

UNIVERSITÀ DEGLI STUDI DI MILANO

Procedura di valutazione Professore universitario di Prima Fascia

- settore concorsuale 01/B1 - INFORMATICA

- settore scientifico disciplinare INF/01 - INFORMATICA

presso il Dipartimento di Informatica Giovanni Degli Antoni - Codice Concorso 5257

## GABRIELE GIANINI - Curriculum Vitae

### PERSONAL INFORMATION

FAMILY NAME	GIANINI
FIRST, GIVEN NAME	GABRIELE
BIRTH DATE	28 MAGGIO 1963
NATIONALITY	ITALIAN
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# 1 EDUCATION, ACADEMIC TITLES, HABILITATIONS

## 1.1 EDUCATION SINCE LEAVING SCHOOL

- 1992 - Laurea in Fisica – (M.Sc. in Physics) –  
Università degli Studi di Pavia, Italy
- 1996 - Dottorato di Ricerca in Fisica – (Ph.D. in Physics) – (VIII Ciclo) –  
Conferito ad Università degli Studi di Roma “La Sapienza”
- 1998 - Corso di Perfezionamento in Fisica –  
Università degli studi di Pavia, AA 1996-97 and AA 1997-98

## 1.2 HABILITATIONS

09/07/2020	<b>Full Professorship Habilitation in Informatics/Computer Science</b> – by the Italian Ministry of the University and Research (MIUR) - <b>Settore Concorsuale 01/B1</b> - Informatica - <b>Fascia: I</b> – Abilitazione Scientifica Nazionale (ASN) Bando D.D. 2175/2018
30/07/2020	<b>Full Professorship Habilitation in Computer Science Engineering</b> – by the Italian Ministry of the University and Research (MIUR) - <b>Settore Concorsuale 09/H1</b> - Sistemi Di Elaborazione Delle Informazioni - <b>Fascia: I</b> – Abilitazione Scientifica Nazionale (ASN) Bando D.D. 2175/2018

# 2 PROFESSIONAL EXPERIENCES

## 2.1 CURRENT POSITION

Dates (2019-now)	<b>Professore Associato INF/01</b> / Associate Professor (faculty) Università degli Studi di Milano, Italy – Dipartimento di Informatica – Responsibilities: Teaching, Research
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## 2.2 PREVIOUS POSITIONS

Dates (2005-2019)	Ricercatore Universitario INF/01 / Assistant Professor (faculty) - <b>Università degli Studi di Milano</b> , Italy – Dipartimento di Informatica – Responsibilities: Teaching, Research
	<u>Senior Researcher Fellow</u> INSA de <b>Lyon</b> , FR (10 months), University of <b>Passau</b> , DE (2 months), Khalifa University, <b>Abu Dhabi</b> , UAE (2017-2020: 39 months) – Responsibilities: Research
	<u>Adjunct Professor</u> Free University of <b>Bolzano</b> (2005-2012) – Responsibilities: Teaching
Dates (2003-2004)	<u>Post-doc Researcher</u> in Computer Science – <b>Università degli Studi di Milano</b> , Italy, Dipartimento di Tecnologie dell’Informazione, – Responsibilities: Teaching, Research
Dates (2000-2003)	Consultant in Information Technologies and R&D at <b>NEXUS T.A.I.</b> Tecnologie e Architetture per l’Innovazione, Pavia (PV), Italy: ICT consultant at Inferentia s.p.a., and for Siemens at Lombardia Informatica – Responsibilities: Software Development, Project Management
Dates (1998-1999)	<u>Post-doctoral Researcher</u> in High-Energy Physics - <b>Università degli Studi di Pavia</b> , Dipartimento di Fisica Nucleare e Teorica, Pavia, Italy and INFN – Responsibilities: Research
	<u>Visiting Post-doc Researcher</u> at FNAL ( <b>Fermi National Accelerator Laboratory</b> ), Batavia, IL, USA – Responsibilities: Research
Dates (1996-1998)	<u>Research Associate</u> INFN section Nuclear and Theoretical Physics Department – <b>Università degli Studi di Pavia</b> , Pavia, Italy, and INFN – Responsibilities: Research
	<u>Visiting Research Associate</u> at FNAL ( <b>Fermi National Accelerator Laboratory</b> ), Batavia, IL, USA – Responsibilities: Research
Dates (1996-1998)	Teaching contracts for <b>CILEA</b> Consorzio Inter-Universitario Lombardo Elaborazione Automatica, Segrate (MI)– Responsibilities: Teaching
Dates (1992-1996)	Ph.D. Student and <u>Research Assistant</u> (as <i>INFN Associate</i> ): INFN ( <b>Istituto Nazionale di Fisica Nucleare</b> ) Pavia Section, Italy – Responsibilities: Research
	<u>Visiting Research Assistant</u> at FNAL ( <b>Fermi National Accelerator Laboratory</b> ), Batavia, IL, USA – Responsibilities: Research
Dates (1991-1992)	<u>Visiting Student</u> at FNAL ( <b>Fermi National Accelerator Laboratory</b> ), Batavia, IL, USA, supported by <b>Università degli Studi di Pavia</b> , INFN, and <b>North Western University</b> , Evanston IL, USA – Responsibilities: Research

### 3 EXPERIENCE IN ACADEMIC TEACHING/ATTIVITÀ DIDATTICA FRONTALE

#### Summary:

- **41** university courses since 2005 (Università degli Studi di Milano, UNIMI and Free University of Bolzano, FUB): 18 at M.Sc. Level, 23 at B.Sc. level
- **8** seminar cycles at Ph.D. level

#### 3.1 TEACHING AT B.SC. LEVEL AND M.SC. LEVEL

##### 3.1.1 Latest 5 years – courses taught as Associate Professor

A.A.	Courses/Insegnamenti	CFU	Lecturer/(vs. faculty) average evaluation*
2022/23	Statistica e Analisi Dati (2nd year B.Sc. SSRI**, UNIMI)	6	
	Business Process Engineering (1st year M.Sc Informatica, UNIMI)	6	
	Statistica Medica (3rd year B.Sc. Infermieristica, UNIMI)	3	
	Statistica e Analisi Dati (2nd year B.Sc. SSRI** - Online, UNIMI)	0.5	
2021/22	Statistica e Analisi Dati (2nd year B.Sc. SSRI**, UNIMI)	6	A:7,80/7,36 B:8,23/7,47 C: 8,66/8,11 D:8,74/8,37
	Business Process Engineering (1st year M.Sc Informatica, UNIMI)	6	A:7,89/8,29 B:8,67/8,24 C: 9,00/8,86 D:8,67/8,92
	Statistica Medica (3rd year B.Sc. Infermieristica, UNIMI)	3	n/a
	Statistica e Analisi Dati (2nd year B.Sc. SSRI** - Online, UNIMI)	0.5	A:7,94/7,43 B:8,06/7,63 C: 7,44/7,61 D: N/A
2020/21	Statistica e Analisi Dati (2nd year B.Sc. SSRI**, UNIMI)	6	A:7,12/7,29 B:7,91/7,62 C: 8,77/8,36 D:8,93/8,63
	Business Process Engineering (1st year M.Sc Informatica, UNIMI)	6	n/a
	Statistica Medica (3rd year B.Sc. Infermieristica, UNIMI)	3	A:8,00/8,04 B:8,55/7,93 C: 9,00/8,55 D:9,11/8,71
	Statistica e Analisi Dati (2nd year B.Sc. SSRI** - Online, UNIMI)	0.5	A:7,19/7,54 B:7,69/7,90 C: 7,63/7,85 D: N/A
2019/20	Business Process Engineering (1st year M.Sc Informatica, UNIMI)	6	A:8,00/7,75 B:8,67/7,83 C: 8,67/8,31 D:8,83/8,57
	Laboratorio corso Programmazione 1 (1st y. B.Sc. Math, UNIMI)	3	n/a (lab. lecturers not evaluated)
	Statistica e Analisi Dati (2nd year B.Sc. SSRI** - Online, UNIMI)	0.5	A:7,40/7,86 B:8,07/8,06 C: 7,53/7,97 D: N/A

\* Questions: A: Does the teacher stimulate/motivate interest in the discipline? – B: Does the teacher explain the topics in a clear and exhaustive way? – C: Is the teacher available for clarifications and explanations? – D: Is the teacher correct and available in the relationship with the students?

\*\* (SSRI = Sicurezza dei Sistemi e delle Reti Informatiche, UNIMI)

##### 3.1.2 Earlier courses – courses taught as University Researcher (Ricercatore Universitario)

From 2004/05, in the 15 years in the role of University Researcher (of which 2 on a fixed-term basis) he has taken on **an average of 10 credits per academic year**. The courses taught – some in Italian (ITA), some in English (ENG) – were:

A.A.	Courses/Insegnamenti	CFU	Further responsibilities
2016/17	IT Project Management/Gestione Progetti (1st year M.Sc Informatica, UNIMI)	6	<u>Presidente</u> commissione esame Sicurezza delle Architetture Orientate ai Servizi e <u>Membro</u> commissione d'esame Calcolo delle probabilità e statistica matematica
2015/16	IT Project Management/Gestione Progetti (1st year M.Sc Informatica, UNIMI)	6	<u>Membro</u> commissione d'esame Calcolo delle probabilità e statistica matematica
2014/15	IT Project Management/Gestione Progetti (1st year M.Sc Informatica, UNIMI)	6	<u>Presidente</u> commissione esame Calcolo delle probabilità e statistica matematica, silente in questo A.A.
	Statistica Medica (3rd year B.Sc. Infermieristica, UNIMI)	3	
2013/14	IT Project Management/Gestione Progetti (1st year M.Sc Informatica, UNIMI)	6	
	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	
2012/13	IT Project Management/Gestione Progetti (1st year M.Sc Informatica, UNIMI)	6	
	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	
2011/12	IT Project Management/Gestione Progetti (1st year M.Sc Informatica, UNIMI)	6	
	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	
	Empirical Methods/Probability and Statistics (2 <sup>nd</sup> year B.Sc. Computer Science, FUB)	4	

<b>2010/11</b>	IT Project Management/Gestione Progetti (1st year M.Sc Informatica, UNIMI)	6	
	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	
<b>2009/10</b>	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	<u>Progettazione e Realizzazione video-corso</u> per l'insegnamento di Corso Calcolo delle Probabilità e Statistica, Corso di Laurea SSRI Online. <u>Membro</u> commissioni: Sistemi per l'elaborazione dell'informazione, Ingegneria del Software
	Open Source Software Engineering (1st year M.Sc Computer Science, FUB)	4	
<b>2008/09</b>	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	<u>Membro</u> commissioni d'esame: Sistemi per l'elaborazione dell'informazione e Ingegneria del Software
	Computer Networks (1st year M.Sc Computer Science, FUB)	4	
<b>2007/08</b>	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	<u>Membro</u> commissioni d'esame: Sistemi per l'elaborazione dell'informazione e Ingegneria del Software
	Computer Networks (1st year M.Sc Computer Science, FUB)	4	
<b>2006/07</b>	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	<u>Membro</u> commissioni d'esame: Sistemi per l'elaborazione dell'informazione e Ingegneria del Software
	Modelli Fisici per la Realtà Virtuale (2nd year B.Sc. SSRI*, UNIMI)	6	
	Computer Networks (1st year M.Sc Computer Science, FUB)	4	
<b>2005/06</b>	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	<u>Membro</u> commissioni d'esame: Sistemi per l'elaborazione dell'informazione e Ingegneria del Software
	Computer Networks (1st year M.Sc Computer Science, FUB)	4	
<b>2004/05</b>	Calcolo delle Probabilità e Statistica Matematica (2nd year B.Sc. SSRI*, UNIMI)	6	<u>Membro</u> commissioni d'esame: Sistemi per l'elaborazione dell'informazione e Ingegneria del Software
	Computer Networks (1st year M.Sc Computer Science, FUB)	4	
	Component Based Development (1st year M.Sc Computer Science, FUB)	4	

### 3.1.3 Misc

- During the Academic Years 2017/18 and AA 2018/19, in the role of “Ricercatore Universitario in regime d’impegno a Tempo Definito” he does not have held courses, but has been president of the committee of Gestione Progetti (17/18) and member of the committee of Statistica e Analisi Dati (17/18, 18/19).

