ai fini della pubblicazione

Procedura selettiva di chiamata per **3 posti di Ricercatore a tempo determinato** – **Tipologia A**, codice concorso: **2023RTDAPNRR001**, presso il **Dipartimento di Ingegneria Informatica, Automatica e Gestionale "Antonio Ruberti"**, **Facoltà di Ingegneria dell'Informazione, Informatica e Statistica**, Settore concorsuale **09/H1**, Settore scientifico-disciplinare **ING-INF/05**, pubblicato sulla **Gazzetta Ufficiale** n. **5** del **20/01/2023** (**D.R.** n. **101/2023** del **19/01/2023**)

SIMONE AGOSTINELLI CURRICULUM VITAE

Part I – General Information

Full Name	Simone Agostinelli
Citizenship	Italian
Spoken Languages	Italian (Native), English (Excellent)

Part II – Education

(II A) – Academic Achievements

Type	Year	Institution	Notes
PhD	2022	Sapienza Università di Roma	PhD in Engineering in Computer Science (Cycle XXXIV). PhD Thesis: "*Generating Executable Robotic Process Automation Scripts from Unsegmented User Interface Logs*". Advisor: Prof. Andrea Marrella
University graduation	2018	Sapienza Università di Roma	Master Degree in Engineering in Computer Science. Final mark: 109/110. Master Thesis: "*Applying Process Mining Techniques in a Real Healthcare Case Study*". Advisor: Prof. Massimo Mecella
University graduation	2015	Sapienza Università di Roma	Bachelor Degree in Computer and System Engineering. Final mark: 98/110. Bachelor Thesis: "*Sistema di Prenotazione Posti Remoto*". Advisor: Prof. Francesco Quaglia

(II B) – PhD Schools

Type	Year	Institution	Notes
PhD School	2019	BISS (Bertinoro International Spring School), Bertinoro, Italy	<u>Course 1</u>: *Multitask learning and learning-to-learn: a statistical learning perspective.* <u>Course Leader</u>: Prof. Massimiliano Pontil, Istituto Italiano di Tecnologia & University College London.
			<u>Course 2</u>: *Software security across abstraction layers.* <u>Course Leader</u>: Frank Piessens - KU Leuven.
			<u>Course 3</u>: *Internet of Things: a data oriented approach.* <u>Course Leader</u>: Luciano Bononi – University of Bologna.

Part III – Appointments

(III A) – Academic Appointments

Start	End	Institution	Contract/Grant[1]	Position
01/02/2022	31/01/2024	Dipartimento di Ingegneria Informatica, Automatica e Gestionale, Sapienza Università di Roma	C2	**Post-doctoral research fellow** for the research groups "*Human-Computer Interaction*" and "*Processes, Services, and Software Engineering*". <u>Research topics</u>: Business Process Management (BPM); Robotic Process Automation (RPA); Human-Computer Interaction (HCI); Process Mining; Model Learning; Automated Planning in the field of BPM; Big Data Pipelines Discovery; Blockchain Technologies.

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[1] For each Academic Appointment, the associated contracts or research grants are listed in Section (III B).

| 01/11/2018 | 31/01/2022 | Dipartimento di Ingegneria Informatica, Automatica e Gestionale, Sapienza Università di Roma | C2 | | **PhD Student** under the supervision of Prof. Andrea Marrella.
 <u>Research topics</u>: Business Process Management (BPM); Robotic Process Automation (RPA); Human-Computer Interaction (HCI); Process Mining; Model Learning; Automated Planning in the field of BPM. |

(III B) – Contracts and Research Grants

ID	Start	End	Duration	Institution	Contract Type
C1	01/11/2018	31/01/2022	39 months	Dipartimento di Ingegneria Informatica, Automatica e Gestionale of Sapienza Università di Roma	PhD Research Grant (Borsa di Studio di Dottorato)
C2	01/02/2022	31/01/2024	24 months	Dipartimento di Ingegneria Informatica, Automatica e Gestionale of Sapienza Università di Roma	Research Grant (Assegno di Ricerca)

