking 2 CP course for High Schools (Bolzano, May 2015, 20 hours, Liceo Pascoli, Bolzano).
  - Computational Thinking course at "IC Bolzano 1 Centro Storico" (2017): 18 hours, 65 students, first-year middle school.
- Supervision of several high school students during their stages and "Alternanza Scuola-Lavoro" at the Faculty of Computer Science, Free University of Bozen-Bolzano (35 students in 2017, 46 students in 2018, 47 in 2019, 79 in 2020, 111 in 2021).
- #unterdemmeer: Eine Einführung in die Welt der Computeranimationen, Programming course for kids aged 8-10 (online, synchronous), Kinderuniversität Innsbruck, 01.09.2021
- Four-hours lab for "Rendezvous mit dem Traumberuf", event for students coming from local German schools (25.10.2021, Bolzano, 15 participants).
- Imparare a programmare: che storia! Programming course (online, synchronous) for kids aged 8-10, JuniorUni, unibz, 2021. Together with "Crea i tuoi video-auguri di Natale" it was the only JuniorUni activity of the semester, 2021. 13 participants
- #ioprogrammoacasa: Programming course (online, synchronous) for kids aged 8-10, proposed to families during the covid19 lockdown in March-

May 2020 online. It was one of the first activities of its kind during the lockdown period, starting as early as mid-March 2020. 110 participants

- Crea i tuoi video-auguri di Natale: Programming course (online, synchronous) for kids aged 8-10, JuniorUni, unibz, 2021. It was the only JuniorUni activity of the semester. 2020. 45 participants
- Lecture "Introduction to humanoid robots" for Liceo Pascoli at unibz, 2020, 10 participants
- Lecture "Introduction to humanoid robots" for ITE Battisti at unibz, 2020, 15 participants
- Organization of the Opening event of the ESF project TANDEM. Guest: prof. Brancaccio, MIUR, 2020, 35 participants
- Lecture "Introduction to robotics" at Liceo Rosmini (TN) (2020, 2021), 15 participants per edition
- PCTO project. School: ITE Battisti. Content: development of a mobile app with social impact. A non-profit organization (i.e., briciole.volontarius.it) was project partner. 2020, 20 participants
- PCTO project. School: ITE Battisti. Content: programming Nao (humanoid robot) to support the exhibition "Pazzi per la luna" at Museo di Scienze Naturali dell'Alto Adige, 2020, 20 participants
- Three labs "Sirene a tutto spiano!" at "[Robo Days](#)", 12.02.2019, Jesolo (VE), 60 participants.
- Eight-hour lab for "Rendezvous mit dem Traumberuf", event for students coming from local German schools<sup>5</sup> (24-25.10.2019, Bolzano, 15 participants).
- SFScor stakeholder meeting, 15.02.2019, NOI Techpark, Bolzano.
- Meeting 6 local companies to collect their needs for Agile training (for FSE project writing), January 2019, Bolzano.
- Eight-hours lab for "Rendezvous mit dem Traumberuf", event for students coming from local German schools<sup>6</sup> (25-26.10.2018, 10 participants).
- Three labs for kids at MiniNOI (drones, tinkering, and robotics), 20.10, 27.10, and 11.11.2018, NOI TechPark, Bolzano, with 150 participants.
- Codeweek & COCONATS: COCONATS open day during the EU Code Week (Bressanone, 17 October 2018, 50 participants).
- Part of the panel of judges of "NAO Challenge Italia - semifinal" (09.04.2018, Bolzano).
- Preparation of a video about "alternanza scuola-lavoro" for the competition "Storie di alternanza", Camera di Commercio BZ (2019).
- Preparation of a video about "alternanza scuola-lavoro" for the competition "Storie di alternanza", Camera di Commercio BZ (2018). The video won the competition<sup>7</sup>. It described the project of Alternanza Scuola-Lavoro completed by a student for the research project COCONATS<sup>8</sup>.
- In 2011-2022, I also participated in many other activities such as JuniorUni; presentation of the Faculty in local high schools (events organized by Advisory Service); organization of events (such as "Getting more from the cloud", Catalysts coding contest<sup>9</sup>); Open Day; organization of the doctoral Summers School in Software Engineering.

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<sup>5</sup> [http://www.provinz.bz.it/schulamt/service/news.asp?aktuelles\\_action=4&aktuelles\\_article\\_id=619817](http://www.provinz.bz.it/schulamt/service/news.asp?aktuelles_action=4&aktuelles_article_id=619817)

<sup>6</sup> [http://www.provinz.bz.it/schulamt/service/news.asp?aktuelles\\_action=4&aktuelles\\_article\\_id=619817](http://www.provinz.bz.it/schulamt/service/news.asp?aktuelles_action=4&aktuelles_article_id=619817)

<sup>7</sup> <https://www.unibz.it/it/news/128291-alternanza-scuola-lavoro-premio-arlin-brija>

