



# Ernesto Damiani

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- **WORK EXPERIENCE**

- **Management of Research & Educational Institutions**

- **Senior Director**

*Artificial Intelligence and Intelligent Systems Institute, Khalifa University (Abu Dhabi, United Arab Emirates)*  
[ 2019 - Current ] <https://www.ku.ac.ae/about/robotics-and-intelligent-systems-institute>

- **President**

*Consorzio Inter-universitario Nazionale per l'Informatica (CINI), (Rome, Italy)* [ 2019 – Current ]  
<https://www.consorzio-cini.it>

- **Director**

*Research Centre on Cyber-Physical Systems, Khalifa University, Abu Dhabi, United Arab Emirates* [ 2018 – Current ]  
<https://www.ku.ac.ae/research-centers/center-for-cyber-physical-systems-c2ps>

- **Full Professor and Director**

*SESAR Lab, Department of Computer Science, Università degli Studi di Milano, Italy* [ 2002 –Current ]  
<https://sesar.di.unimi.it>

- **Associate Professor** [ 2000 – 2002 ]
    - **Assistant Professor** [1996 – 2000 ]

- **Co-Director**

*IRIXYS, International Research Center on Intelligent Digital Systems, INSA Lyon, University of Passau, Università degli Studi di Milano* [ 2016 – Current ]  
<https://www.iryxis.org>

- **Distinguished Research Professor**

*Etisalat British Telecom Innovation Center, UAE.* [ 2014 – Current ]  
<https://www.ebtic.org>

- **Full Professor and Director**

*Information Security Research Center* [2014-2017], *Khalifa University, Abu Dhabi, United Arab Emirates*

- **Head of School**

*Ph.D. Program in Computer Science, Università degli Studi di Milano, Italy.* [ 2008 – 2015 ]

- **Chairperson**

*MiPiace.com (now part of British Telecom Enia, <http://www.btenia.it>), Piacenza, Italy* [ 2006 – 2009 ]

## Executive Boards

- Board member

**Fondazione UniMi** (formerly *Fondazione Filarete*) [ 2016 – current ]

<https://www.fondazionefilarete.com/it/index.html>

- Board member

**DFLabs** – Milan, San Francisco, Abu Dhabi [ 2016 – 2021 ]

<https://www.dflabs.com>

## Start-ups

- co-Founder

**MoonCloud** - Cloud Monitoring and Assurance [ 2017 – Current ]

<https://www.moon-cloud.eu>

- co-Founder

**Inpolitix** - Advanced services for political campaigns [ 2017 – Current ]

<http://www.inpolitix.com/>

## Advisory Boards

- Member AI Cybersec WG

**European Network Information Security Agency** [ 2020 – Current ]

- Member, Blockchain Expert Group

**Italian Ministry of Economic Development, Rome, Italy** [ 2019 - 2021 ]

- Member, Board of Advisors

**Secure Systems Research Centre (SSRC)**, Technology Innovation Institute (TII), Abu Dhabi [ 2020 – Current ]

- Member, Scientific Advisory Board (SAB)

**Cluster of Excellence “Internet of Production” (IoP) RWTH-Aachen, Germany** [ 2020 – Current ]

## Visiting Positions

- Visiting Professor

**Tokyo Denki University, Japan** [ 2011 – 2013 ]

- Adjunct Professor

**Free University of Bozen-Bolzano, Italy** [ 2011 – 2012 ]

- Visiting Professor

**INSA-Lyon, France** [ 2010 – 2011 ]

- Visiting Professor

**Université de Bourgogne, France** [ 2010 – 2011 ]

- Adjunct Professor

**University of Technology, Sydney, Australia** [ 2008 ]

- Fellow

**Center for Secure Information Systems, George Mason University, US** [ 2006 ]

- Visiting Professor

**La Trobe University, Melbourne, Australia** [ 1998 – 1999 ]

## EDUCATION AND TRAINING

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### Doctorate Honoris Causa

*doctorate honoris causa from INSA-Lyon for contributions to research and teaching on Big Data*  
[ 2017 ]

### Ph.D. in Computer Science

*Università degli Studi di Milano, Italy* [ 1990 – 1994 ]