Part IV – Teaching experience

(IV A) – Teaching in Academia

Year	Institution	Lecture/Course
2022/2023	*Università IUAV di Venezia, Master Social Museum and Smart Tourism*	**Teaching assistant** (Tutor) of the course "**Archivistica e Conservazione degli Oggetti Digitali: Competenze Informatiche**" (Databases - ING-INF/05). Course Leader: Prof. Marco Schaerf.
2021/2022	Sapienza Università di Roma B.Sc. in Engineering in Management Science	**Teaching assistant** (Tutor) of the course "**Fondamenti di Informatica**" (Databases - ING-INF/05 - 12 CFU). Course Leaders: Prof. Roberto Navigli, Prof.ssa Irene Amerini, Prof. Andrea Marrella, Prof. Federico Maria Scafoglieri.
2020/2021	Sapienza Università di Roma B.Sc. in Engineering in Management Science	**Teaching assistant** (Tutor) of the course "**Fondamenti di Informatica**" (Databases - ING-INF/05 - 12 CFU). Course Leaders: Prof. Riccardo Lazzeretti, Prof.ssa Irene Amerini, Prof. Andrea Marrella, Prof. Francesco Leotta.

2019/2020	Sapienza Università di Roma B.Sc. in Engineering in Management Science	**Teaching assistant** (Tutor) of the course "**Fondamenti di Informatica**" (Databases - ING-INF/05 - 12 CFU). Course Leaders: Prof. Riccardo Lazzeretti, Prof.ssa Irene Amerini, Prof. Andrea Marrella, Prof. Francesco Leotta.
2018/2019	Sapienza Università di Roma B.Sc. in Computer and System Engineering	**Teaching assistant** (Tutor) of the course "**Progettazione del Software**" (Databases - ING-INF/05 - 9 CFU). Course Leaders: Prof. Massimo Mecella, Prof. Giuseppe De Giacomo.

(IV B) – Lectures and specialized seminars in Academia

Year	Institution	Lecture/Course
2022/2023	Cyprus University of Technology	**Specialized Seminar** (1 talk on Robotic Process Automation, for 3 *academic hours*) held in the context of DESTINI project (see *"Part VI - Funding Information"*)
2022/2023	Sapienza Università di Roma M.Sc. in Engineering in Management Science	**Lecture** (1 talk on Robotic Process Automation, for 3 *academic hours*) for the course "**Process Management and Mining**" (ING-INF/05 - 6 CFU). Course Leader: Prof. Andrea Marrella
2021/2022	Sapienza Università di Roma M.Sc. in Engineering in Management Science	**Lectures** (2 talks on Robotic Process Automation, for 5 *academic hours*) for the course "**Process Management and Mining**" (ING-INF/05 - 6 CFU). Course Leader: Prof. Andrea Marrella

(IV C) –Teaching in Industry

Start	End	Institution	Lecture/Course
13/02/2023	03/03/2023	Lazio Digital ITS Academy - Via Luigi Filippo De Magistris 13	**Lecturer** (Docente a contratto) for the course "**Metodologie di Analisi e Progettazione del Software (UML)**" (34 ore).

(IV D) – Theses Supervisor

Since 2018, within DIAG, Simone Agostinelli **co-supervised**:

- **3 M.sc**. **student** in Engineering in Management Science on the topics of process mining.
- **6 M.sc. students** in Engineering in Computer Science on the topics of business process management, robotic process automation, process mining, big data pipeline discovery, model learning, and blockchain technologies.
- **1 M.sc student** in Design, Multimedia and Visual Communication, on the topic of adaptive storytelling through automated planning.

Notably, **4 of them published the results of their thesis in peer-reviewed scientific conferences and journals** (see below for more details).

- **S. Agostinelli,** *M. Lupia*, A. Marrella, M. Mecella. *Reactive Synthesis of Software Robots in RPA from User Interface Logs*. In: Computers in Industry (ISSN 0166-3615), Volume 142, Elsevier, 2022.

- **S. Agostinelli**, G. Acitelli, *M. Capece*, M. Mecella. *A Human-in-the-Loop Approach to Support the Segments Compliance Analysis*. In: Proceedings of the Robotic Process Automation (RPA) Forum, held as part of the 20th International Conference on Business Process Management (BPM 2022), Springer (Vol. 459 LNBIP), pp. 200-214, Münster, Germany, 11-16 September 2022.

- **S. Agostinelli**, G. Bergami, *A. Fiorenza*, F.M. Maggi , A. Marrella, F. Patrizi. *Discovering Declarative Process Model Behavior from Event Logs via Model Learning*. In: Proceedings of the 3rd International Conference on Process Mining (ICPM 2021), pp. 48-55, Eindhoven, 31 October - 4 November 2021.