<sup>8</sup> <https://coconats.inf.unibz.it>

<sup>9</sup> <https://www.codingcontest.org/en/>

### **Significant achievements in third mission**

- The number of participants at [MobileDev](#), the coding camp I organize yearly for high school students, increased exponentially, from 5 in 2012 to 180 in 2023. The continuous evolution of participation modalities (in presence, online, and hybrid) enabled the event to overcome the pandemic emergency and achieve excellent visibility all over Italy.
- The web series “Alla scoperta dell’informatica” has been one of the finalists of “Cartoons of the Bay” 2022 (International Festival of Animation, Transmedia and Interactive Art Forms).
- #ioprogrammoacasa, the programming course (online, synchronous, 110 participants) for kids I proposed to support families during the covid19 lockdown (in March-May 2020), was one of the first activities of its kind during the lockdown period, starting as early as mid-March 2020. Given the success of the initiative, Kinderuniversität Innsbruck requested a new edition of the course in September 2021 (#unterdemmeer: Eine Einführung in die Welt der Computeranimationen)
- In November 2018, the [Faculty Council expressed its gratitude for my continuous commitment to the schools of South Tyrol](#), particularly in the context of activities aimed at promoting computational thinking and interest in issues related to CS among the school population.
- Third mission initiatives gave me visibility in the region, and the media often contacted me for articles or interviews. In 2022, noteworthy are the interview at RAI TV Alto Adige, the interview at “Zeppelin” radio RAI Alto Adige, the articles in “Alto Adige” newspaper, and the interview as “Woman of the Month” at the [Frauen Museum](#) Merano.
- I have a strong connection with the area in which the university is located, e.g., local schools, associations, and public authorities. For example, I regularly collaborate with the “Ufficio Politiche Giovanili” (Office of Youth Policy) of the Autonomous Province of Bolzano.

### **Publications**

#### **Chapters in books**

- Fronza, I., El Ioini, N., Pahl, C. and Corral, L. (2019) Bringing the Benefits of Agile Techniques Inside the Classroom: A Practical Guide. In *Agile and Lean Concepts for Teaching and Learning*, 133-152, 2019, Springer. DOI: [10.1007/978-981-13-2751-3\\_7](https://doi.org/10.1007/978-981-13-2751-3_7).

#### **Editorship**

- Proceedings of the 2nd Systems of Assessments for Computational Thinking Learning workshop (TACKLE 2019) co-located with 14th European Conference on Technology Enhanced Learning (EC-TEL 2019); Delft, Netherlands, September 17th, 2019. CEUR Workshop Proceedings, Volume 2434, 2019. ISSN: 16130073
- Joint 1st Co-Creation in the Design, Development and Implementation of Technology-Enhanced Learning Workshop and Systems of Assessments for Computational Thinking Learning Workshop, CC-TEL 2018 and TACKLE 2018; Leeds; United Kingdom; 3 September 2018. CEUR Workshop Proceedings, Volume 2190, 2018. ISSN: 16130073

#### **Journal papers in refereed academic journals**

- Fronza, I., and Wang, X. (2021). Social loafing prevention in agile software development teams using team expectations agreements. *IET Software*, 15(3), 214–229. <https://doi.org/10.1049/sfw2.12019>
- Fronza, I., Corral, L., Pahl, C. An Approach to Evaluate the Complexity of Block-Based Software Products (2020) *INFORMATICS IN EDUCATION*, vol. 19, p. 15-32, ISSN: 1648-5831, doi: 10.15388/infedu.2020.02

- Fronza, I., Corral, L., Pahl, C. (2020). End-User Software Development: Effectiveness of a Software Engineering-Centric Instructional Strategy. JOURNAL OF INFORMATION TECHNOLOGY EDUCATION, vol. 19, p. 367-393, ISSN: 1539-3585, doi: <https://doi.org/10.28945/4580>
- Fronza, I., El Ioini, N., and Corral, L. Teaching computational thinking using agile software engineering methods: A framework for middle schools (2017) ACM Transactions on Computing Education, 17 (4). DOI: 10.1145/3055258
- di Bella, E., Fronza, I., Phaphoom, N., Sillitti, A., Succi, G., and Vlasenko, J. (2013) Pair Programming and Software Defects – A Large, Industrial Case Study, Software Engineering, IEEE Transactions on, vol.39, no.7, pp.930-953, July 2013. DOI: [10.1109/TSE.2012.68](https://doi.org/10.1109/TSE.2012.68)
- Fronza, I., Sillitti, A., Succi, G., Terho, M., and Vlasenko, J. (2013) Failure prediction based on log files using Random Indexing and Support Vector Machines. Journal of Systems and Software, Volume 86, Issue 1, January 2013, Pages 2-11. DOI: [10.1016/j.jss.2012.06.025](https://doi.org/10.1016/j.jss.2012.06.025)