### Bachelor and Master in Computer Engineering

*Università di Pavia, Italy* [ 1979 – 1987 ]

## LANGUAGE SKILLS

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Mother tongue(s):

### Italian

### English

LISTENING: C2 READING: C2 WRITING: C2

SPOKEN PRODUCTION: C2

SPOKEN INTERACTION: C2

### French

LISTENING: C1 READING: C1 WRITING: C1

SPOKEN PRODUCTION: C1

SPOKEN INTERACTION: C1

### German

LISTENING: A2 READING: A2 WRITING: A2

SPOKEN PRODUCTION: A2 SPOKEN INTERACTION: A2

## ORGANISATIONAL SKILLS

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Leadership of Research and Educational organizations. Ernesto has extensive experience in leading large organizations – including a Consortium of 50 Universities in Italy, which runs 10 National Research Laboratories, and the Robotics and Intelligent Systems Research Institute in the UAE, which is composed of six research Centers. He also has successfully led smaller, focused research teams.

Ernesto is currently responsible for a team of 35 people in Italy and >50 staff in the UAE, where he manages and is responsible for all processes, including procurement, hiring and appraisal of all categories of personnel.

Ernesto has also extensive experience in graduate studies' organization, having chaired one of the largest Italian PhD programs in computer science at Università di Milano.

## COMMUNICATION AND INTERPERSONAL SKILLS

### Communication and interpersonal skills

Ernesto has very good communication skills gained through experience as technical writer, speaker, instructor and team leader in international settings. He is involved in creating content for the communication of research via social network as well as via general media, including Expo 2021 in Dubai (see for example Ernesto's take at <https://www.youtube.com/watch?v=3sUMsmIA5QI>).

## JOB-RELATED SKILLS

Ernesto has very good command of research quality control processes (currently responsible for research quality audit at KU-RISI), including monitoring, appraisal and ranking of research organizations.

Through RISI, he contributed to KU reaching the 183rd position in the QS ranking in 2021. The trend of the results achieved at KU-RISI to the top 100 Universities in relation to the 'Citations per Faculty' score (which accounts for 20% of the overall ranking score), is shown below:

Ranking	CPF	Note
QS 2019	27.7	(ahead of 5 Universities in the top 100)
QS 2020	42.2	(ahead of 13 Universities in the top 100)
QS 2021	65.1	(ahead of 36 Universities in the top 100)

Ernesto has been involved in the evaluation of large projects and research centers, including the Austrian Center for Information Security (<https://www.sba-research.org/about/>).

## RESEARCH

### Scientific Production

#### Research Publications

According to DBLP (<http://www.informatik.uni-trier.de>, consulted Nov. 2021), Ernesto Damiani has authored **153** journal papers, **347** refereed articles in proceedings of international conferences, and published **56** books and chapters as an author or editor. According to Google Scholar, Ernesto's work has been cited **19,573** times and his h-index is **58**. More than **300** of his papers have at least 10 citations.

On Scopus, Ernesto has **643** documents and **7755** total citations by **6,231** documents. His Scopus h-index is **36**.

#### Metrics overview



#### Document & citation trends



With 573 publications listed on DBLP, Ernesto is considered among the most prolific European computer scientists.

### Books

Among Ernesto's books, most notable are "Open Source Systems Security Certifications" (with C.A. Ardagna, N. El Ioini, Springer, 2008), "Intelligent Multimedia Multi-Agent Systems: A Human-Centred Approach (with R. Khosla, I. K. Sethi, Springer, 2010)", and "Human-Centred e-Business" (with R. Khosla and W. Grosky, Elsevier, 2003). Well-known is his work on (a) the modelling and analysis of SOA and cloud security; (b) encrypted data querying and secure computation over Big Data, and (c) semi-structured data models (Ernesto contributed to the XML-GL query language, was the proposer of the XACML policy language).