- **S. Agostinelli**, *M. Lupia*, A. Marrella, M. Mecella. *SmartRPA: A Tool to Reactively Synthesize Software Robots from User Interface Logs.* In: Proceedings of the 33rd International Conference on Advanced Information Systems Engineering (CAiSE 2021 Forum), Springer (Volume 424 LNBIP), pp. 137-145, Melbourne, Australia, 28 June - 2 July 2021.

- **S. Agostinelli**, *M. Lupia*, A. Marrella, M. Mecella*. Automated Generation of Executable RPA Scripts from User Interface Logs*. In: Proceedings of 18th International Conference on Business Process Management (BPM 2020) – Robotic Process Automation (RPA) Forum, Springer (Vol 393 LNBIP), pp. 116-131, Seville, Spain, 13-18 September 2020. **Selected among the best papers of the RPA Forum**

- **S. Agostinelli**, *F. Battaglini*, T. Catarci, F. dal Falco, A. Marrella. *Generating Personalized Narrative Experiences in Interactive Storytelling through Automated Planning*. In: Proceedings of the Biannual Conference of the Italian SIGCHI Chapter (CHItaly 2019), Padua, Italy, 23-25 September 2019.

Part V – Scientific Awards and Society Memberships

Year	Title
2019	**Best Forum Paper Award** at the prestigious **CAiSE 2019** conference (31st International Conference on Advanced Information Systems Engineering) for the paper: *"Achieving GDPR Compliance of BPMN Process Models"*.

Part VI – Funding Information [grants as PI-principal investigators or I-investigator]

Year	Title	Program	Role	Grant value
2022-2023	**BINTRAWINE** – **"***Blockchain, Tracking and Tracing solutions for Wine"*	The goal of the project is to apply blockchain solutions to the wine supply chain in trustless contexts.	Participant	Financing to Sapienza: 40.000 €
2021-2023	**DATACLOUD** – *"Enabling the Big Data Pipelines in the Computing Continuum"*	The vision of the project is the creation of a novel paradigm for Big Data pipeline processing over heterogeneous resources encompassing the Computing Continuum, covering the complete lifecycle of managing Big Data pipeline	Participant	Funding from EU: 4.999.996 €. Financing to Sapienza: 433.751 €
2020-2022	**DESTINI** – *"Smart Data Processing and Systems of Deep Insight"*	The aim of DESTINI is to facilitate the transfer of scientific knowledge and expertise, as well as of best research practices from the leading institutions to the Cyprus University of Technology	Participant	Funding from EU: 799.267,50 €. Financing to Sapienza: 166.222,50 €
2019-2020	**K4G** – *"Knowledge for Giustizia"*	The main objective of the project is to study, analyze and define a system that allows the management of administrative and support processes of the Department of Justice Affairs	Participant	Financing to Sapienza: 100.000 €

Part VII – Research Activities

The **research activity** of Simone Agostinelli concerns **theoretical, methodological,** and **practical aspects** in different areas of **Computer Science**, including Business Process Management (BPM); Robotic Process Automation (RPA); Human-Computer Interaction (HCI); Process Mining; Model Learning; Automated Planning in the field of BPM; Big Data Pipelines Discovery; and Blockchain Technologies. Such topics are challenged in the application domains of smart manufacturing, IoT-based environments and healthcare.

Simone Agostinelli is a member of the **Human-Computer Interaction research group** and the **Processes, Services, and Software Engineering research group** at the Dipartimento di Ingegneria Informatica Automatica e Gestionale Antonio Ruberti - Sapienza Università di Roma.

His main research accomplishments in all the areas of interest are summarized below (see *"Part IX - Publications"* for a fully comprehensive list of publications, together with the respective publication venues).

Keywords	Brief Description
Robotic Process Automation *Automated Segmentation of User Interface Logs* *Automated generation of*	**Robotic Process Automation** (RPA) is a fast-growing technology in the field of **Business Process Management** (BPM) that creates software (SW) robots to partially or fully automate rule-based and repetitive tasks (or simply routines) performed by human users in their applications' user interfaces (UIs). RPA tools are able to capture in dedicated UI logs the execution of many routines of interest. A UI log consists of user actions that are mixed in some order that reflects the particular order of their execution by the user, thus potentially