## 3.2 POST-GRADUATE TEACHING (PH.D. COURSES)

Acad.Year	Title	Hours	University – Co-lecturers
<b>2022/23</b>	Introduction to Quantum Information and Cryptography	15 out of 20	UNIMI – Prof. S.Cimato
<b>2021/22</b>	Leveraging Machine Learning in Process Mining	5 out of 10	UNIMI – Prof. P.Ceravolo
<b>2020/21</b>	Introduction to Quantum Information and Cryptography	10 out of 15	UNIMI – Prof. S.Cimato
<b>2016/17</b>	Introduction to Big Data Methods and Tools	13 out of 20	UNIMI – Prof E.Damiani
<b>2011/12</b>	Quality of Service in IP Networks	15	Computer Science Doctoral School, Addis Ababa University
<b>2009/10</b>	Introduction to Game Theory for Networking	6	UNIMI
<b>1997-98</b>	Statistical Data Analytics Techniques for HEP	6	UNIPV
<b>1996-97</b>	Statistical Data Analytics Techniques for HEP	6	UNIPV

## 4 EXPERIENCE IN STUDENT SUPERVISION/ATTIVITÀ DIDATTICA INTEGRATIVA

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### Summary:

- Supervisor of **12** Ph.D. students (3 theses currently ongoing)
- Supervisor of **53** degree theses (**20** M.Sc., **33** B.Sc.)
- Co-supervisor of **10** theses (B.Sc. or M.Sc.); external reviewer (contro-relatore) for **1** M.Sc. thesis
- External tutor for **6** Ph.D. students

### 4.1 PH.D. SUPERVISION, CO-SUPERVISION AND TUTORING

All the following supervisions and co-supervisions have been assigned through formal appointments by the respective universities.

#### 4.1.1 Ph.D. supervision and co-supervision

Supervisor of 6 Ph.D. students (Informatica, Università degli Studi di Milano)

- **Guido Lena Cota** XXIX Ciclo - Dottorato di Ricerca in Informatica (UNIMI 2012-2017)
- **Leopold Ghemmogne Fossi** XXXI Ciclo - Dottorato di Ricerca in Informatica (UNIMI 2015 - 2019)
- **Corrado Mio** XXXII Ciclo - Dottorato di Ricerca in Informatica (UNIMI 2016-2020)
- **Annalisa Barsotti** XXXVI Ciclo - Dottorato di Ricerca in Informatica (UNIMI 2020-)
- **Ines Filipa Fernandes Ramos** XXXVI Ciclo - Dottorato di Ricerca in Informatica (UNIMI 2020-)
- **Saman Fouladi** XXXVIII Ciclo - Dottorato di Ricerca Intersettoriale per l'Innovazione (UNIMI 2022-)

Co-supervisor of 3 Ph.D. students (Computer Science, Addis Ababa University (AAU)<sup>1</sup>) 2012-2018:

- **Dawit Kifle Djote**: Improving information dissemination in unstructured networks using topological indexes
- **Ketema Adere Gameda**: An Evolutionary cluster game approach for Multi-Class WSNs in Non-collaborative settings
- **Meshesha Legesse Bedane**: Hybrid Image Annotation in Folksonomies using Tags/Words co-occurrence

Co-supervisor of 3 Ph.D. students (Computer Science, University of Science and Technology (KUST) of Abu Dhabi)

- **Ebtesam Almazrouei**: Deep Learning applications to Radio Signal Processing (2017-2021)
- **Ebrahim Hamdan Al Zaabi**: Machine Learning Techniques in Biometrics (2017-2020)
- **Ghalia Tello**: A Machine Learning-Based Framework for Log-Lifting in Business Process Mining (2017-2020)

#### 4.1.2 Tutoring

External member of the "Comité de suivi" for Ph.D. students of the INSA of Lyon<sup>2</sup>

- **Tarek Awwad** - (INSA Lyon – University of Passau)
- **Johannes Jurgovsky** - (INSA Lyon – University of Passau)
- **Armin Gerl** - (INSA Lyon – University of Passau)
- **Thomas Véran** - (INSA Lyon)
- **Alaa Alhamzeh** - (INSA Lyon – University of Passau)
- **Pierre-Yves GENEST** - (INSA Lyon)

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<sup>1</sup> Role of lead supervisor (co-supervision established by formal appointment: the collaboration between UNIMI and AAU is governed by a memorandum of understanding established within the IRIXYS collaboration network).

<sup>2</sup> The Comité de suivi" (monitoring committee) is a device set up by doctoral schools in France to follow the progress of theses and identify any problems in advance. It is composed of the thesis director and supervisors, a member of the local thesis committee and an external member.

## 4.2 M.Sc. SUPERVISION

	Student (and university)	Thesis Title	A.A.
1	Ghidoni, Giovanni (UNIMI)	Studio di una tecnica anti-spam basata sulla valutazione incrementale del grado di indesiderabilità e sul controllo della banda	2004-2005
2	Mozzi, Riccardo (UNIMI)	Caratterizzazione e previsione del workload di un Application Server per l'E-commerce	2005-2006
3	Scotti, Andrea (UNIMI)	Studio di tecniche per la protezione della privacy nei servizi basati sulla localizzazione	2007-2008
4	Moretti, Daniele (UNIMI)	Progetto e realizzazione di un sistema per l'archiviazione ottica sostitutiva di documenti informatici	2007-2008
5	Gregory Irhule Osunde (FUB)	Self-interacting Random Walks for information dissemination	2007/2008
6	Adilson Oliveira Cruz (FUB)	A location-based service middleware with privacy protection from inference attacks	2007/2008
7	Paulius Danielius (FUB)	Distributed Consensus in P2P Networks	2008/2009
8	Paulius Miksys (FUB)	Neighbor avoiding random walks for information dissemination in P2P networks	2008/2009
9	Summa, Francesco (UNIMI)	Studio di protocolli di gossiping in reti non strutturate	2008/2009
10	Dossena, Mattia (UNIMI)	Reti senza fili di sensori mobili : posizionamento dinamico e salvaguardia del perimetro	2011/2012
11	Dognini, Cristian (UNIMI)	Correlazioni tra pixel nel confronto tra immagini: studio di un algoritmo ibrido basato su SURF	2011/2012
12	Brignoli, Mauro Alberto (UNIMI)	Management del progetto di design ed integrazione di componenti di sicurezza informatica in un sistema informativo sanitario	2012/2013
13	Ghemmogne Fossi, Leopold (UNIMI)	Un modello di gestione del rischio dei processi su Cloud : caso di studio delle aste on-line	2013/2014
14	Sacchi, Alberto (UNIMI)	Realizzazione di un sistema per il calcolo del rischio di leakage nei processi collaborativi	2013/2014
15	Rainini, Andrea (UNIMI)	Vulnerability Patching : un approccio basato sulla teoria dei giochi	2013/2014
16	Scattino, Luca (UNIMI)	Analisi esplicativa basata su power index per modelli d'apprendimento automatico	2019/2020
17	Patel, Shehbaz Rafiq (UNIMI)	Tracking Humans in Industrial Environments	2020/2021
18	Pastore, Piero (UNIMI)	Uso di tecniche XAI con algoritmi predittivi nel Business Process Management	2021/2022
19	Ventura Padilla, Rafael David (UNIMI)	Studio di algoritmi di annotazione basati su apprendimento automatico in diagnostica per immagini	2022/2023

## 4.3 B.Sc. SUPERVISION

	Studente	Titolo Tesi	AA
1	Baronchelli, Michele (UNIMI)	Apprendimento senza supervisione del processo software visto come Catena di Markov	2004-2005
2	Cortese, Alessandro (UNIMI)	Apprendimento con supervisione e validazione del processo software mediante modelli di Markov nascosti	2004-2005
3	Bosco, Elisa (UNIMI)	Apprendimento con supervisione e validazione del processo software visto come catena di Markov	2004-2005
4	Ghisoni, Silvio (UNIMI)	Studio empirico del processo software mediante l'analisi dei dati di Log	2004-2005
5	Cinesi, Marcello (UNIMI)	Classificazione senza supervisione delle sequenze di Log del processo di sviluppo software	2005-2006
6	Scotti, Andrea (UNIMI)	Studio di modelli di mobilità per il miglioramento delle prestazioni della rete cellulare	2005-2006
7	Staibano, Agnello (UNIMI)	Progettazione e sviluppo di un componente per la ricostruzione delle serie temporali incomplete di consumi energetici su piattaforma J2EE	2005-2006
8	Cometti, Fabio (UNIMI)	Studio comparativo di software per la simulazione dinamica di strutture	2006-2007
9	Sannino, Luca (UNIMI)	Studio comparativo di software per l'analisi di reti di code	2006-2007
10	Nam Cam, Dara Thanh (UNIMI)	Una rete P2P per la semantica emergente : meccanismi di gossiping	2007-2008
11	Raimondi, Dario Andrea (UNIMI)	Tecniche di parallelizzazione per calcolo di flussi su reticoli	2008/2009
12	Sbarufatti, Alessandro (UNIMI)	Progettazione di reti telefoniche VoIP	2008/2009
13	Lena Cota, Guido (UNIMI)	Consenso distribuito in reti non-strutturate a topologia casuale: ruolo dell'asimmetria dei link	2008/2009
14	Biancardi, Stefano (UNIMI)	Previsione del futuro di serie temporali di carattere finanziario mediante macchine di Markov discrete su un alfabeto di candlestick pattern	2008/2009
15	Abdul Fikri (UNIMI)	Application of Artificial Immune System (AIS) technique in the designing of a distributed smart environment	2009-2010
16	Rocco Santese (UNIMI)	A Rational Security approach to Knowledge Intensive Business Process re-Engineering	2009-2010
17	Rainini, Andrea (UNIMI)	Security in virtual environments & implementation of a virtual network	2009/2010
18	Brambilla, Manuele Roberto (UNIMI)	Studio di reti strutturate P2P mediante piattaforma OverSim	2009/2010
19	Primavera, Erika (UNIMI)	Evoluzione del sistema di gestione degli allarmi dei dispositivi di campo: integrazione di un motore di regole	2010/2011
20	Romaniello, Domenico Fabio (UNIMI)	Integrazione dinamica tra Change Request "third party product" e sistema di ticketing	2011/2012