### Patents

Ernesto is also co-author of several patents. Notable patents he authored with industrial partners include:

- *Method, system, network and computer program product for positioning in a mobile network* EP1765031A1 Filed 2005-09-15 • Published 2007-03-21 Owner: Siemens Mobile Communications
- *Data access control for business processes* WO EP EP3084675B1 Published 2018-02-07 Granted 2018-02-07 Owners: British Telecom, Etisalat, Khalifa University
- *System and method for managing fraud detection in financial transactions* WO EP CN FR EP3613003A1 Filed 2018-04-20 • Published 2020-02-26 Owner: Atos Worldline
- *Procédé de hachage qui préserve la distance* WO WO2020200447A1 Filed 2019-04-03 • Published 2020-10-08 Owners: British Telecom, Etisalat, Khalifa University

### Publication record

- DBLP Page: <https://dblp.uni-trier.de/pid/d/EDamiani.html>
- Scopus: <https://www.scopus.com/authid/detail.uri?origin=AuthorProfile&authorId=57195375517>
- Google Scholar Page: <https://scholar.google.it/citations?user=aC7ZsHAAAAAJ>
- Publons profile: <https://publons.com/researcher/3489667/ernesto-damiani/>

## INNOVATION

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Ernesto Damiani has been involved in the process of generating value from research results, both as a founder of successful start-ups and as a facilitator for research spin-offs at various institutions.

- Ernesto has served for three years as the Chairperson of MiPiacce.com, a joint venture between the local authorities of the Emilia Romagna Region in Italy and venture capital funds. The company deployed a fiber-based network infrastructure for public services in the Region. Ernesto chaired the company until its merger with Enia Telecom, into what is now British-Telecom Enia.
- He is a Member of the Board of the Università di Milano's Foundation (formerly Filarete Foundation) for the development of the University's research IP into innovation opportunities and start-ups.
- Ernesto co-founded twostart-ups with collaborating colleagues, one of which (MoonCloud) with the direct partnership of Università di Milano as an equity holder. **MoonCloud won Milan's Innovation Cup in 2013.**
- Ernesto has served in the Board of DFLabs, an incident management start-up with offices in Milan, San Francisco and Abu Dhabi, as the independent representative of key equity holders, until the recent acquisition of the company by Sumo Logics.

## Funding

### Endowment

The KU Institute of Robotics and Intelligent Systems and the Center for Cyber Physical System at KU have a joint yearly endowment of 4M USD over 5 years (total 20 M USD). Ernesto is in charge of setting the Institute's strategy, hiring staff, selecting internal research Themes, and attracting external funding. Funding is granted subject to annual KPIs including scientific productivity, matching with external funds and innovation achievements.

### Funded Projects (in addition to endowment)

#### European Projects

Beneficiary: UNIMI/CINI (Amounts are net contributions to Ernesto's institution. Total grants range from 3 to 11 MEUR)

SN Title	Program	Role	Fund(EUR)
1 SecureSCM	FP7-213531	Research unit leader	€ 367,685
2 Assert4SOA	FP7-257351	Principal Investigator	€ 459,884
3 ARISTOTELE	FP7-257886	Research unit leader	€ 409.100
4 CUMULUS	FP7-318580	Research unit leader	€ 353,300
5 PRACTICE	FP7-609611	Research unit leader	€ 308,600
6 TOREADOR	H2020-688797	Principal Investigator	€ 1,160,250
7 EVOTION	H2020-727521	Research unit leader	€ 295,125
8 THREAT-ARREST	H2020-786890	Scientific leader 3	€ 681,250
9 CONCORDIA	H2020-830927	Research unit leader	€ 343.750
10 SMART BEAR	H2020-85172	Research Unit Leader	€ 2,625,875
11 AERAS	H2020-872375	Project coordinator	€ 220,800
12 CISC	H2020-955901	Research Unit Leader	€ 261,500

**Total funding in excess of 7.5 M EUR**

#### UAE Projects

Beneficiary: Khalifa University

SN Title	Program	Role	Fund(AED)
1 Big Data Risk Analysis (BanDoRA)	KU-L1	Principal Investigator	163,000
2 Quantum Safe Security Infrastructure	KU-L2	Principal Investigator	2,000,000
3 Big Data Security	Northrop	Research unit leader	350,000
4 ML-based Exfiltration Detection	TII	Research unit leader	1,772,000
5 System-on-Chip for Secure UAV Operation	TII	Research unit leader	2,805,000
6 Secure FPGA as a Cloud Micro Service	TII	Research unit leader	3,405,250
7 PALM : Security in ML model Training	TII	Research unit leader	4,637,000
8 ANN for Signal Processing in IoT Mesh Networks	TII	Research Unit Leader	1,266,000
9 Enhanced $\mu$ TESLA protocol for IoT	TII	Research unit leader	905,000