executable RPA scripts	belonging to different routines. Moreover, when considering state-of-the-art RPA technology, it becomes apparent that the current generation of RPA tools is driven by predefined rules and manual configurations made by expert users rather than automated techniques [N3, W1, W2, W4]. Towards this direction, in his PhD Thesis [T1] the **research of Simone Agostinelli** tries to mitigate the involvement of skilled human experts through the development of: 1) an interactive approach to the **automated segmentation of UI logs** (i.e., the challenge to automatically understand which user actions contribute to which routines inside a UI log) [B1, C2, C4, C7, C8], and 2) the **SmartRPA approach** [C1, C6, C9] to the automated identification of the variation points of a routine, to enable the selection of the most suitable routine variants to be implemented with an SW robot directly from a UI log, thus skipping completely the manual modeling activity of the flowchart diagrams. [C9] <u>was selected among the best papers</u> of the RPA forum of the 18th International Conference on Business Process Management (BPM 2020). An extension of the paper has been accepted by the prestigious Journal of Computers in Industry [J2].
Business Process Management *Business Process Modeling* *Process Resilience* *GDPR Compliance of Business Process Models*	**Business Process Management** (BPM) is an active research area that is based on the observation that each product and/or service that a company provides to the market is the outcome of a number of activities performed. Business processes are key to organizing such activities and understanding their interrelationships. Specifically, in the context of **Business Process Modeling**, the **research of Simone Agostinelli** was twofold: *(i)* investigating design-time approaches to model processes in a way that will result more **resilient** at run-time from a data-aware perspective [C3] and *(ii)* providing an analysis of the main privacy constraints in **GDPR** (General Data Protection Regulation) and propose a set of design patterns to capturing and integrating such constraints in BP models using **BPMN** (Business Process Modeling Notation) as modeling notation [C11]. [C11] <u>received the Forum Award</u> at the 31st International Conference on Advanced Information Systems Engineering (CAiSE 2019)
Process Mining *Process Mining in Healthcare* *Automated Process Discovery*	**Process mining** is about extracting knowledge from event logs commonly available in today's information systems. These techniques provide new means to discover, monitor, and improve processes in a variety of application domains. On this topic, **Simone Agostinelli** conducted a real case study in San Carlo di Nancy hospital in Rome (Italy) to apply **process mining** in the **healthcare** domain [J3]. Process mining techniques are here used to infer meaningful knowledge about the patient care flows from raw event logs consisting of clinical data stored by the hospital information systems. The results of the proposed case study show that process mining provided useful insights for the governance of the hospital. **Simone Agostinelli** has also investigated **automated process discovery techniques**. These techniques take as input event logs and produce a business process model as output that captures the control-flow relations between tasks that are described by the event log. In this setting, he provided a systematic comparative evaluation of existing implementations of automated process discovery methods with domain experts by using a real-life event log extracted from an international software engineering company on the basis of four quality metrics: *understandability*, *correctness*, *precision*, and *usefulness* [C10]. The evaluation results highlight gaps and unexplored trade-offs in the field and allow researchers to improve the lack of automated process discovery methods in terms of the usability of process discovery techniques in the industry.

Model Learning	**Model Learning** (ML) refers to a group of test-based and counterexample-driven algorithms conceived for learning the models of black-box hardware (HW) and software (SW) systems. Examples of learned models are deterministic finite state automatons (**DFAs**), state charts, and Mealy machines. In the field of **BPM**, declarative business process (BP) models define the behavior of BPs as a set of temporal constraints, which can be summarized as a DFA. Declarative BP discovery aims at inferring such constraints from event logs. To this aim, it requires as additional input the set of candidate constraints to be verified with respect to the event log.
Discovering Declarative Process Model Behavior via Model Learning	In this context, **the research of Simone Agostinelli** concentrated on investigating how to leverage **ML** for the **automated discovery** of the **DFA** underlying the behavior of a declarative BP model, without using any further a-priori information in addition to the event log [C5].
	An extension of the paper has been accepted by the prestigious Journal of Information Systems (Elsevier) [J1].

Human-Computer Interaction	**Human-Computer Interaction** (HCI) is a research topic focusing on the interfaces between users and computers. Nowadays, successful usage of **RPA** requires strong support from skilled human experts, from the discovery of the routines to be automated to the development of the executable scripts required to enact SW robots. Towards this direction, in the context of **HCI**, the **research of Simone Agostinelli** focused on developing a human-in-the-loop approach to filter out the routine behaviors not allowed (i.e., wrongly discovered from the UI log) by any real-world routine under analysis [C2].
Leveraging the human-in-the-loop for RPA	