21	Reggiani, Mattia	Reti mobili : studio di protocolli di gossiping opportunistici	2011/2012
22	Ghemmogne Fossi, Leopold (UNIMI)	Studio comparativo di protocolli stateful e stateless per reti non strutturate	2011/2012
23	Caputo, Andrea (UNIMI)	Studio di un sistema informatico per il supporto all'automatizzazione di un magazzino farmaceutico	2011/2012
24	Summa, Francesco (UNIMI)	Studio e implementazione di una soluzione Single-Sign-On	2011/2012
25	Porcu, Mirko (UNIMI)	Design e implementazione parallela dell'algoritmo Retinex mediante architettura GPU	2012/2013
26	Garavelli, Vittorio (UNIMI)	Studio simulativo di protocolli per reti di comunicazione opportunistiche	2012/2013
27	Serina, Michele (UNIMI)	Studio del protocollo di comunicazione Spray and Wait per reti opportunistiche	2013/2014
28	Greco, Vincenzo (UNIMI)	Prototipo di gioco interattivo per lo studio del patching di vulnerabilità	2014/2015
29	Serra, Paolo (UNIMI)	Studio dell'Apprendimento Automatico per la segmentazione dei log di processo finalizzata a rilevazione di anomalie	2018/2019
30	Passini, Andrea (UNIMI)	Transfer Learning applicato alla colorazione di immagini in bianco e nero	2020/2021
31	Pezzoni, Claudio (UNIMI)	Apprendimento di Modelli Retinex mediante Reti Neurali	2020/2021
32	Boem, Matteo (UNIMI)	Studio degli algoritmi di rilevazione oggetti in foto e video: Yolo E Retinanet	2020/2021
33	Bhartiya, Rishabh (UNIMI)	Study of the Random Forest algorithm variants	2021/2022
34	Serventi, Matteo (UNIMI)	A study in heterogeneous transfer learning	2022/2023

External reviewer (contro-relatore) for the M.Sc. thesis of Antonio Napoli (Main supervisor Marco Anisetti) "Studio e implementazione di approcci di Machine Learning e Fuzzing per la certificazione di servizi"

## 4.4 CO-SUPERVISION

### Co-advisor of the following Bachelor and Master Theses

	Studente	Titolo Tesi	Main Advisor	A.A.
1	Manara, Massimo (UNIMI)	Modelli quantitativi del comportamento di un intrusore nell'analisi economica di tecnologie per la sicurezza informatica	Cremonini, Marco	2005-2006
2	Urso, Christian (UNIMI)	Tecniche di trasporto dei dati del processo di sviluppo software nel rispetto della sicurezza e della privacy	Damiani, Ernesto	2003-2004
3	Oggionni, Pierluigi (UNIMI)	Realizzazione di un modulo per il controllo dell'accesso ai dati di log in un processo di sviluppo software	Damiani, Ernesto	2003-2004
4	Parsani, Sara (UNIMI)	Modello UML per l'analisi della corrente di commutazione nelle porte logiche CMOS	Liberali, Valentino	2004-2005
5	Biancini, Federico (UNIMI)	Algoritmo veloce per l'analisi della corrente di commutazione nelle porte logiche CMOS	Liberali, Valentino	2004-2005
6	Rossini, Maddalena (UNIMI)	Tecniche per la rimozione dei graffi e della polvere dalle sequenze di immagini digitali	Rizzi, Alessandro	2006-2007
7	Manenti, Andrea (UNIMI)	Analisi di metodi statistico/geometrici per l'esplorazione locale di immagini in modelli del sistema visivo umano	Rizzi, Alessandro	2007-2008
8	Manenti, Andrea (UNIMI)	Una formulazione probabilistica dell'algoritmo Random Spray Retinex	Rizzi, Alessandro	2009/2010
9	Buffoni, Federico (UNIMI)	Boolean Neural Networks Models and their use in efficient classifier representation	Ernesto Damiani	2016/2017
10	Nada Abdulrahman Abdulla Alhashmi (KUST)	Source node identification based on jittering patterns	Nawaf Almoosa	2019/2020

### Advisor of the following Bachelor last year collaborative projects at the Khalifa University of Science and Technology (KUST)

	Studenti	Titolo del progetto	Anno Accademico
1	Alanood Almemari, Hamda Altamimi, Latifa Alkhateri, Safa Alkatheeri, Sara Tarmoom	Using deep learning to build a brainwave controlled system	2017-2018 <b>Bachelor</b> in CS
2	Mohammad Almaqadmeh, Muawia Almazloum, Mahmud Otman Bashir, Rami Saed	Individual Summer Projects	2019-2020 <b>Master</b> in Computer Science

## 5 OTHER ACADEMIC AND ORGANIZATIONAL RESPONSIBILITIES

### 5.1 INTERNAL APPOINTMENTS

	Role
(2022- present) <b>1 academic year</b>	Member of the <b>Commissione Paritetica</b> Docenti-Studenti, Dipartimento di Informatica Università degli Studi di Milano
(2021- present) <b>2 academic years</b>	Responsible of the “ <b>Orientamento in Itinere</b> ” within the <b>Commissione Orientamento</b> , Dipartimento di Informatica Università degli Studi di Milano
(2021- present) <b>2 academic years</b>	Member of the <b>Commissione per l’Ammissione studenti extra UE</b> to the M.Sc. - Dipartimento di Informatica Università degli Studi di Milano
(2007-present) <b>15 academic years</b>	Member of <b>Doctoral College</b> in Computer Science, Ph.D. Program of Dipartimento di Informatica - Università degli Studi di Milano
(2007-2017) <b>10 academic years</b>	Member of Departmental <b>Library Board</b> Dipartimento di Informatica Università degli Studi di Milano
(2015-2017) <b>2 academic years</b>	Member of the <b>Interdepartmental Committee for Digital Resources</b> Dipartimento di Informatica Università degli Studi di Milano
(2007-2015) <b>8 academic years</b>	Member of the <b>Erasmus Committee</b> Dipartimento di Informatica Università degli Studi di Milano

Member of the evaluation committee, public competition for a Researcher position: (membro della commissione di concorso pubblico 2022INAF18RIC/IASFMI/Posizione15 ai fini del reclutamento di 1 Ricercatore, Terzo Livello Professionale, pieno presso l’Istituto Nazionale di Astrofisica (INAF)). (Determina 57/2022 del 15/6/2022).

#### Member of the admission committee for the Ph.D. positions in Computer Science

- Cycle XXXVIII (Università degli Studi di Milano), January 2023
- Cycle XXXVI (Università degli Studi di Milano), May 2021, ITN Marie-Curie scholarship, CISC project
- Cycle XXXI (Università degli Studi di Milano), September 2015

### 5.2 EXTERNAL APPOINTMENTS

Research Area Coordinator for "Information Modeling" within the integrated international research network **IRIXYS** (International Research and Innovation Centre in Intelligent Digital Systems), <http://www.irixys.org/>

- IRIXYS includes the SesarLab laboratory of the **Università degli Studi di Milano**, the LIRIS/DRIM group at **INSA in Lyon**, the chair of Data Science and the chair of Distributed Information Systems and the **University of Passau**, and the Computer Science Research Laboratory of the **Université de Pau et des pays de l'Adour** (LIUPPA). IRIXYS is one of the strategic university initiatives of Università degli Studi di Milano and represents one of the 4 inter-university agreements operational with France.
- Research and training, within the organization, are structured in the areas of Information Modeling, Data Science and Multimedia Information Systems.

Chair of the final evaluation committee for the Ph.D: defense of

- **Wisnu Uriawan** – December 2022 (INSA Lyon, FR)
- **Yvan Lucas** – December 2019 (INSA Lyon e University of Passau, doppio titolo, FR-DE)



Member of the Ph.D. final evaluation committee for the Ph.D. defense of

- **Thomas Véran** – November 2022 (INSA Lyon, FR) (as rapporteur/reviewer)
- **Rémi Canillas** – December 2020 (INSA Lyon, FR) (as rapporteur/reviewer)
- **Thyerry Nsabimana** – November 2020 (Université d'Abomey-Calavi (UAC), Benin) (rapporteur/reviewer)
- **Johannes Jurgowsky** – December 2019 (INSA Lyon e University of Passau, doppio titolo, FR-DE)
- **Zeinab Fawaz** - December 2016 (Université de la Franche-Comté. FR)
- **Yulian Yung** - April 2015 (INSA Lyon e Università degli Studi di Milano, doppio titolo, IT-FR)
- **Vanessa el Khoury** - September 2013 (INSA Lyon e University of Passau, doppio titolo, FR-DE)
- **Tobias Mayer** - September 2013 (INSA Lyon e University of Passau, doppio titolo, FR-DE)
- **Eduardo Faleiro Usanos** – September 1998 (Universidad Complutense de Madrid, ES) (as reviewer)

### 5.3 CONFERENCE AND WORKSHOP ORGANIZATION

#### Summary:

- Organizing committee member of 9 international conferences/workshops

#### 5.3.1 Conference/Workshop Organization Chair, Publicity Chair etc.

1. Publicity Chair of **ICDIP 2022** 14<sup>th</sup> International Conference on Digital Image Processing, Wuhan China, May 20-23 2022, <http://www.icdip.org/>
2. Session Chair of Session III (Machine Vision) - **ICDIP 2022** 14<sup>th</sup> International Conference on Digital Image Processing, Wuhan China, May 20-23 2022, <http://www.icdip.org/>
3. Organizing Committee member of **MEDES 2020** (12<sup>th</sup> International Conference on Management of Emergent Digital EcoSystems) 2020, Abu Dhabi, UAE
4. Publicity Chair of **ACM Q2SWinet 2020** (16<sup>th</sup> ACM International Symposium on QoS and Security for Wireless and Mobile Networks) – <http://q2swinet.com/2020/> in conjunction with the conference MSWIM 2020 (The 23<sup>rd</sup> ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems) (November 16<sup>th</sup> - 20<sup>th</sup>, 2020 Alicante, Spain)
5. Demo and Poster Chair of **ACM Q2SWinet 2019** (15<sup>th</sup> ACM International Symposium on QoS and Security for Wireless and Mobile Networks) – <http://q2swinet.com/2019/> in conjunction with the conference MSWIM 2019 (The 22<sup>nd</sup> ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems) (November 25<sup>th</sup> - 29<sup>th</sup>, 2019 Miami Beach, USA)
6. Demo and Poster Chair of **ACM Q2SWinet 2018** (14<sup>th</sup> ACM International Symposium on QoS and Security for Wireless and Mobile Networks) - <http://q2swinet.com/2018/> in conjunction with the conference MSWIM 2018 (The 21<sup>st</sup> ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems) <http://mswimconf.com/2018/> (2018, Montreal, Canada)
7. Organizing Committee member of **Agile Development Workshop 2005** - II Forum AICA sulle Tecniche Agili per il Software Process Improvement 15 Novembre 2005, Milano, Italy
8. Organizing Committee member of Workshop SIGSOFT **QUTESWAP**: QUAntitative TEchniques for SoftWare Agile Processes, within ACM SIGSOFT 2004/FSE-12 - Newport Beach USA Oct 31 - Nov 5, 2004
9. Organizing Committee member of **Agile Development Workshop 2004** - Primo Forum AICA sulle Tecniche Agili per il Software Process Improvement 3-4 Giugno 2004, Milano, Italy
10. Organizing Committee of **RPC Workshop**, Pavia, Italy October 1995

## 6 MEMBERSHIPS AND ROLE IN THE SCIENTIFIC COMMUNITY

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### Summary:

- Associate Editor for 4 international journals
- Guest Editor of 7 special issues on international journals
- Co-Editor of 1 volume with international diffusion
- Conference Chair of 1 international conference
- Workshop Chair or Track Chair of 3 workshops and 1 track at international conferences
- Program Chair of 6 international doctoral workshops
- Technical Program Committee member of 26 instances of conferences (16 distinct conferences)
- Reviewer for 28 conferences and for at least 20 international journals
- Invited speaker at 3 conferences + 12 tutorials
- Papers presented at more than 40 conferences and workshops

### 6.1 ASSOCIATE AND GUEST EDITORSHIP

#### 6.1.1 Associate Editorship

Associate Editor of the journal “Data Science and Engineering” (**DSEJ**) – Springer (dal Gennaio 2018) - la rivista è nel quartile **Q2** in Computer Science Applications (Scimago Journal Rank - SJR)

Associate Editor of the journal “Information” (**MDPI**) (Multidisciplinary Digital Publishing Institute) Section Board for 'Artificial Intelligence' (dal Giugno 2020) - la rivista è nel quartile **Q3** in Computer Science Applications (Scimago Journal Rank - SJR)

Associate Editor of the “Journal of Imaging Science and Technology” (**JIST**) (Society for Imaging Science and Technology) dal Marzo 2018 - la rivista è nel quartile **Q4** in Computer Science Applications (SJR Rank)

Associate Editor of the journal “Frontiers in Big Data” Speciality: Machine Learning and Artificial Intelligence dall’Aprile 2022.

