Ivan Compagnucci, Ph.D. Candidate

✉ ivan.compagnucci@unicam.it
in https://www.linkedin.com/in/ivan-compagnucci/
iD https://orcid.org/0000-0002-1991-0579
○ https://github.com/IvanComp
R^G https://www.researchgate.net/profile/Ivan-Compagnucci
ᵍ https://scholar.google.com/citations?user=pp6CqJoAAAAJ&hl=it

Personal Information

Sex	▮	Male
Born at	▮	12/04/1995, Loreto (AN), Italy
Nationality	▮	Italian

Employment History

01/04/2020 – 12/06/2020	▮	**University of Camerino.** Supporting tutor for online lectures.
10/04/2014 – 10/05/2014	▮	**ComputerLand.** [Stage] Repair and assembly of PC hardware components.
14/04/2013 – 20/05/2013	▮	**Giava Servizi S.r.l.** [Stage] Software development and PC configuration in enterprise networks.

Skills

Languages	▮	Italian (Mother tongue), English (C1 - EF SET Certificate).
Coding	▮	Java, php, Python, C, C++, sql, xml/xsl, LaTeX, …
Databases	▮	Mysql, Postgresql, hsql, sqlite, MongoDB.
Web Dev	▮	Html, css, JavaScript, Apache Web Server, Tomcat Web Server.
Misc.	▮	Academic research, teaching

Education

Personal Education

01/11/2020 – Now	▮	**Ph.D. Candidate in Computer Science & Mathematics** University of Camerino, Camerino (MC) Italy Research topic: IoT-Aware Business Process Supporting Digital Twin. Supervisor: Prof. Barbara Re.
01/10/2017 – 28/05/2020	▮	**M.Sc. Computer Science LM-18, University of Camerino** Thesis title: *Modelling and Enactment of Smart Environments combining Business Process and Internet of Things*. Mark: 110/110 cum laude.
01/10/2014 – 25/01/2018	▮	**B.Sc. Computer Science L-31, University of Camerino** Thesis title: *Data Mining in the Management of a Non-Profit Organisation*. Mark: 110/110 cum laude.

Education Activities

2020 - 2023	▮	**Thesis Supervision.** I have supervised three bachelor's degree theses in the Computer Science program at the University of Camerino.

Education (continued)

2021 - 2023   **Tutoring.**
Teaching tutor for the Operating Systems bachelor course at the University of Camerino for 2 years.

2020 - 2023   **Orientation Activities.**
I have actively engaged in orientation activities within educational institutions, representing the University of Camerino.

Research Activity

Research Focus

I'm a Ph.D. candidate in Computer Science and Mathematics in the PROcesses & Services lab research group at the University of Camerino. My research focuses on modeling and monitoring business processes that integrate features, data and concepts concerning the Internet of Things (IoT) world. The goal is to align enterprise or organization business processes with emerging IoT technologies, aiming to achieve a synergy that enables continuous technology innovation.

Research Group

PROS Lab. Member of the Process and Service Lab (`https://pros.unicam.it`) at the University of Camerino, Camerino (MC) (Italy). The PROS Lab group is composed of PhD students, post-doc researchers, and professors with expertise in formal languages, analysis, and verification techniques for service-oriented distributed systems, software engineering, and process-aware information systems.

Research Project

FLUIDWARE - PRIN 2017. Member of the founded national project FLUIDWARE Develop a novel programming model for IoT services and applications. MIUR - PRIN 2017.
Duration: 36 months.

Visiting Research Period

KU Leuven, Brussels - 5 Months. Between March 2023 and July 2023, I worked as a visiting Ph.D. student with the Information Systems Engineering Research Group (LIRIS) at KU Leuven under the supervision of Prof. Estefania Serral Asensio and Prof. Monique Snoeck. I worked on two topics: Digital Twins and Learning Analytics in BPM successfully publishing two research papers.

Conferences

21st International Conference on Business Process Management (BPM 23), Utrecht, The Netherlands, September 11-15, 2023 [speaker]

26th International Conference on Model-Driven Engineering Languages and Systems (MODELS 23), Västerås, Sweden, October 1-6, 2023 [speaker]

20th international Conference on Business Informatics Research, BIR 2021, Vienna, Austria, September 22-24, 2021. [speaker - online]

18th International Conference on Business Process Management (BPM 20), Seville, Spain, September 13-18, 2020 [participant -online]

Research Publications

Journal Articles

1 Compagnucci, I., Corradini, F., Fornari, F., & Re, B. (2023a). A Study on the Usage of the BPMN Notation for Designing Process Collaboration, Choreography, and Conversation Models. *Business & Information Systems Engineering, In Press.*

2 Compagnucci, I., Corradini, F., Fornari, F., Polini, A., Re, B., & Tiezzi, F. (2022). A systematic literature review on IoT-aware business process modeling views, requirements and notations. *Software and Systems Modeling, 14*(1), 1–36.