Automated Planning	**Automated planning** is a subfield of **Artificial Intelligence** that deals with the automation of decision-making processes. It involves the use of algorithms and computational techniques to generate a plan of action that achieves a specific goal or set of goals. In this context, the **research of Simone Agostinelli** concentrated on demonstrating how instances of the **verification problem** in **BPM** can be represented as **planning problems** in **PDDL** (Planning Domain Definition Language) for which planners can find a correct solution in a finite amount of time. If verification problems are converted into planning problems, one can seamlessly leverage the best-performing automated planners, with advantages in terms of versatility and customization. [W3]
Verification of Petri Net-Based Process Models using Automated Planning	
Generation of Personalized Narrative Experiences in Interactive Storytelling through Automated Planning	**Simone Agostinelli was also involved** in [N2] to employ automated planning techniques in generating personalized narrative experiences in **interactive storytelling**. The feasibility of the approach has been demonstrated through a mobile application for cultural heritage based on mini-games, whose order of presentation is dynamically determined to increase user engagement in museum-like spaces.

Big Data Pipeline Discovery	**Big data pipeline discovery** refers to the process of identifying, analyzing, and understanding the flow of data from Dark Data sources. This can include identifying sources of data, the different types of data being collected, and how the data is being transformed and stored as it moves through the pipeline. In the context of the **DATACLOUD project**, the **research of Simone Agostinelli** focuses on developing a new breed of intelligent solutions for the achievement of the Data Pipeline Discovery task, relying on a scalable integration of process mining techniques to (semi-)automatically learn the structure of Big Data pipelines by interpreting huge amounts of event data produced by Dark Data sources [N1].
Big Data Pipeline Discovery through Process Mining	

Blockchain Technologies *Blockchain, Tracking, and Tracing solutions for Wine Supply Chain*	**Blockchain** is a distributed database technology that builds on a tamper-proof list of timestamped transaction records. Its innovative power stems from allowing parties to transact with others they do not trust over a computer network in which nobody is trusted. This is enabled by a combination of peer-to-peer networks, consensus-making, cryptography, and market mechanisms. In the context of the **BINTRAWINE** project, the **research of Simone Agostinelli** concentrates on designing and realizing an IT platform that offers integrated services for managing data in the **wine supply chain**, ensuring reliability, traceability, and verifiability. The system will use the blockchain to manage information in a shared and simultaneous way, representing a digital transformation opportunity for the highly competitive wine sector.

Part VIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Journal Papers [international]	2*	Google Scholar	2020	2022
Book Chapters [scientific]	1	Google Scholar	2021	2021
Conference Papers [international]	11	Google Scholar	2019	2022
Conference Papers [national]	3	Google Scholar	2019	2021
International Workshops [scientific]	4	Google Scholar	2019	2022
Theses [academic]	1	Sapienza	2022	2022

Metrics	Google Scholar	Scopus
Number of Research Products	22	19
Total Citations	213	103
Average Citations per Product°	9,68	5,4
Hirsch (H) index	8	6
i10-index	5	5
Normalized H index''	2	1,5

° The *average citations* are calculated on the basis of the peer-reviewed articles published from 2018 to 2022.

* J1 is accepted at Information Systems and it will be indexed soon on Google scholar and Scopus.

'' *Normalized H index* is the H-index divided by the academic seniority. Notice that Dr. Simone Agostinelli graduated in 2018, got his PhD in May 2022 and his first scientific publication relates to September 2019. For the computation of the metric, the academic seniority has been calculated as the time span from the start of the PhD, which can be estimated to be 4 years and 3 months (rounded down to 4 years).

ai fini della pubblicazione

Part IX – Publications[2]

International Journals[3]

J1. **[SELECTED PUBLICATION]**

S.Agostinelli, F. Chiariello, F.M. Maggi, A. Marrella, F. Patrizi. *Process Mining Meets Model Learning: Discovering Deterministic Finite State Automata from Event Logs for Business Process Analysis*. In: Information Systems (ISSN 0306-4379), In press, Elsevier, 2023 **[JCR 3.180/2.992] [SJR Q1] [GS 0] [SC 0]**

J2. **[SELECTED PUBLICATION]**

S. Agostinelli, M. Lupia, A. Marrella, M. Mecella. *Reactive Synthesis of Software Robots in RPA from User Interface Logs*. In: Computers in Industry (ISSN 0166-3615), Volume 142, Elsevier, 2022 **[JCR 11.425/9.613] [SJR Q1] [GS 4] [SC 3]**

J3. **[SELECTED PUBLICATION]**

S. Agostinelli, F. Covino, G. D'Agnese, C. De Crea, F. Leotta, A. Marrella. *Supporting Governance in Healthcare through Process Mining: A Case Study*. In: IEEE Access (ISSN 2169-3536), Volume 8, pp. 186012-186025, IEEE, 2020 **[JCR 3.476/3.758] [SJR Q1] [GS 8] [SC 6]**