#### 6.1.2 Guest Editorship

1. Guest Editor of Special Issue for **Journal of Imaging Science and Technology** (JIST, Society for Imaging Science and Technology) – “IS&T 75<sup>th</sup> Anniversary Special Issue” (publication 2023), Eds. Sophie Triantaphillidou, Gabriele Gianini, Teruaki Mitsuya, Kye Si Kwon, Steven Simske
2. Guest Editor of Special Issue for **Computing** (Springer) – “QoS and QoE in Large Scale wireless IoT Networks” (2022), Eds. Ahmed Mostefaoui, Gabriele Gianini, Cheng Li, Ernesto Damiani
3. Guest Editor of Special Issue for **Frontiers in Big Data** “Software Engineering Challenges for Machine Learning” (2021), Eds. Gabriele Gianini, Michel Granitzer, Pierre-Edouard Portier, Christin Seifert
4. Guest Editor of Special Issue for **MDPI Information** “Advances in Explainable Artificial Intelligence” (2021), Eds. Gabriele Gianini, Pierre-Edouard Portier (to date, 7 papers published in the issue)
5. Guest Editor of Special Issue for **Computing** (Springer) – Special Issue on “QoS and security in software for wireless and mobile micro-services” (2021), Eds. Ahmed Mostefaoui, Gabriele Gianini, Ernesto Damiani, Geon Min
6. Guest Editor of Special Issue for **Journal of Electronic Imaging** (JEI) – Special Issue “Retinex at 50”, vol. 26 (3) (2017) Eds. Alessandro Rizzi, Marcelo Bertalmio, Gabriele Gianini, John McCann
7. Guest Editor of Special Issue for the International **Journal of Computer Systems Sciences and Engineering** (IJCSSE, CRL Publishing) - Special issue on Web Service Security, vol 21(5) (2006) Eds. Ernesto Damiani, Gabriele Gianini, Hiroshi Maruyama
8. Co-Editor del volume “Sharing experiences on agile methodologies in Open Source Software development” – Polimetrica (2006) Ed.s Gabriele Gianini, Alberto Sillitti (ISBN-13: 9788876990342)

## 6.2 CONFERENCE AND WORKSHOP CHAIR

### 6.2.1 Conference Chair

1. Co-chair of the 5<sup>th</sup> International Conference on Computing Sciences (**ICCS**) – Lovely Professional University Phagwara, Punjab, India (4th-6th December 2021)

### 6.2.2 Workshop Chair

1. Co-chair of the workshop **MLWCOM 2020** (Machine Learning for Wireless Communications) <http://sesar.di.unimi.it/call/mlwcom-2020/> in conjunction with ISCC (International Symposium on Computers and Communications), Rennes – <https://conferences.imt-atlantique.fr/iscc2020/>
2. Co-chair of the workshop **MLWCOM 2019** (Machine Learning for Wireless Communications) <http://sesar.di.unimi.it/call/mlwcom-2019/> in conjunction with ISCC (International Symposium on Computers and Communications), Barcelona – <http://paradise.site.uottawa.ca/iscc2019>
3. Co-chair of Workshop **SESAMOSS 2005** @ OSS 2005 Sharing ExperienceS on Agile Methodologies in Open Source Software development (SESAMOSS) Monday, July 11, 2005 – Università di Genova, Italy within the "First International Conference on Open Source Systems" Workshop page: <http://ra.crema.unimi.it/sesamoss05/> conference page: <http://oss2005.case.unibz.it/index.html>
4. Track Chair of **IEEE DEST-CEE 2012**: Track A "Foundations of Digital Ecosystems and Complex Environment", IEEE DEST-CEE 2012 : 6th IEEE International Conference on Digital Ecosystems Technologies - Complex Environment Engineering - <http://sesar.dti.unimi.it/DEST2012/>

### 6.2.3 Doctoral Workshop Chair

11. Co-Chair -- **MDPS/IRIXYS** Doctoral Workshop (Ph.D. Workshop on Multimedia Distributed Pervasive Systems organized by the International Research & Innovation Center on Intelligent Digital Systems, IRIXYS) - Università degli Studi di Milano: October **2022**, November **2020**, June **2018**, June **2016**, June **2014**, January **2013**, June **2011**.

## 6.3 SCIENTIFIC AND TECHNICAL SOCIETIES MEMBERSHIPS

- Member of the Institute of Electrical and Electronics Engineers (IEEE)
- Member of the Optical American Society (OSA)
- Associated Membership (associatura) Istituto Italiano di Astrofisica (INAF), afferenza IASF Milano

## 6.4 TPC MEMBERSHIP AND REVIEWER ACTIVITIES

### 6.4.1 TPC membership

<ol style="list-style-type: none"> <li>1. Track Graph Models for Learning and Recognition, <b>GMLR 2022</b>, @ 37th ACM Symposium on Applied Computing, SAC 2022 (Brno, Czech Republic), <a href="http://phuselab.di.unimi.it/GMLR2022/">http://phuselab.di.unimi.it/GMLR2022/</a></li> <li>2. 14th International Conference on Digital Image Processing, <b>ICDIP 2022</b>, (Wuhan, China)</li> <li>3. International Conference on Machine Learning and Applications <b>IEEE ICMLA 2021, 2022</b></li> <li>4. The 1st International Electronic Conference on Information, <b>IECI 2021</b>, virtual conference <a href="https://sciforum.net/event/IECI2021">https://sciforum.net/event/IECI2021</a></li> <li>5. IEEE Cyber Security and Resilience Conference <b>IEEE CSR 2021</b>, virtual conference</li> <li>6. IEEE International Conference on Smart Data Services, <b>IEEE SMDS 2021</b> (Special Track: Graphs, Knowledge Graphs, and AI)</li> <li>7. W.kshop AI System Engineering <b>AI Sys@DEXA 2022, 2021</b></li> <li>8. Conference on QoS and Security for Wireless &amp; Mobile Nets: <b>Q2SWINET 2021, 2020, 2019, 2018</b></li> </ol>	<ol style="list-style-type: none"> <li>9. Track Video Processing for Human Behavioral Analysis @ <b>ACM SAC 2021</b></li> <li>10. Advanced Modelling of Health Systems and Policies <b>HCIS-20</b> Special Session @ <b>KES 2020</b></li> <li>11. IEEE World Congress on Services: <b>SERVICES 2020, 2019</b></li> <li>12. International Symposium on Computers and Communications: <b>ISCC 2019</b></li> <li>13. IEEE International Conference on Big Data: <b>IEEE BigData 2022, 2021, 2020, 2019, 2018</b></li> <li>14. International Conference on Signal-Image Technology &amp; Internet-Based Systems: <b>SITIS 2019 (ACI workshop on Applications of Computational Intelligence)</b> <b>SITIS 2018 (I-WeKA, Intelligent Web Computing and Applications)</b>, <b>SITIS 2015, SITIS 2016</b></li> <li>15. Electronic Imaging: <b>EI 2016</b></li> <li>16. IEEE Digital EcoSystem Technologies: <b>IEEE DEST 2012, 2007</b></li> </ol>
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### 6.4.2 Reviewer activity for conferences

<ol style="list-style-type: none"> <li>1. <b>IJCAI-PRICAI2020</b> (29th International Joint Conference on Artificial Intelligence and 17th Pacific Rim International Conference on Artificial Intelligence.)</li> <li>2. <b>DASFAA 2018</b> 23rd International Conference on Database Systems for Advanced Applications</li> <li>3. <b>ICWS 2019, 2018, 2017, 2016</b> (International Conference on Web Services)</li> <li>4. <b>ICIT 2017</b> 16th International Conference on Information Technology</li> <li>5. <b>ACM MEDES 2015, 2010</b> International Conference on the Management of computational and collective Intelligence in Digital EcoSystems</li> <li>6. <b>EESM 2015</b> (Environmental, Energy, and Structural Monitoring Systems)</li> <li>7. <b>ICTRC 2015</b> (International Conference on Information and Communication Technology Research)</li> <li>8. <b>INFORSID 2013</b> (Congrès INformatique des ORganisations et Systèmes d'Information et de Décision)</li> <li>9. <b>SITIS 2013, 2009</b> (International Conference on Signal-Image Technology &amp; Internet-Based Systems)</li> </ol>	<ol style="list-style-type: none"> <li>10. <b>IEEE DEST CEE 2013</b> IEEE International Conference on Digital Ecosystems and Technologies</li> <li>11. <b>INFORSID 2013</b> Congrès INformatique des ORganisations et Systèmes d'Information et de Décision</li> <li>12. <b>ICIS 2011</b> (International Conference on Information Systems)</li> <li>13. <b>KES-IIMMSS 2010, 2009, 2008, 2007</b> (International Conference on Knowledge-Based and Intelligent Information &amp; Engineering Systems)</li> <li>14. <b>NaBIC 2010</b> (World Congress on Nature and Biologically Inspired Computing)</li> <li>15. <b>SWS 2009, 2008</b> (ACM Workshop on Secure Web Services)</li> <li>16. <b>CSS 2009</b> (ACM Computer and Communications Security Conference)</li> <li>17. <b>BPS 2009</b> (International Workshop on Business Processes Security)</li> <li>18. <b>KMO 2007</b> (Knowledge Management in Organizations)</li> </ol>
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## 6.5 REVIEWER FOR INTERNATIONAL JOURNALS

Among the journals for which the candidate has acted as reviewer are the following:

IEEE Transactions on Fuzzy Systems ( <b>IEEE-TFS</b> )	Journal of Systems Architecture ( <b>JSA</b> ), Elsevier
IEEE Transactions on Service Computing ( <b>IEEE-TSC</b> )	<b>EPJ Data Science</b> , Elsevier
IEEE Transactions on Image Processing ( <b>IEEE-TIP</b> )	Multimedia Tools and Applications ( <b>MTAP</b> ), Springer
IEEE Transactions on Artificial Intelligence ( <b>IEEE-TAI</b> )	Computer Networks ( <b>COMNET</b> ), Elsevier
IEEE Intelligent Transportation Systems Magazine	IET Wireless Sensor Systems (IET), IET society
IEEE Transactions on Network and Service Management ( <b>IEEE-TNSM</b> )	Journal of Electronic Imaging ( <b>JEI</b> ), SPIE society
IEEE Systems Journal ( <b>IEEE-SJ</b> )	Journal of Applied Remote Sensing ( <b>JARS</b> ), SPIE society
ACM Transactions on Internet Technology ( <b>ACM-TOIT</b> )	Scientific Programming ( <b>SP</b> ), Hindawi
Signal Processing Image Communication, Elsevier	Journal of Imaging Science and Technology" ( <b>JIST</b> )
Artificial Intelligence in Medicine ( <b>AIIM</b> ), Elsevier	Expert Systems With Applications ( <b>ESWA</b> ), Elsevier
Concurrency and Computation, Practice and Experience ( <b>CCPE</b> ), Elsevier	International Journal of Knowledge and Learning ( <b>IJKL</b> ) – Inderscience
<b>PLOS ONE</b> , Elsevier	Journal of the Optical Society of America ( <b>JOSA</b> )