Conference Proceedings

1 Compagnucci, I., Corradini, F., Fornari, F., & Re, B. (2023b). BPMN inspector: A tool for extracting features from BPMN models. In *Proceedings of the Best Dissertation Award, Doctoral Consortium, and Demonstration & Resources Forum at BPM 2023 co-located with 21st International Conference on Business Process Management (BPM 2023), Utrecht, The Netherlands, September 11th to 15th, 2023* (Vol. 3469, pp. 122–126). CEUR-WS.org. Retrieved from 🔗 https://ceur-ws.org/Vol-3469/paper-22.pdf

2 Compagnucci, I., Snoeck, M., & Asensio, E. S. (2023). Supporting digital twins systems integrating the merode approach. In *Proceedings of the 26th International Conference on Model Driven Engineering Languages and Systems: Companion Proceedings, MODELS 2023, Västerås, Sweden, October 1-6, 2023* (pp. 449–458). 🔗 doi:10.1109/MODELS-C59198.2023.00079

3 Vemuri, P., Poelmans, S., Compagnucci, I., & Snoeck, M. (2023). Using formative assessment and feedback to train novice modelers in business process modeling. In *Proceedings of the 26th International Conference on Model Driven Engineering Languages and Systems: Companion Proceedings, MODELS 2023, Västerås, Sweden, October 1-6, 2023* (pp. 449–458). 🔗 doi:10.1109/MODELS-C59198.2023.00079

4 Compagnucci, I., Corradini, F., Fornari, F., & Re, B. (2021). Trends on the usage of BPMN 2.0 from publicly available repositories. In *Perspectives in business informatics research - 20th international conference on business informatics research, BIR 2021, vienna, austria, september 22-24, 2021.* (Vol. 430, pp. 84–99). 🔗 doi:10.1007/978-3-030-87205-2_6

5 Compagnucci, I., Corradini, F., Fornari, F., Polini, A., Re, B., & Tiezzi, F. (2020). Modelling notations for iot-aware business processes: A systematic literature review. In *Business Process Management Workshops - BPM 2020 International Workshops, Seville, Spain, September 13-18, 2020.* (Vol. 397, pp. 108–121). 🔗 doi:10.1007/978-3-030-66498-5_9

Software

BPMN Inspector

BPMN Inspector, is a web application designed to streamline the inspection process of BPMN models. The inspection process effectively distinguishes various model types (i.e. collaboration, choreography, and conversation) while eliminating the need for manual effort in identifying duplicate models, validity issues, and non-English models. In addition, BPMN Inspector provides detailed insights into the collection of models by investigating the usage of BPMN notation elements, their combinations, syntactic violations of the standard and the adherence to established good modeling practices.

The contribution was mentioned for its noteworthy "potential impact on BPM practitioners and educators" in the BPM Newsletter of November 2023: `https://bpm-conference.org/assets/docs/newsletter/BPM-newsletter-2023-11.pdf`

Repository Link: `https://github.com/PROSLab/BPMN-Inspector`

🏆 *BPM 2023 Best Paper Award of the Demonstrations and Resources Forum.*

BPMN Grader

Under development

BPMN Grader is a Java tool developed to assist teachers in correcting BPMN diagrams. The tool enables annotations to be added to images of BPMN models, indicating errors made by students while modeling the process. The Annotations that can be included in the model are defined by a framework which includes common errors when modeling BPMN diagrams. The aim is to provide graphic and immediate feedback to the student, improving their learning in BPMN process modeling.

Repository Link: `https://github.com/IvanComp/BPMN-Grader`

Miscellaneous Experience

Awards and Achievements

2023 **BPM '23 Best Paper Award of the Demonstration and Resources Forum.**
BPMN Inspector: A Tool for Extracting Features from BPMN Models. At the 21st International Conference on Business Process Management at Utrecht, The Netherlands, 11-15 September 2023. `https://bpm-conference.org/awards/`

Certification

2022 **Fundamentals of Digital Marketing.** Awarded by Google Digital Training.

2014 **ECDL "*Advanced*".** Modules: *Presentation, Online Collaboration, IT Security, Word Processing, Spreadsheets, Online Essentials, Computer Essentials.*

Seminars

2023 **Trends on the use and adoption of the BPMN during the last ten years** - lecture for the master course in Business Process Modeling and Enactment, University of Camerino (2023); [Speaker]

2022 **The use of the BPMN in IoT environments** - lecture for the master course in Business Process Modeling and Enactment, University of Camerino (2023); [Speaker]

Courses

2021 **The Tenth Summer School on Formal Techniques**. by SRI International. May 22-28, 2021 Duration: 7 days.