Book Chapters

B1. **[SELECTED PUBLICATION]**

S. Agostinelli, A. Marrella, M. Mecella. *Automated Segmentation of User Interface Logs*. In: Robotic Process Automation: Management, Technology, Applications, pp. 201-222, De Gruyter, 2021 **[GS 10] [SC 7]**

International Conferences[4]

C1. **[SELECTED PUBLICATION]**

S. Agostinelli, A. Marrella, L. Abb, J.R. Rehse. *Mastering Robotic Process Automation with Process Mining*. In: Proceedings of the 20th International Conference on Business Process Management (BPM 2022), Springer (Vol. 13420 LNCS), pp. 47-53, Münster, Germany, 11-16 September 2022 **[CORE A] [GII-GRIN A] [GS 0] [SC 0]**

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[2] The **12 publications selected for the evaluation** are explicitly tagged with the label **[SELECTED PUBLICATION]**. For such publications, the number of citations on Google Scholar is reported in the format **[GS #]**, while the number of citations on Scopus is reported in the format **[SC #]**. Notice that the 12 selected publications are also included separately in the document: "Allegato D1 - Elenco_12_Pubblicazioni.pdf"

[3] The quality of a journal is assessed through the following metrics (all metrics are updated with 2021 annual values):
- Incites Journal Citation Reports (**JCR**) calculates the global/5-year Impact Factor of a journal.
- SCImago Journal Rank (**SJR**) measures the scientific influence of a journal and ranges from Q1 (top) to Q4.

[4] The quality of a conference is assessed according to the well-known GII-GRIN (A++, A+: excellent, top notch conferences, A: very good events) and CORE (A*: top 4%, A: top 14%) rankings.

C2. **[SELECTED PUBLICATION]**

S. Agostinelli, G. Acitelli, M. Capece, M. Mecella. *A Human-in-the-Loop Approach to Support the Segments Compliance Analysis*. In: Proceedings of the Robotic Process Automation (RPA) Forum, held as part of the 20th International Conference on Business Process Management (BPM 2022), Springer (Vol. 459 LNBIP), pp. 200-214, Münster, Germany, 11-16 September 2022 **[CORE A] [GII-GRIN A] [GS 0] [SC 0]**

C3. **[SELECTED PUBLICATION]**

S. Agostinelli, F. De Luzi, U. Di Canito, J. Ferraro, A. Marrella, M. Mecella. *A Data-Centric Approach to Design Resilient-Aware Process Models in BPMN*. In: Proceedings of the Business Process Management Forum, held at the 20th International Conference on Business Process Management (BPM 2022), Springer (Vol. 458 LNBIP), pp. 38-54, Münster, Germany, 11-16 September 2022 **[CORE A] [GII-GRIN A] [GS 0] [SC 0]**

C4. **[SELECTED PUBLICATION]**

S. Agostinelli, F. Leotta, A. Marrella. *Interactive Segmentation of User Interface Logs*. In: Proceedings of the 19th International Conference on Service-Oriented Computing (ICSOC 2021), Springer (Vol. 13121), pp. 65-80, Dubai, 22-25 November 2021 **[CORE A] [GII-GRIN A-] [GS 7] [SC 3]**

C5. **S. Agostinelli**, G. Bergami, A. Fiorenza, F.M. Maggi , A. Marrella, F. Patrizi. *Discovering Declarative Process Model Behavior from Event Logs via Model Learning*. In: Proceedings of the 3rd International Conference on Process Mining (ICPM 2021), pp. 48-55, Eindhoven, 31 October - 4 November 2021

C6. **S. Agostinelli**, M. Lupia, A. Marrella, M. Mecella. SmartRPA: *A Tool to Reactively Synthesize Software Robots from User Interface Logs.* In: Proceedings of the 33rd International Conference on Advanced Information Systems Engineering (CAiSE 2021 Forum), Springer (Volume 424 LNBIP), pp. 137-145, Melbourne, Australia, 28 June - 2 July 2021.