## 6.6 INVITED TALKS AT CONFERENCES AND TUTORIALS

### 6.6.1 Invited talks at conferences

1. 2016 - Invited talk "Statistical Aspects of Space Sampling in Retinex models" – Gabriele Gianini, at Electronic Imaging conference **EI 2016** (San Francisco, USA, Feb 2016)
2. 2006 - Keynote - The Discovery of the Software Process by Means of Machine Learning Techniques – Ernesto Damiani, Gabriele Gianini - IASTED International Conference on Software Engineering, **SE 2006**, February 14 – 16, 2006 - Innsbruck, Austria
3. 2004 - Keynote - Discovering the software process from automatically collected event data: data mining challenges and privacy protection concerns, Gabriele Gianini - **OTS 2004** Conference, Object Technology in Slovenia - June 16-17, Maribor, Slovenia <http://cot.uni-mb.si/ots2004/program.html>

### 6.6.2 Tutorials

1. 2021 – Tutorial "A Guided Tour of Machine Learning" Summer School of the Marie Skłodowska-Curie ITN Doctoral Network CISC (2022), Dublin
2. 2021 – Tutorial "Principles of Machine Learning" Summer School of the Marie Skłodowska-Curie ITN Doctoral Network CISC (2021), Dublin
3. 2015 – Tutorial "The (n+1) lives of the Shapley Value - Recent Developments and Computer Science Applications of a Coalitional Game Theory concept", Fakultätskolloquium, 10/11/2015, Fakultät für Informatik und Mathematik, Universität Passau
4. 2010 - Tutorial at MDPS/IRIXYS 2010 International Doctoral Workshop: "Introduction to Markov Chain Monte Carlo Techniques" – Lyon, December 2010
5. 2005 - Tutorial presso il "Seminario Gorini sulle Misure": "Introduction to Networking for Sensor Networks: Principles, Protocols & Recent Developments", Monte Bondone, Trento 29 Agosto 2005
6. 2004 - Tutorial "Networks for Measurement and Monitoring Systems" at **IEEE IMTC 2004** Instrumentation and Measurement Technology Conference Como, Italy - 18-20 May 2004, Lecturers: Gabriele Gianini and Damiano Somenzi, Università degli Studi di Milano, Crema, Italy <http://ewh.ieee.org/soc/im/imtc/imtcur/>
7. 1997 - Seminario "Introduction to Wavelet Transform for Signal Compression and Denoising", tenuto alla Universidad Complutense de Madrid
8. 1997 - Ciclo di 2 seminari – "Applicazioni delle trasformate Wavelet", Seminari del Collegio Universitario Ghislieri, Pavia
9. 1996 - Seminario "Introduction to Wavelet Transform for Signal Compression and Denoising", tenuto alla Escuela Universitaria de Ingeniería Técnica Industrial, di Madrid
10. 1995-96 Due cicli di seminari su "Tecniche di analisi in multi-risoluzione" nell'ambito del Corso Istituzioni di Fisica Superiore, titolare Sergio P.Ratti, Università di Pavia
11. 1995 - Seminario per il Dottorato di Ricerca in Fisica: "Le risorse delle reti informatiche per la Fisica", Università degli Studi di Pavia
12. 1994 – Seminar "The extension of Factorial and Cumulant Moments to Continuous Rank", Lebedev Physics Institute, Moscow
13. 1994 – Seminar: "La previsione del futuro delle Serie Temporal", Università degli Studi di Pavia

## 7 SCIENTIFIC RESEARCH AND SCHOLARSHIPS/FELLOWSHIPS

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### Summary:

- Visiting researcher or research fellow abroad for **6** years overall, out of which
  - o **2** years as Visiting Scientist at Fermilab (Chicago) and CERN (Geneva)
  - o **4** years as Fellow at 3 CS departments (INSA (FR), Passau (DE), EBTIC/KUST (UAE))
- Key role in the creation of a laboratory network among two Italian universities and one in the UAE
- Key role in the creation of an integrated tri-national (Italian-French-German) research network (IRIXYS)
- Head of **1** research area in a tri-national integrated network of academic cooperation (IRIXYS)
- Principal Investigator in **1** project funded by private institutions (ATOS/Worldline)
- Co-Principal Investigator in **2** research projects funded by tender from public or private institutions
- Task Leader for **1** task of the PNRR MUSA Spoke 2 project
- Responsible for UNIMI of **1** Marie Skłodowska-Curie project (Innovative Training Networks, H2020)
- Co-responsible for 2 Italian-French exchange projects funded by the Italian-French University
- 3 best research paper awards at conferences + 1 journal editor's pick + 2 scientific label
- Participant as researcher to **22** funded projects

### 7.1 RESEARCH INTERESTS

Gabriele Gianini has been carrying out research since 1992 in the fields of **Data Science**, **Machine Learning**, and **Computational Intelligence**. His research interests have spanned **various application fields**, maintaining probabilistic and statistical modeling as a common methodological trait.

### 7.2 FORMAL ATTRIBUTION OF FELLOWSHIPS AND VISITING POSITIONS

Summary of the fellowships:

- (in the period 1991 to 2000) as a scholar of the U.of Pavia, within visiting positions at the **FermiLab** (Chicago) and **CERN** (Geneva) within the projects E687,E831/Focus (@Tevatron) and CMS (@LHC)
- (in the period 2011 to 2020) as a scholar of the University of Milan, several fellowships at
  - o Lab LIRIS/DRIM at the **INSA de Lyon** (10 months)
  - o Chair of Distributed Information Systems of the University of **Passau** (2 months)
  - o EBTIC center, **Khalifa University**, Abu Dhabi (39 months)

#### 7.2.1 List of Visiting Positions and Fellowships

**36 months – EBTIC/Khalifa University** - Senior Researcher Fellowship at EBTIC center, Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates (from 04-09-2017 to 3-09-2020).

**3 months – EBTIC/Khalifa University** - Research Fellowship at EBTIC center, Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates (from 01-10-2016 to 31-12-2016).

**1 month – Passau Universitat**, Research Fellowship at the Chair of Distributed Information Systems of the University of Passau (from 12-10-2015 to 17-11-2015).

**4 months – INSA Lyon**, Research Fellowship at the INSA de Lyon, group LIRIS/DRIM - Funding Agency: Region Rhone-Alpes, project CMIRA/AccueilPro (grant n.14.004390) from a **competitive tender** (from 01-10-2014 to 28-02-2015)

**1 month – Passau Universitat**, Research Fellowship presso la Chair of Distributed Information Systems University of Passau. Stay supported by a grant for the mobility of researchers obtained through a **competitive tender DAAD** (Deutscher Akademischer Austausch Dienst) (from 12-01-2014 to 16-02-2014)

**3 months – INSA Lyon**, Research Fellowship at the INSA of Lyon, research group LIRIS/DRIM - Funding Agency: INSA of Lyon from 01-10-2013 to 31-12-2013.

**1 month - Passau Universitat**, Research Fellow presso la Chair of Distributed Information Systems of the University of Passau (dal 22-10-2012 al 07-12-2012).

**3 months – INSA Lyon** – Research Fellowship at the INSA of Lyon, research group LIRIS/DRIM - Funding Agency: CNRS Rhône-Alpes (dal 01-10-2011 al 31-12-2011).

**6 months - CERN**, Centro Europeo per la Ricerca Nucleare (Geneva) Visiting Scientist (mobility supported by INFN) (vari periodi dal 01-01-1995 al 31-12-1999).

**18 months - FERMILAB**, Fermi National Accelerator Laboratory (Chicago) Visiting Scientist (mobility supported by INFN) (various periods with a variable duration from 16-06-1991 to 10-12-1999).

## 7.3 LEADING ROLE IN FUNDED PROJECTS AND SCIENTIFIC NETWORKS

### 7.3.1 Creation/organization/direction/coordination of national and international research centers

The candidate has made a key contribution to the following two institutional collaboration initiatives:

1. Construction of the integrated international research network IRIXYS (International Research and Innovation Centre in Intelligent Digital Systems), <http://www.iriixys.org/> which includes the SesarLab laboratory of the **Università degli Studi di Milano**, together with the LIRIS/DRIM group at **INSA in Lyon**, the chair of Data Science and the chair of Distributed Information Systems and the **University of Passau**.<sup>3</sup> The candidate exploited of the total 12 months of stay as a Fellow at INSA and at the University of Passau, not only to take part in the common research activity, but also to contribute to the write-up of the
  - a. international agreements for the creation of IRIXYS, signed by the 3 universities in 2016. Today IRIXYS is one of the strategic university initiatives of Università degli Studi di Milano and represents one of the 4 inter-university agreements operational with France.
  - b. agreements for the extension of IRIXYS to the **Université de Pau et des pays de l'Adour**, FranceThe IRIXYS network is now part of the strategic initiatives of the UNIMI university. Its activities include
  - institutional initiatives, such as the creation of joint masters
  - training, under the form of organization of doctoral schools and workshops every six months
  - and research activities in collaboration with industrial partners, including Atos and Siemens
2. Institutionalization of a collaboration framework among UNIMI, Khalifa University of Science and Technology (KUST), Abu Dhabi, UAE, and Scuola di Studi Superiori Sant'Anna (SSSA) of Pisa, sanctioned by various bi- and tri-lateral agreements. The candidate exploited the total 39 months spent as a Fellow at KUST, to contribute to the drafting of the following agreements
  - <https://www.unimi.it/en/international/university-milan-world/international-agreements/framework-agreement-khalifa-university-science-and-technology>
  - c. Bi-lateral Memorandum of Understanding UNIMI-KUST (February 2019)
  - d. Agreement for the supervision and exchange of PhD students UNIMI-KUST (December 2019)
  - e. Tri-lateral agreement for the creation of a joint laboratory UNIMI-SSSA-KUST (December 2019)

### 7.3.2 Leadership in projects financed by public or private institutions

1. Principal Investigator of project SAMPSON - Università degli Studi di Milano: Credit Card Fraud Prevention: Performance Assessment and Management of rule pools (2017-2018) - funded by ATOS/Worldline (Lyon/Brussels). (Budget Euro 15,000.00)

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<sup>3</sup> The IRIXYS network has been active in the area of information and communication technologies de facto since 2008 (as Doctoral College on Multimedia Distributed Pervasive Secure Systems (MDPS)) and the research group SesarLab has been part of it since 2010.

### 7.3.3 Leadership in international and national projects, funded based of competitive tenders

1. Task Leader PNRR MUSA Spoke 2 WP1 Task 1.7: Pilot Fusion of image-tabular data for federated learning of diagnostic models (industrial partner CDI/Bracco), within the project MUSA (Multilayered Urban Sustainability Action) Spoke 2, PNRR funds– 2022-2025.
2. Responsible for UNIMI of the project CISC “**Collaborative Intelligence for Safety Critical systems**” a Marie Skłodowska-Curie, Innovative Training Networks project, devoted to funding an Early Stage Researcher (ESR), (a Ph.D. student position): the activity consists in the coordination with the CISC collaboration, involving 12 institutions/companies e 14 ESR (Budget: EU contribution Euro 3,605,548.32, UNIMI share Euro 229,099.68)
3. Co-Principal-Investigator of the project “**Cloud-enabled Business Process Management As-a-Service**”, funded by the ICT Fund (project n.3093, 2016-2018) at EBTIC (Emirates Innovation Center) of the Khalifa University of Science and Technology (KUST), Abu Dhabi. The project content was coordinated with FIRB Tekne (previously conducted by SesarLab at UNIMI). (Budget USD 3,577,029)
4. Co-Principal-Investigator of the project “**A decision support system for AI applications in the oil and gas industry**”, selected in the RDPETRO 2018 competition by an international jury of industrial partners, supported by the Abu Dhabi National Oil Company (**ADNOC**) – (Budget USD 2,410,251).
5. Co-responsible of the project **VINCI**, for the funding of research mobility between Italy and France (2011-13), funded by UFI (Università Franco Italiana). (Budget: Euro 15,000,00)
6. Co-responsible (responsible for the Italian side) of the project **COOPERA** (scientific collaboration between the University of Milan, INSA of Lyon and the University of Addis Ababa) funded by the Rhone-Alpes Region (2014-16, budget: 20,000 managed by the French partner INSA of Lyon).