#### **Journal papers in professional journals**

- Fronza, I. and Gallo, D. 2016. "Der, die, o das?": il Computational Thinking nella didattica del tedesco L2/L3. (2016) Mondo Digitale\*, vol. 15, no. 64, pp. 1-10. ISSN: 1720-898X.
- Fronza, I. and Zanon, P. 2015. Introduction of computational thinking in a hotel management school. (2015) Mondo Digitale\*, vol. 14, pages 28-34. ISSN: 1720-898X
- Fronza, I., El Ioini, N., Janes, A., Sillitti, A., Succi, G., and Corral Velazquez, L.R. (2014) "If I had to vote on this laboratory, I would give nine": Introduction on Computational Thinking in the lower secondary school: Results of the experience, Mondo Digitale\*, vol. 13, no. 51, pp. 757-765. ISSN: 1720-898X
- Corral, L., Fronza, I., and El Ioini, N. (2015) The Future of Energy-Aware Software: The Case of Drones. Cutter IT Journal, issue "What's Over the Technology Horizon", vol. 28, no. 8, pp. 19-23. ISSN: 1522-7383
- Fronza, I. 2013. Making Managerial Dashboards Meaningful: Opening statement. (2013) Cutter IT Journal, 26 (1), 2013, pp. 3-5. ISSN: 1522-7383. **Included in the five [Top Cutter IT Journal Articles for 2013](#).**

#### **Conference papers**

- Rousi, R., Samani, H., Mäkitalo, N., Vakkuri, V., Linkola, S., Kemell, K.K., Daubaris, P., Fronza, I., Mikkonen, T., and Abrahamsson, P., Business and ethical concerns in domestic Conversational Generative AI-empowered multi-robot systems. 14th International Conference on Software Business (ICSOB 2023). To appear.
- Fronza, I., Iaccarino, G., and Corral, L. Learning by teaching robotics during Science Festivals. In Proceedings of the 24th Annual Conference on Information Technology Education (SIGITE '23). Association for Computing Machinery, New York, NY, USA, 203–204. DOI: 10.1145/3585059.3611433
- Iaccarino, G., Tosi, S., Gallo, D., and Fronza, I. (2023). Una strategia didattica per favorire l'apprendimento di concetti di Robotica Educativa in microlingua L2 e L3 in un contesto plurilingue. *Convegno ITAliano sulla Didattica dell'INFormatica (ITADINFO 2023)*. ISBN: 978-88-6629-075-9
- Adil, M., Fronza, I., Sievi-Korte, O., Mikkonen, T., Corral, L., and Abdul-Rahman, S. (2023) "Let's Discuss it in a Team Meeting!" Collaboration

Challenges of Distributed Software Design. *49th Euromicro Conference on Software Engineering and Advanced Applications (SEAA)*.

- Adil, M., Fronza, I., Sievi-Korte, O., and Pahl, C. (2023) Architecture Design Decisions in Distributed Teams: an Assessment of Tool Support. *25th International Conference on Enterprise Information Systems (ICEIS)* Proc. 2, 65-74, DOI: 10.5220/0011848000003467. **Short-listed for "Best Paper award"**
- Adil, M., Fronza, I., and Pahl, C. (2023) Bringing Distributed Collaborative Design and Team Collaboration to the Table: a Conceptual Framework. *25th International Conference on Enterprise Information Systems (ICEIS)* - Proceedings, 2, pp. 126-133, DOI: 10.5220/0011820500003467
- Fronza, I., Iaccarino, G., Tosi, S., Corral, L., and Pahl, C. (2023) Getting Ready for the New Normal Way of Working: Using Business Simulation Projects to Foster Work-From-Anywhere Skills. *15th International Conference on Computer Supported Education (CSEDU)* - Proceedings, 2, pp. 418-425, DOI: 10.5220/0011986100003470
- Nardelli, E., Lacchia, F., Rossano, V., Gentile, E., Forlizzi, L., Melideo, G., Capecchi, S., Fronza, I., Vardanega, T., Davoli, R., Sbaraglia, M., Lonati, V., Monga, M., and Morpurgo, A. (2023). Learning Iteration for Grades 2-3: Puzzles vs. UMC in Code.org. *SIGCSE 2023*, March 15–18, 2023, Toronto, ON, Canada, DOI: 10.1145/3545947.3576312
- Iaccarino, G., Tosi, S., Fronza, I., and Corral, L. (2022) Laboratorio di #bioinformatica: un PCTO innovativo in periodo pandemico e post pandemico. *DIDAMATICA 2022*
- Corral, L. and Fronza, I. (2022) It's Great to Be Back: An Experience Report Comparing Course Satisfaction Surveys Before, During and After Pandemic. In *The 23rd Annual Conference on Information Technology Education (SIGITE)*, 3554755Chicago, IL, USA, September 21–24, 2022, 10 pages. DOI: 10.1145/3537674.
- Fronza, I., Wang, X. (2022) Revealing Agile Mindset Using LEGO® SERIOUS PLAY®: Experience from an Online Agile Training Project. *34th Int. Conf. on Software Engineering and Knowledge Engineering (SEKE)*, 428-433, Pittsburgh, USA, 1-10.07.2022. DOI: 10.18293/SEKE2022-117.
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Ilenia Fronza