C7. **[SELECTED PUBLICATION]**

S. Agostinelli, A. Marrella, M. Mecella. *Exploring the Challenge of Automated Segmentation in Robotic Process Automation*. In: Proceedings of 15th International Conference on Research Challenges in Information Science (RCIS 2021), Springer, (Volume 415 LNBIP), pp. 38-54, Limassol, Cyprus, 11-14 May 2021. **[CORE B] [GS 7] [SC 4]**

C8. **S. Agostinelli**. *Automated Segmentation of User Interface Logs Using Trace Alignment Techniques (Extended Abstract)*. In: Proceedings of 2nd International Conference on Process Mining (ICPM 2020) - Doctoral Consortium and Tool Demonstration Track, CEUR Workshop Proceedings (Vol. 2703), pp. 13-14, Padua, Italy, 4-9 October 2020.

C9. **[SELECTED PUBLICATION]**

S. Agostinelli, M. Lupia, A. Marrella, M. Mecella*. Automated Generation of Executable RPA Scripts from User Interface Logs*. In: Proceedings of 18th International Conference on Business Process Management (BPM 2020) – Robotic Process Automation (RPA) Forum,

Springer (Vol 393 LNBIP), pp. 116-131, Seville, Spain, 13-18 September 2020. **Selected among the best papers of the RPA Forum [CORE A] [GII-GRIN A] [GS 27] [SC 18]**

C10. **[SELECTED PUBLICATION]**

S. Agostinelli, F.M. Maggi, A. Marrella, F. Milani. *A User Evaluation of Process Discovery Algorithms in a Software Engineering Company*. In: Proceedings of 23rd IEEE International Conference on Enterprise Computing (EDOC 2019), pp. 142-150, Paris, France, 28-31 October 2019 **[CORE B] [GII-GRIN B] [GS 8] [SC 6]**

C11. **[SELECTED PUBLICATION]**

S. Agostinelli, F.M. Maggi, A. Marrella, F. Sapio. *Achieving GDPR Compliance of BPMN Process Models*. In: Proceedings of 31st International Conference on Advanced Information Systems Engineering (CAiSE 2019 Forum), Springer (Vol. 350), pp. 10-22, Rome, Italy. 3-7 June 2019. **Winner of the Best Forum Paper Award [CORE A] [GII-GRIN A] [GS 36] [SC 17]**

National Conferences

N1. **S. Agostinelli**, D. Benvenuti, F. De Luzi, A. Marrella. *Big Data Pipeline Discovery through Process Mining: Challenges and Research Directions*. In: Proceedings of the 1st ITalian forum on Business Process Management (ITBPM'21) held in conjunction with the 19th International Conference on Business Process Management (BPM 2021), CEUR Workshop Proceedings (Vol. 2952), pp. 50-55, Rome, Italy, 10 September 2021.

N2. **S. Agostinelli**, F. Battaglini, T. Catarci, F. dal Falco, A. Marrella. *Generating Personalized Narrative Experiences in Interactive Storytelling through Automated Planning*. In: Proceedings of the Biannual Conference of the Italian SIGCHI Chapter (CHItaly 2019), Padua, Italy, 23-25 September 2019.

N3. **S. Agostinelli**. *Synthesis of Strategies for Robotic Process Automation*. In: Proceedings of the 27th Italian Symposium on Advanced Database System (SEBD 2019), CEUR Workshop Proceedings (Vol. 2400), Castiglione della Pescaia, Italy, 16-19 June 2019.

International Workshops

W1. **S. Agostinelli**, A. Marrella. *Intelligent Robotic Process Automation: Generating Executable RPA Scripts from Unsegmented UI Logs*. In: Proceedings of the Workshop on Process Management in the AI Era (PMAI 2022), held in conjunction with the 31st International Joint Conference on Artificial Intelligence and the 25th European Conference on Artificial Intelligence (IJCAI-ECAI 2022), CEUR Workshop Proceedings (Vol. 3310), pp. 89-21, Wien, Austria, 23 July 2022

W2. **S. Agostinelli**, A. Marrella, M. Mecella. *Towards Intelligent Robotic Process Automation for BPMers*. In: Proceedings of the AAAI-20 Workshop on Intelligent Process Automation (IPA

2020), held in conjunction with the 34th AAAI Conference on Artificial Intelligence (AAAI 2020), New York, U.S.A., 7-12 February 2020. https://arxiv.org/pdf/2001.00804.pdf

W3. **S. Agostinelli**, F.M. Maggi, A. Marrella, M. Mecella. *Verifying Petri Net-Based Process Models using Automated Planning*. In: Proceedings of the 23rd IEEE International Enterprise Distributed Object Computing Workshop (EDOC 2019), Vol. 2019, pp. 44-53, Paris, France, 28 October 2019

W4. **S. Agostinelli**, A. Marrella, M. Mecella. *Research Challenges for Intelligent Robotic Process Automation*. In: Proceedings of the Workshop on Artificial Intelligence for Business Process Management (AI4BPM 2019), held in conjunction with the 17th International Conference on Business Process Management (BPM 2019), Springer (Vol. 362 LNBIP), pp. 12-18, Vienna, Austria, 2 September 2019

Thesis

T1. **S. Agostinelli**. *Generating Executable Robotic Process Automation Scripts from Unsegmented User Interface Logs*. PhD Thesis in Engineering in Computer Science (Cycle XXXIV), Sapienza Università di Roma, Italy. 20 May 2022.