## 7.4 AWARDS AND SPECIAL MENTIONS FOR SCIENTIFIC ACTIVITY

**2022** – The manuscript entitled “*Mathematical insights into the Original Retinex Algorithm for Image Enhancement*”, published in Journal of the Optical Society of America A, has been highlighted as a “Journal Editor's Pick” (text from the publisher: “Editor's Picks serve to highlight articles with excellent scientific quality and are representative of the work taking place in a specific field”).

**2019** - The initiative Italian-French-German Doctoral College MDPS/IRIXYS of which Gabriele Gianini is a coordinator, together with Stelvio Cimato (Ernesto Damiani leading scientist for U.of Milan) has received the Scientific Label of the **UFI** (Università Italo Francese/Université Franco-Italienne) for the **year 2019**.

**2018** - Best Research Paper Award at **KES 2018**, 22nd International Conference on Knowledge-Based and Intelligent Information & Engineering Systems 2018 Belgrade, Serbia, 3-5 September 2018 – Julian Stier, Michael Granitzer, Gabriele Gianini, Konstantin Ziegler “*Analyzing Neural Network Topologies: a Game Theoretic Approach*”

**2011** - The initiative Italian-French-German Doctoral College MDPS/IRIXYS of which Gabriele Gianini is a coordinator, together with Stelvio Cimato (Ernesto Damiani leading scientist for U.of Milan) has received the Scientific Label of the **UFI** (Università Italo Francese/Université Franco-Italienne) for the **year 2011**.

**2009** - Best Research Paper Award at **INFORSID 2014** Conference for the paper “*Tag Similarity in Folksonomies*” – Hatem Mousselly Sergieh, Elöd Egyed-Zsigmond, Mario Döller, Gabriele Gianini, Harald Kosch et Jean-Marie Pinon

**2009** - Best Track Paper Award at **IEEE DEST 2009** 3rd IEEE International Conference on Digital Ecosystems and Technologies, for the paper “*An Artificial Immune System Approach to Anomaly Detection in Multimedia Ambient Intelligence*” - G Gianini, M Anisetti, A Azzini, V Bellandi, E Damiani, S Marrara



## 7.5 PARTICIPATION TO PUBLICLY FUNDED PROJECTS

1. PNRR **MUSA** Spoke 2 WP1 Task 1.6 Exploiting Genomic Data for Drug Design.
2. H2020 Project "**Impetus**" (Intelligent Management of Processes, Ethics and Technology for Urban Safety), (Grant agreement No. 883286).
3. Project "**Interactive Learning in Process Mining**", funded by Dipartimento di Informatica, Università degli studi di Milano with the Piano di Sostegno alla ricerca, [PSR 2021](#). Responsible Prof. P. Ceravolo.
4. H2020 Project "**ADMIRE**" (Adaptive multi-tier intelligent data manager for Exascale) [H2020-EU.2.1.1.2](#). Industrial Leadership - Information and Communication Technologies (ICT) - Next generation computing (Grant agreement No. 956748). Responsible for UNIMI is prof. Claudio Ardagna.
5. Project "**EIMAWA**" ("Egyptian – Italian Mission at West Aswan") funded by [Bando SEED 2019](#) project 1141, Università degli Studi di Milano: For the UNIMI CS department responsible Prof. E. Damiani. (2019-, ongoing).
6. Project "**RRAM-Based Computational Intelligence Hardware for IoT**", funded by [ADEK](#) (Abu Dhabi Ministry of Education and Knowledge) – Higher Education Sector within the program AARE2018 (ADEK Award for Research Excellence) (2019-2021). Scientific responsible: Baker Mohammad, Khalifa University of Science and Technology, Abu Dhabi, UAE.
7. Project **EBTIC/SPL-Software Product Line: Machine Learning Supported Legacy Software Reverse Engineering** (dal 2018 al 2020). Responsabile Scientifico: Salwa Mohamed Rashed Alzahmi, EBTIC/Khalifa University of Science and Technology, Abu Dhabi, UAE.
8. Project **MiND FoodS Hub** (CUP E41B20000070007, POR FESR 2014-2020 - Call [HUB Ricerca e Innovazione](#)): identifying crops with optimal nutritional profiles and developing optimized and innovative growing systems (Start 2020). For the UNIMI CS department responsible Prof. Ernesto Damiani.
9. Project **Aspetti Umani nella Fruizione di Video, Immagini, e Grafica (AURIGA)** funded by the Dip. di Informatica, Università degli Studi di Milano within Piano di Sostegno alla Ricerca, [PSR 2019](#). Responsible Prof. A. Rizzi
10. H2020 Project – **Smart Bear** (Smart Big Data Platform to Offer Evidence-based Personalised Support for Healthy and Independent Living at Home) [H2020-SC1-FA-DTS-2018-2](#) - Grant Agreement No. -857172 (2018-21) Responsabile Scientifico UNIMI: Prof. Ernesto Damiani
11. H2020 Project – **Concordia** (Cyber Security Competence for Research and Innovation) H2020 - Grant Agreement (2018-21) Responsible UNIMI: Prof. Ernesto Damiani
12. H2020 Project – **Threat-Arrest** (Cyber Security Threats and Threat Actors Training - Assurance Driven Multi-Layer, end-to-end Simulation and Training) H2020 - Grant Agreement No. 786890 (2018-21). Scientific Responsible UNIMI: Prof. Ernesto Damiani
13. H2020 Project - **EVOTION** (Big Data Supporting Public Hearing Health Policies) H2020 - Grant Agreement No 727521 (2016-19) Scientific Responsible UNIMI: Prof. Ernesto Damiani
14. H2020 Project - **TOREADOR** (Trustworthy model-aware Analytics Data platfORm) H2020 - Grant Agreement No 688797 (2016-18) Scientific Responsible UNIMI: Prof. Ernesto Damiani
15. Project **DECANO** (Data Intensive Applications in Smart City Scenarios) funded by Dip. di Informatica di UNIMI within Piano di Sostegno alla Ricerca, [PSR 2016](#), [PSR 2017](#), [PSR 2018](#). Scientific Responsible prof. Gian Paolo Rossi.
16. Project [PRIN2011](#) "**SecurityHorizons**" funded by MIUR (2013-2016); Responsible UNIMI: Prof. Ernesto Damiani
17. [FP7](#) Project- **PRACTICE** (Privacy Preserving Computation in the Cloud) FP7- 609611 (2013-16) Scientific Responsible UNIMI: Prof. Ernesto Damiani
18. National Project, **KITE.IT** (Knowledge and Business Intelligence Technologies in Cross-Enterprise Environments for Italian Advanced Mechanical Industry) – Funded by Ministero dello Sviluppo Economico - MISE - D.M. n. 00074MI01 del 16/12/2011 - Bando PII Nuove Tecnologie per il Made in Italy "Industria 2015" Scientific Responsible UNIMI: Prof. Ernesto Damiani
19. [FP7](#) Project - **SecureSCM** (Secure Supply Chain Management) FP7- 213531 (2008-11) Responsabile Scientifico UNIMI: Prof. Ernesto Damiani
20. [FP7](#) Project - **ARISTOTELE** (Personalised Learning & Collaborative Working Environments Fostering Social Creativity and Innovations Inside the Organisations). FP7 ICT G.A. No. 257886
21. [FIRB Project](#) "**TEKNE**" (Towards Evolving Knowledge-based interNetworked Enterprise) funded by the FIRB fund for fundamental research - (c.n. 2010XSEMLC) (2006-2009) Scientific Responsible UNIMI: Prof. Ernesto Damiani
22. [FIRB Project](#) "**MAPS**" (Modeling Agile Processes of Software development) finanziato dal fondo FIRB per la ricerca di base (2004-2006) Scientific Responsible UNIMI: Prof. Ernesto Damiani

## 8 SCIENTIFIC PUBLICATIONS

### 8.1 12 SELECTED PUBLICATIONS, WITH JOURNAL CITATION SCORE, IMPACT FACTOR AND QUARTILE

Articles n. 1-11 are **journal articles published in refereed academic journals**: the 3 rightmost columns report Citation Score (CS), Impact Factor (IF), Quartile and Rank according to Scopus. Article n. 12, has been published in the proceedings of an **international conference**. For all the works are reported the publisher, the place of publication, the ISSN and the DOI url. They are listed in decreasing Citation Score order.