10 PHY Layer Security for UAV-Ground Wireless Network	TII	Research Unit Leader	2,154,000
11 A framework for detecting suspicious item in X-ray security imagery	CIRA	Research Unit leader	786,800
12 ML systems for early detection of prostate cancer in MRI images	CIRA	Research Unit Leader	289,000

**Total Funding in excess of 18 M AED (4.5 M Eur)**

## Industrial research grants

- Ernesto manages/has managed on behalf of Università di Milano and CINI several large research grants from a number of major industrial partners, including TIM – Telecom Italia, Cisco Systems, Siemens Telecommunications (now Nokia Siemens), British Telecom, Engineering Ingegneria Informatica, Leonardo, NVIDIA and others.
- In the UAE, he manages on behalf of KU-RISI ongoing collaborations with industrial partners, including Etisalat, ADNOC, Emirates Steel and ATD.

## Other projects

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- **Italian National Projects (FIRB - PRIN)** : Security Horizons - Research unit leader & WP leader – Contribution € 118,612-KITE - Research unit leader & WP leader – Contribution € 696,480
- **Other international projects:** Bill & Melinda Gates Foundation “Pay-with-a Selfie” <http://gcgh.grandchallenges.org/grant/pay-group-selfie-pgs>

## Awards

Ernesto Damiani is an ACM Distinguished Scientist (2008), and a Senior Member of the IEEE. He was awarded with the IFIP Outstanding Service Award (2011), the ACM SIGAPP Outstanding Service Award (2000). He received the IEEE IES Chester-Sall Award in 2007, and the IEEE ICWS/Service Society Stephen S. Yau Award in 2016. In 2017 Ernesto received a doctorate *honoris causa* from INSA-Lyon for his contributions to research and teaching on Big Data. In 2021 he received the IEEE TCHS Research and Innovation Award

## Curriculum and Program Design

- Ernesto Damiani proposed and co-designed Università di Milano's first online degree in Systems and Network Security. The program, delivered in blended mode, involved large scale production of ad-hoc online teaching material and labs. Students can opt in the online program as an additional service to the in-presence degree, paying an additional tuition fee. In the course of 5 years, this program has generated a revenue stream of more than 5 MEUR for the University.
- Ernesto Damiani led Università di Milano's PhD program in the procedure to obtain national accreditation, after the introduction of national accreditation for PhD programs in 2013.
- Ernesto Damiani co-designed Khalifa University's Cyber Security M.S. Program through its approval from the Abu Dhabi Ministry of Education, to accreditation.
- Recently Ernesto followed the accreditation process of the KU M.S. Program in Computational Data Science co-designed with the Abu Dhabi Investment Authority (ADIA).

## Services in Professional Societies

Ernesto Damiani has served for ten years the Chair of IFIP Working Group 2.6 on Data Semantics, and as the Vice-chair of IFIP WG 2.12 on Web Data. He has served as Vice-chair of the IEEE Technical Committee on Industrial Informatics, and as Secretary and Vice-chair of the IEEE Technical Committee on Services and of ACM SIGAPP.

## Journal Editorships and Conference organization

- Ernesto Damiani serves as Associate Editor of the IEEE Trans. on Fuzzy Systems, of the IEEE Trans. on Services and of Multimedia Technology and Application (MTAP). He has served as Area Editor of the Journal of Systems Architecture. He is the Editor in Chief of the Intl. Journal of Knowledge and Learning. Ernesto guest edited special issues in many top research journals, including Soft Computing, ACM TOIT, FGCS, Computer in Human Behavior and many others.
- Ernesto Damiani has been involved as General and Program Chair in the organization of many conferences and events worldwide, including several Dagstuhl schools. He is/has served as PC member in most major conferences in his area. He serves as the *Program Chair in Chief* of IEEE Services conference series, the flagship event of IEEE TCS (including IEEE ICWS, SCC, SMDS), with more than 1000 submissions this year.