Part X – Tutorials and Papers presentation

(X A) – Tutorials

- *"Mastering Robotic Process Automation with Process Mining"*. Tutorial held at 20th International Conference on Business Process Management (BPM 2022), 14 September 2022, Munster, Germany.

(X B) – Papers Presentation

Simone Agostinelli has presented the results of his research in the following events:

Year	Event	Paper
2022	Robotic Process Automation (RPA) Forum, held as part of the 20th International Conference on Business Process Management (BPM 2022)	A Human-in-the-Loop Approach to Support the Segments Compliance Analysis
2021	33rd International Conference on Advanced Information Systems Engineering (CAiSE 2021 Forum)	SmartRPA: a Tool to Reactively Synthesize Software Robots from User Interface Logs
2021	15th International Conference on Research Challenges in Information Science (RCIS 2021)	Exploring the Challenge of Automated Segmentation in Robotic Process Automation

2021	19th International Conference on Service-Oriented Computing (ICSOC 2021)	Interactive Segmentation of User Interface Logs
2020	AAAI-20 Workshop on Intelligent Process Automation (IPA 2020), held in conjunction with the 34th AAAI Conference on Artificial Intelligence (AAAI 2020)	Towards Intelligent Robotic Process Automation for BPMers
2020	Doctoral Consortium of the 2nd International Conference on Process Mining (ICPM 2020)	Automated Segmentation of User Interface Logs using Trace Alignment Techniques
2020	Robotic Process Automation (RPA) Forum of the 18th International Conference on Business Process Management (BPM 2020)	Automated Generation of Executable RPA Scripts from User Interface Logs
2019	23rd IEEE International Conference on Enterprise Computing (EDOC 2019)	A User Evaluation of Process Discovery Algorithms in a Software Engineering Company
2019	23rd IEEE International Enterprise Distributed Object Computing Workshop (EDOC 2019)	Verifying Petri Net-based Process Models using Automated Planning
2019	27th Italian Symposium on Advanced Database System (SEBD 2019)	Synthesis of Strategies for Robotic Process Automation
2019	Workshop on Artificial Intelligence for Business Process Management (AI4BPM 2019), held in conjunction with the 17th International Conference on Business Process Management (BPM 2019)	Research Challenges for Intelligent Robotic Process Automation
2019	31st International Conference on Advanced Information Systems Engineering (CAiSE 2019 Forum)	Achieving GDPR Compliance of BPMN Process Models

Part XI – Professional Service

(XI A) – Conferences and Workshops Organization and Chairship

As far as organization and chairship of conferences and workshops, Simone Agostinelli has acted/is acting as:

- Publicity Chair of the 5th International Conference on Process Mining (ICPM 2023) (https://icpmconference.org/2023/organizing-committee/)

(XI B) – Program Committee Membership

Simone Agostinelli serves/has served in the Program Committee of:

- 21st International Conference on Business Process Management ([RPA Forum 2023](#))
- 20th International Conference on Service Oriented Computing - Demonstration Track ([ICSOC 2022 Demo Track](#))
- 20th International Conference on Business Process Management ([RPA Forum 2022](#))

(XI C) – Reviewer for International Journals, Conferences and Workshops

Simone Agostinelli has served as a reviewer for:

- **International Journals:**
    - Applied Sciences (MDPI)
    - Journal of Business Research (Elsevier)

- **International Conferences:**
    - Business Process Management (BPM)
    - Business Information Systems (BIS)
    - Advanced Information Systems Engineering (CAISE)
    - Research Challenges in Information Systems (RCIS)
    - Human-Machine Systems (ICHMS)
    - Process Mining (ICPM)
    - Service Oriented Computing (ICSOC)
    - Artificial Intelligence (IJCAI)
    - Enterprise Information System (ICEIS)

- **European Conferences:**
    - Information System (ECIS)