Articles	CS	IF	Scopus Rank
1 - Managing a Pool of Rules for Credit Card Fraud Detection by a Game Theory based Approach / <i>Gabriele Gianini</i> , Leopold Ghemmogne Fossi, Corrado Mio, Olivier Caelen, Lionel Brunie, Ernesto Damiani – <b>Future Generation Computer Systems</b> , 102, 549-561 (2020) - Elsevier, Amsterdam, Netherlands, ISSN: 0167-739X <a href="https://doi.org/10.1016/j.future.2019.08.028">https://doi.org/10.1016/j.future.2019.08.028</a>	18.7	7.19	Q1 - 99% (2/167) Hardware & Architecture
2 - SOAP processing performance and enhancement / Joe Tekli, Ernesto Damiani, Richard Chbeir, <i>Gabriele Gianini</i> in <b>IEEE Transactions on Services Computing</b> 5:3 (2012), 387-403 - IEEE Computer Society - Los Alamitos, CA, USA - ISSN: 1939-1374 <a href="https://doi.org/10.1109/TSC.2011.11">https://doi.org/10.1109/TSC.2011.11</a>	13.6	8.22	Q1 - 96% (23/747) in CS Applications
3 - RACOON++: A Semi-Automatic Framework for the Selfishness-aware Design of Cooperative Systems / Guido Lena Cota, Sonia Ben Mokhtar, <i>Gabriele Gianini</i> , Ernesto Damiani, Julia Lawall, Gilles Muller, Lionel Brunie in <b>IEEE Transactions on Dependable and Secure Computing</b> , vol. PP, no.99, pp.1-1 (2017) - IEEE Computer Society, Los Alamitos, CA, USA, ISSN: 1545-5971 <a href="https://doi.org/10.1109/TDSC.2017.2706286">https://doi.org/10.1109/TDSC.2017.2706286</a>	13.5	7.33	Q1 - 95% (11/231) in General CS
4 - A Retinex model based on Absorbing Markov Chains / <i>Gabriele Gianini</i> , Alessandro Rizzi, Ernesto Damiani - <b>Information Sciences</b> 327, 149-174 (2016) - Elsevier, Amsterdam, Netherlands ISSN: 0020-0255 <a href="https://doi.org/10.1016/j.ins.2015.08.015">https://doi.org/10.1016/j.ins.2015.08.015</a>	12.1	6.80	Q1 - 95% (35/747) in CS Applications
5 - A delay and cost balancing protocol for message routing in mobile delay tolerant networks / Jingwei Miao, Omar Hasan, Sonia Ben Mokhtar, Lionel Brunie, <i>Gabriele Gianini</i> – <b>Ad-Hoc Networks</b> 25, 430-443 (2014) Elsevier, Amsterdam, Netherlands ISSN: 1570-8705 <a href="https://doi.org/10.1016/j.adhoc.2014.08.008">https://doi.org/10.1016/j.adhoc.2014.08.008</a>	9.5	4.11	Q1 - 91% (30/359) in Computer Networks & Communications
6 - Multi-disease big data analysis using beetle swarm optimization and an adaptive neuro-fuzzy inference system / Parminder Singh, Avinash Kaur, Ranbir Singh Batth, Sukhpreet Kaur, <i>Gabriele Gianini</i> , <b>Neural Computing and Applications</b> , (2021) Springer, London, UK, ISSN: 0941-0643 <a href="https://doi.org/10.1007/s00521-021-05798-x">https://doi.org/10.1007/s00521-021-05798-x</a>	8.7	5.61	Q1 - 84% (43/269) in Artificial Intelligence
7 - An Evolutionary Cluster-Game Approach for Wireless Sensor Networks in Non-collaborative Settings / Ketema Adere Gameda, <i>Gabriele Gianini</i> , Mulugeta Libsie, <b>Pervasive and Mobile Computing</b> 42, 209-225 (2017) - Elsevier, Amsterdam, Netherlands, ISSN: 1574-1192 <a href="https://doi.org/10.1016/j.pmcj.2017.10.008">https://doi.org/10.1016/j.pmcj.2017.10.008</a>	7.9	3.45	Q1 - 87% (46/359) Computer Networks & Communications
8 - A cryptographic cloud-based approach for the mitigation of the airline cargo cancellation problem / Stelvio Cimato, <i>Gabriele Gianini</i> , Maryam Sepehri, Rasool Asal, Ernesto Damiani, <b>Journal of Information Security and Applications</b> , Volume 51, 2020, 102462 - Elsevier, Amsterdam, Netherlands, ISSN: 2214-2126 <a href="https://doi.org/10.1016/j.jisa.2019.102462">https://doi.org/10.1016/j.jisa.2019.102462</a>	7.6	3.87	Q1 - 85% (52/359) in Computer Networks & Communications
9 - Long-term memory-induced synchronisation can impair collective performance in congested systems / Fabrice Saffre, <i>Gabriele Gianini</i> , Hanno Hildmann, John Davies, Seth Bullock, Ernesto Damiani, Jean Louis Deneubourg – <b>Swarm Intelligence</b> 13.2 (2019): 95-114 ISSN: 1935-3812. - Springer, New York, NY, USA, ISSN: 1935-3812 <a href="https://doi.org/10.1007/s11721-019-00164-z">https://doi.org/10.1007/s11721-019-00164-z</a>	7.4	2.14	Q1 - 77% (62/269) Artificial Intelligence
10- Landscape-aware location-privacy protection in location-based services / Claudio Agostino Ardagna, Marco Cremonini, <i>Gabriele Gianini</i> - <b>Journal of Systems Architecture</b> 55:4 (2009) - Elsevier, Amsterdam, Netherlands ISSN: 1383-7621 <a href="https://doi.org/10.1016/j.sysarc.2009.01.003">https://doi.org/10.1016/j.sysarc.2009.01.003</a>	7.2	3.78	Q1 - 79% (84/398) in Software
11 - Robust Computationally-Efficient Wireless Emitter Classification Using Autoencoders and Convolutional Neural Networks / Ebtesam Almazrouei, <i>Gabriele Gianini</i> , Nawaf Al Moosa, Ernesto Damiani, <b>MDPS Sensors (Intelligent Sensors section)</b> 21 (2021) 2414 - MDPI, Basel, Switzerland, ISSN: 1424-8220 - <a href="https://doi.org/10.3390/s21072414">https://doi.org/10.3390/s21072414</a>	6.4	3.58	Q1 - 78% (77/353) Information Systems
12 - Machine Learning-Based Framework for Log-Lifting in Business Process Mining Applications / Ghalia Tello, <i>Gabriele Gianini</i> , Rabeb Mizouni, Ernesto Damiani – Proceedings of the International Conference on <b>Business Process Management (BPM)</b> , Vienna September 2019) Lecture Notes in Business Information Processing (LNBIP) pp. 232-249 (2019) - Springer, Cham, Switzerland, ISSN: 1862-4979 (Online) - <a href="https://doi.org/10.1007/978-3-030-26619-6_16">https://doi.org/10.1007/978-3-030-26619-6_16</a>			<b>Class A</b> in GII-GRIN-SCIE (GGS) Conference Rating

## 8.2 OVERVIEW OF THE SCIENTIFIC PRODUCTION

### Summary:

- **32** articles on Computer Science journals out of which **18** in (Scopus) quartile **Q1**, **6** in **Q2**, and **4** in **Q3**,  
(summary in section 8.2.1; list in section 8.3)
- **60** book chapters and CS conference proceedings papers (**34** IEEE or ACM conf.), **5** of them in class **A-**, **A**  
(ranking GII-GRIN-SCIE (GGS) Conference Rating - summary in section 8.2.2; list in section 8.4)

Bibliometric indexes on Scopus (<https://www.scopus.com/authid/detail.uri?authorId=7005964726>) and to Google Scholar (<https://tinyurl.com/y8xprm9c>) covering the period 1992-2023:

- h-index = **Scopus**: 30, GoogleScholar: 44 (latest five years = 17)
- i-10 index = GoogleScholar: 129 (latest five years = 37)
- citations = **Scopus**: 3345 (GoogleScholar: 6423, latest five years 1164)

### 8.2.1 Summary of journal papers 2003-2023 and bibliometric indicators (Web of Science and Scopus)

CS	IF	Journal Name	# articles	Quartile (Scopus)	WoS rank	Scopus rank
9.5	4.11	Ad Hoc Networks	1	Q1	70% (49/161) in Information Systems	91% (30/359) in Computer Networks & Communications
18.7	7.19	Future Generation Computer Systems	1	Q1	94% (7/110) in CS Theory & Methods	99% (2/167) Hardware & Architecture
6.7	3.37	IEEE Access	3	Q1	60% (65/161) in Information Systems	85% (34/231) in General CS
6.2	3.57	IEEE Security & Privacy	1	Q1	82% (20/108) in CS Software Engineering	78% (78/359) Computer Networks & Communications
13.5	7.33	IEEE Transactions on Dependable and Secure Computing	1	Q1	92% (13/161) in CS Information Systems	95% (11/231) in General CS
13.6	8.22	IEEE Transactions on Services Computing	1	Q1	96% (7/161) in CS Information Systems	96% (23/747) in CS Applications
5.1	1.95	IET Computer Vision	1	Q2	39% (92/139) in CS Artificial Intelligence	65% (33/94) in Computer Vision & Pattern Recognition
12.1	6.80	Information Sciences	1	Q1	60% (65/161) in CS Information Systems	95% (35/747) in CS Applications
2.2	0.95	Journal of Electronic Imaging	4	Q3	10% (26/29) in Imaging Science & Photographic Technology	41% (439/747) in CS Applications
1.1	0.40	Journal of Imaging Science And Technology	1	Q4	1% (29/29) in Imaging Science & Photographic Technology	20% (592/747) in CS Applications
7.6	3.87	Journal of Information Security and Applications	1	Q1	65% (56/161) in CS Information Systems	85% (52/359) in Computer Networks & Communications
4.4	2.13	Journal of the Optical Society of America A (now Optica)	4	Q2	46% in Optics	61% (37/94) in Computer Vision & Pattern Recognition
7.2	3.78	Journal of Systems Architecture	2	Q1	84% (17/108) in CS Software Engineering	79% (84/398) in Software
5.3	2.76	Multimedia Tools and Applications	1	Q1	72% (30/108) in CS Software Engineering	81% (12/62) in Media Technology
8.7	5.61	Neural Computing and Applications	1	Q1	78% (31/139) in CS Artificial Intelligence	84% (43/269) in Artificial Intelligence
1.2	1.99	Performance Evaluation Review (ACM SIGMETRICS)	1	Q2	61% (43/110) in CS Theory & Methods	23% (274/359) in Computer Networks & Communications
7.9	3.45	Pervasive and Mobile Computing	1	Q1	62% (62/161) in CS Information Systems	87% (46/359) Computer Networks & Communications
7.4	2.14	Swarm Intelligence	1	Q1	40% (84/139) in Artificial Intelligence	77% (62/269) Artificial Intelligence
6.4	3.58	Sensors (section Intelligent Sensors) MDPI	1	Q1	78% (14/64) in Instruments & Instrumentation	78% (77/353) Information Systems
4.4	2.22	Springer Nature Computing	1	Q1		81% (31/167) in Computational Mathematics

### Journals not indexed by WoS or Scopus

IF	Journal Name	# of articles
<b>4.40</b>	Computer Systems Sciences and Engineering (ISSN:0267-6192)	1
<b>3.36</b>	ISecure Journal (The ISC International Journal of Information Security) (ISSN: 2008-2045)	1
	Color Culture and Science Journal (ISSN 2384-9568)	1

### 8.2.2 Summary of Conference Proceedings and Book Chapters

A total of **5** book chapters and **55** papers published in conference proceedings (out of which **34** in IEEE or ACM conferences), presented to 30 distinct conferences, 7 of them with GII-GRIN-SCIE (GGS) Conference Rating (see table).

Achronym	Conference	# of articles	GGS Rating
BPM	International Conference on Business Process Management	1	A
DSN	IEEE/IFIP International Conference on Dependable Systems and Networks	1	A
ICDCS	IEEE International Conference on Distributed Computing Systems	1	A
CEC	IEEE Congress on Evolutionary Computation	1	A-
SRDS	IEEE Symposium on Reliable Distributed Systems	1	B
KES	International Conference on Knowledge-Based Intelligent Information and Engineering Systems	3	B-
MELECON	Mediterranean Electro-technical Conference	1	C

### 8.2.3 Summary of publications with large scientific collaborations (1992-2000)

The candidate participated in the collection, processing and data analysis of High Energy Physics experiments in the years 1990-2000 at the Fermilab/Tevatron in Chicago and at the CERN/LHC in Geneva.

- (1995-2000) - Compact Muon Solenoid (CMS), CERN, Ginevra
- (1994-2000) - FOCUS/E831 Fermilab, Batavia, Chicago, IL, USA
- (1991-1996) - E687 Fermilab, Batavia, Chicago, IL, USA
- (1990-1992) - E299 Fermilab, Batavia, Chicago, IL, USA

This research activity has yielded over one hundred articles published in Q1 quartile journals of that sector (these articles are not mentioned in the list of articles reported in the following section). These articles involved the application of Data Analytics methods to High Energy Physics (HEP) problems.<sup>4</sup>

I.F.	Journal name	# of papers	Quartile according to Scimago Journal Rank
<b>1.17</b>	Nuclear Instruments and Methods in Physics Research Section A	22	<b>Q1</b> in Instruments & Instrumentation
<b>4.95</b>	Nuclear Physics B	4	<b>Q1</b> in Nuclear and HE Physics
<b>4.77</b>	Physics Letters B	87	<b>Q1</b> in Nuclear and HE Physics
<b>4.83</b>	Physical Review D	3	<b>Q1</b> in Physics and Astronomy
<b>9.16</b>	Physical Review Letters	13	<b>Q1</b> in Physics and Astronomy
<b>7.90</b>	Zeitschrift für Physik C (Particles and Fields) now European Physical Journal C	1	<b>Q1</b> in Engineering & Q1 in Physics and Astronomy
<b>3.00</b>	Il Nuovo Cimento A	3	Q4 in Physics and Astronomy

<sup>4</sup> Some examples:

1. Application of Genetic Programming to High Energy Physics event selection. Link, J. M., et al., **Nuclear Instruments and Methods in Physics Research Section A**: 551.2-3 (2005): 504-527.  
<https://doi.org/10.1016/j.nima.2005.05.069>
2. Search for  $\Lambda_c \rightarrow p K^+ \pi^-$  and  $D_s \rightarrow K^+ K^+ \pi^-$  using Genetic Programming for Event Selection, JM Link et al.- **Physics letters B** vol. 624(3-4), 29 (2005), pp. 166-172, <https://doi.org/10.1016/j.physletb.2005.08.032>
3. Neural Network based neutral particles reconstruction with the E687 hadron calorimeter, V Arena, et al. **Nuclear Instruments and Methods in Physics Research Section A** 374.3 (1996): 359-366.  
[https://doi.org/10.1016/0168-9002\(96\)00285-9](https://doi.org/10.1016/0168-9002(96)00285-9)

### 8.3 LIST OF ARTICLES IN REFEREED INTERNATIONAL JOURNALS

1. A Survey of Methods and Evaluation of Retinex-inspired Image Enhancers - Gabriele Simone, Michela Lecca, Gabriele Gianini, and Alessandro Rizzi – **Journal of Electronic Imaging** – JEI - <https://doi.org/10.1117/1.JEI.27.1.013014>
2. Mathematical insights into the Original Retinex Algorithm for Image Enhancement- Michela Lecca, Gabriele Gianini, Raul Paulo Serapioni – **Journal of the Optical Society of America** – JOSA A <https://doi.org/10.1364/JOSAA.418137>
3. An Efficient In-Memory Computing Architecture for Image Enhancement in AI Applications - Meriem Bettayeb, Fakhreddine Zayer, Heba Abunahla, Gabriele Gianini, Baker Mohammad – **IEEE Access** 2022 <https://doi.org/10.1109/ACCESS.2022.3161525>
4. Robust Computationally-Efficient Wireless Emitter Classification Using Autoencoders and Convolutional Neural Networks - Ebtesam Almazrouei, Gabriele Gianini, Nawaf Al Moosa, Ernesto Damiani, **MDPS Sensors** (Intelligent Sensors section), 2021, 21, 2414 - <https://doi.org/10.3390/s21072414>
5. Smart connected parking lots based on secured multimedia IoT devices M.A. Merzoug, Ahmed Mostefaoui, Gabriele Gianini, Ernesto Damiani – **Springer Nature Computing**, 2021 - <https://doi.org/10.1007/s42979-021-00516-2>
6. Multi-disease big data analysis using beetle swarm optimization and an adaptive neuro-fuzzy inference system – P. Singh, A. Kaur, R. Singh Batth, S. Kaur, G. Gianini, **Neural Computing and Applications**, (2021) - <https://doi.org/10.1007/s00521-021-06362-4>
7. A cryptographic cloud-based approach for the mitigation of the airline cargo cancellation problem - Stelvio Cimato, Gabriele Gianini, Maryam Sepehri, Rasool Asal, Ernesto Damiani, **Journal of Information Security and Applications**, Volume 51, 2020, 102462 - <https://doi.org/10.1016/j.jisa.2019.102462>
8. Managing a Pool of Rules for Credit Card Fraud Detection by a Game Theory based Approach – Gabriele Gianini, Leopold Ghemmogne Fossi, Corrado Mio, Olivier Caelen, Lionel Brunie, Ernesto Damiani – **Future Generation Computer Systems**, 102, 549-561 (2020) - <https://doi.org/10.1016/j.future.2019.08.002>
9. RRAM Crossbar-based In-Memory Computation of Anisotropic Filters for Image Preprocessing - Fakhreddine Zayer, Baker Mohammad, Hani Saleh, Gabriele Gianini. **IEEE Access**, 2020 - <https://doi.org/10.1109/ACCESS.2020.3035975>
10. Glare-removal as an ill-conditioned problem — Gabriele Gianini, Cristian Bonanomi , Corrado Mio, Marco Anisetti, Alessandro Rizzi, **Journal of Electronic Imaging**, (2019) - <https://doi.org/10.1117/1.JEI.28.3.033014>
11. An Enhanced Electrocardiogram Biometric Authentication System Using Machine Learning – Ebrahim Hamdan Al Zaabi, Song Kyoo Kim, Chan Yeob Yeun, Jamal Zemerly, Kin Poon, Gabriele Gianini, Pau Yoo, **IEEE Access**, 2019 - <https://doi.org/10.1109/ACCESS.2019.2953451>
12. Long-term memory-induced synchronisation can impair collective performance in congested systems – F. Saffre, G. Gianini, H. Hildmann, J. Davies, S. Bullock, E. Damiani, J.-L. Deneubourg, **Swarm Intelligence**, Feb 2019, pp.1-20 <https://doi.org/10.1007/s11721-019-00157-8>
13. Visual glare limits of HDR displays in medical imaging - A Rizzi, BR Barricelli, C Bonanomi, L Albani, G Gianini - **IET Computer Vision**, 2018 - <https://doi.org/10.1049/iet-cvi.2017.0238>
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## 8.4 LIST OF BOOK CHAPTERS AND CONFERENCE PROCEEDINGS

### 8.4.1 Book chapters (international diffusion)

1. 2016 - Possibilistic Assessment of Process-Related Disclosure Risks on the Cloud – V. Bellandi, S. Cimato, E. Damiani, G. Gianini **Computational Intelligence and Quantitative Software Engineering**, 173-207 - Springer International Publishing (2016) - [https://doi.org/10.1007/978-3-319-32368-2\\_9](https://doi.org/10.1007/978-3-319-32368-2_9)
2. 2009 - Toward value-based control of knowledge sharing in networked service design, F. Kerschbaum, R. Pibernik, E. Damiani, G. Gianini, **Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu** (85), 51-65 - ISSN 1899-1899
3. 2008 - Assessing separation of duty policies through the interpretation of sampled video sequences: a pair programming case study, Marco Anisetti, Valerio Bellandi, Ernesto Damiani, Gabriele Gianini, **New Directions in Intelligent Interactive Multimedia**, 555-564 - [https://doi.org/10.1007/978-3-540-85483-8\\_57](https://doi.org/10.1007/978-3-540-85483-8_57)
4. 2007 - A non-invasive method for the conformance assessment of pair programming practices based on hierarchical hidden Markov models, E. Damiani, G. Gianini, **Agile Processes in Software Engineering and Extreme Programming**, 123-136
5. 2004 - An ontology-driven approach to metadata design in the mining of software process events, Gabriele Gianini, Ernesto Damiani, **Knowledge-Based Intelligent Information and Engineering Systems, (KES-IIES)** 321-327

### 8.4.2 Articles in proceedings of international conferences

1. Retinex by Autoencoders – Claudio Pezzoni, Corrado Mio, Annalisa Barsotti, and Gabriele Gianini – **SITIS 2022**, (International Conference on Signal Image Technology and Internet based Systems) Dijon 2022 - <https://doi.org/10.1109/SITIS53154.2022.00013>
2. A Multiple Path Routing Model for Quality of Service in Software Defined Networking – Himanshi Babbar, Shalli Rani, Aman Singh and Gabriele Gianini – **MEDES 2022**, Venice 2022 - <https://doi.org/10.1145/3444805.3444840>

3. Neuro-Symbolic AI for Sensor-based Human Performance Prediction: Challenges and Solutions – Inês F. Ramos, Gabriele Gianini, Ernesto Damiani – European Conference on Safety and Reliability – **ESREL 2022** – Dublin 2022 - <https://doi.org/10.1201/9781003183411-86>
4. Set-based counterfactuals in partial classification – Gabriele Gianini, Jianyi Lin, Corrado Mio and Ernesto Damiani – International Conference On Information Processing And Management Of Uncertainty In Knowledge-Based Systems – **IPMU 2022** – Milano 2022 - [https://doi.org/10.1007/978-3-030-84462-7\\_37](https://doi.org/10.1007/978-3-030-84462-7_37)
5. Path Asymmetry Reconstruction via Deep Learning – Nada Alhashmi, Nawaf Almoosa, Gabriele Gianini – IEEE 21st Mediterranean Electrotechnical Conference - **IEEE MELECON 2022**, Palermo 2022 - <https://doi.org/10.1109/MELECON51841.2022.9805987>
6. Inter-rater agreement based Risk Assessment scheme for ICT corporates – Roberto Cassata, Gabriele Gianini, Marco Anisetti, Valerio Bellandi, Ernesto Damiani, Alessandro Cavaciuti – **IDT-KES 2022** - 14th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems – Intelligent Decision Technologies, Rhodes 2022 - [https://doi.org/10.1007/978-3-030-92108-8\\_16](https://doi.org/10.1007/978-3-030-92108-8_16)
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8. Hybrid Inspector-Inspectee-Agent Games in Mobile Cloud Computing - Gabriele Gianini, Francesco Viola, Guido Lena-Cota, Jianyi Lin - **Q2SWINET 2020** - ACM Symposium on QoS and Security for Wireless and Mobile Networks - <https://doi.org/10.1145/3428361.3432069>
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## 9 ENTREPRENEURSHIP, PATENTS AND TECHNOLOGY TRANSFER

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**Summary:** 1 patent filed + numerous “third-mission”/ technology transfer activities

### 9.1 PATENTS

- **1 filed patent/1 brevetto depositato.** An excerpt from this patent repository follows  
<https://patents.google.com/patent/WO2018193085A1>

Gabriele Gianini has filed the following patent (April 2017) – Title: **System And Method For Managing Fraud Detection In A Financial Transaction System** - Titre : Système Et Procédé Pour Gérer La Détection De Fraudes Dans Un Système De Transactions Financières – (Numéro de demande : 1753504, Numéro de soumission : 1000400573, Date de réception : 21 avril 2017, Demandeur : WORLDLINE/07/FR). Inventors : Olivier CAELEN, Gabriele GIANINI, Damiani ERNESTO - STATUS : Application

### 9.2 THIRD-MISSION ACTIVITIES/TECHNOLOGY TRANSFER

#### 9.2.1 Contribution to the development of technological standards

Member of the **Group IEEE P2976 - Standard for XAI** – eXplainable Artificial Intelligence for Achieving Clarity and Interoperability of AI Systems Design, dal 2021 - Working Group: XAI WG - Standard for XAI - eXplainable AI Working Group - Standards Committee: CIS/SC - Standards Committee - Society: IEEE Computational Intelligence Society

#### 9.2.2 Popular science books/Libri di Divulgazione Scientifica

**Nel ciberspazio con Internet**, Gabriele Gianini Apogeo, **1994**. ISBN, 8873030750, 9788873030751

#### 9.2.3 Manuals for Enterprises/Manuali per le imprese

- **Best Practices for Data Management in Artificial Intelligence Applications**, AAVV (among them Gabriele Gianini) (2021) for Ministry of Economic Development, Abu Dhabi, UAE
- **Software Reuse, Good Practices**, Gabriele Gianini (2007), for Siemens/Nokia, Milano

#### 9.2.4 Communication to the general public

Several introductory meetings for personnel from ministries and companies

- Data Protection and ISO 9001 Security Findings, R.Cassata & G.Gianini, CISCO, XR tech talk, 2020
- Introduction to Artificial Intelligence, Ministry of Tourism, Abu Dhabi, UAE, 2018
- Artificial Intelligence, Opportunities and Challenges, ETISALAT, Dubai, UAE, 2020
- Machine Learning for the Enterprise, per COMAU (of the group FCA, development of systems and products for industrial automation), at Telecom Italia quarters, Torino, 1 Luglio 2017

Moderator in the public meeting “**Giornata Nazionale Contro la Disinformazione Scientifica/Italia Unita per la Scienza**”, Aula del Quattrocento, Università di Pavia, 8 June 2013.

## 10 LANGUAGE COMPETENCE

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Written and spoken competence in all languages according to CERF levels, Common European Reference Framework.

Mother tongue: **Italian**

Other languages	Understanding		Speaking		Writing
	Listening	Reading	Spoken Interaction	Spoken Production	
English	B2	C1	C1	C1	C1
French	C1	C1	C1	C1	B2
Spanish	B2	B2	B1	B1	A1