

EUROPEAN  
CURRICULUM VITAE  
FORMAT



PERSONAL INFORMATION

Name **PROF. RICCARDO LEONARDI**  
Address **32, VIA TRIESTE 22 – 25060 COLLEBEATO (BS), ITALY**  
Telephone [REDACTED]  
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E-mail [Riccardo.Leonardi@unibs.it](mailto:Riccardo.Leonardi@unibs.it)  
Website <http://www.unibs.it/en/ugov/person/299>  
  
Nationality Italian / Swiss  
Date of birth [REDACTED]

GENERAL RESEARCH INTERESTS

Visual Communications, Multimedia Content Analysis, Compression techniques, Mathematical models for information representation, Machine Learning, Entropy Coding models

BIBLIOMETRIC SUMMARY DATA

• Total international publications 280 INTERNATIONAL PUBLICATIONS  
• Total citations 4504 source: scholar.google.com  
• Total cited paper 255 source: scholar.google.com  
• H-index 31 source: scholar.google.com

EDUCATION AND TRAINING

• Dates (from – to) 1984 – 1987  
• Name and type of organisation providing education and training École Polytechnique Fédérale de Lausanne, Switzerland [HES]  
• Principal subjects/occupational skills covered PhD level training in Electrical Engineering, majoring in Signal Processing Research Research: Mathematical Modelling, Experimental simulations, Critical Analysis, Technical writing, Teaching Digital Signal and Image Processing, Labs & exercises, Student evaluation  
• Title of qualification awarded « *Doctorat es Sciences Techniques* » (Thesis title : Segmentation Adaptative pour le Codage d'Image, date : Jun. 1987)  
  
• Dates (from – to) 1979 – 1981 & 1982 – 1984  
• Name and type of organisation providing education and training École Polytechnique Fédérale de Lausanne, Switzerland [HES]  
• Principal subjects/occupational skills covered Electrical Engineering Degree (MS like, 4 ½ year duration)  
Fundamental training in Electrical Engineering: mathematics & physics for engineers, computer programming, circuits and systems, control, electronics, signal processing, telecommunications, independent project management, experimental simulation, laboratories, technical writing, fundamentals of economics & law.  
• Title of qualification awarded « *Diplôme d'Ingénieur Électricien EPF* » (date : Jan. 1984)  
*Equipollenza di Laurea* in Ingegneria Elettronica, Università of Padova, Italy (date: Feb. 1985)

- Dates (from – to)

- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered

### PRINCIPAL POSITIONS

- Dates (from – to)

- Name and address of employer

- Type of business or sector
- Occupation or position held

- Main activities and responsibilities

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- Main activities and responsibilities

1981 – 1982

Carnegie Mellon University, Pittsburgh, USA [HES]

Exchange student in Electrical Engineering - Junior Year education (Undergraduate & Graduate training), courses: Control, Electromechanics, Electronics, Fundamentals of Computer Sciences, Quantum Mechanics, Robotics.

May 2022 – May 2026

Università degli Studi di Roma "Tor Vergata" (part-time appointment 33%)

Via Carcovia, 50 – 00133 Roma (RM), Italy

Education and Research

Research & Training, Professor

Project coordination & team management, vision and strategy with particular interests in Next Generation Media Information Processing & Exchange and in Mathematical modelling for Semantic Representation of Information

Feb. 1992 – current

Università degli Studi di Brescia, Italy (part-time appointment 67% from May 2022 till May 2026)

Piazza del Mercato, 15 – 25121 Brescia (BS), Italy

Education and Research

Research & Training, Professor (since Mar. 2000) / Associate professor (Feb. 1992 – Mar. 2000)

Head, Signals, Imaging, Networking and Communications (SINC) Group

Dept. of Information Engineering

Apr. 1991 – Mar. 1992

École Polytechnique Fédérale de Lausanne

Route Cantonale, 1015 Lausanne (VD), Switzerland

Education and Research

Adjoint Scientifique

Research Head, Laboratoire de Traitement Numérique des Signaux (Director : prof. M. Kunt), Département d'Électricité

Oct. 1988 – Mar. 1991

AT&T

Crawfords Corner Road, Holmdel, NJ 07733, USA

Information and Communication Technologies

Member of Technical Staff, Bell Labs Research, AT&T Bell Labs, Holmdel,

Visual Communication Research, including participation to ISO/MPEG standardization activity,

Visual Communication Research Department, Information Research Laboratory

Oct. 1987 – Sep. 1988

University of California, Santa Barbara

Santa Barbara, CA 93106, USA

Education and Research

Post-doctoral fellow

Visual Communication Research & Graduate Education Temporary Faculty Appointment, Communications Research Laboratory (Director: Prof. Allen Gersho), Department of Electrical and Computer

## VISITING POSITIONS

- Dates (from – to) Jan. – Feb. 2020
- Name and address of employer New York University  
NYU Tandon School of Engineering, 15 Metro Tech Centre, Brooklyn, NY 11201, USA
- Type of business or sector Education and Training
- Occupation or position held Visiting Research Professor
- Main activities and responsibilities Research on Deep Learning techniques for Visual information processing and compression
  
- Dates (from – to) Jul. – Aug. 1993, Jul. – Aug. 1994, Jul. 1995
- Name and address of employer AT&T  
Crawfords Corner Road, Holmdel, NJ 07733, USA
- Type of business or sector Information and Communication Technologies
- Occupation or position held Visiting Research Position
- Main activities and responsibilities Visual Communications Research

## TEACHING

- Current Advanced Signal Processing, Digital Signal Processing, Multimedia Information Coding and Description, Signals & Systems
- Past Digital Image Processing, Information Theory, Random Variables & Stochastic Processes

## GRANTS & PROJECTS

- Dates (from – to) 11/2011-12/2016
- Name of the project RELIghT: Rete di Eccellenza Lombarda per advanced signal processing and smart networking toward the Internet of Things
- Description Partner; Funding Organization: Fondazione CARIPL0
- Total grant € 400'000
  
- Dates (from – to) 01/2010-12/2011
- Name of the project IRIS: Integrating Research in Interactive Storytelling
- Description Partner, Funding Organization: European Commission (contract no. 231824)
- Total grant € 2'425'000
  
- Dates (from – to) 02/2007-07/2009
- Name of the project RUSHES: Retrieval of mUltimedia Semantic units for enHanced rEuSability
- Description Partner, Funding Organization: European Commission (contract no. 045189)
- Total grant € 2'670'000
  
- Dates (from – to) 04/2005-12/2007
- Name of the project Codifica di Informazione Visiva in Modalità DSC (Distributed Source Coding)
- Description PI, Funding Organization: MIUR, programma PRIN 2005
- Total grant € 101'000
  
- Dates (from – to) 09/2005-11/2007
- Name of the project DISCOVER: DIStributed Coding for Video sERvices
- Description Partner, Funding Organization: European Commission (contract no. 015314)
- Total grant € 1'500'000
  
- Dates (from – to) 05/2002-04/2005
- Name of the project SCHEMA: Network of Excellence in Content-Based Semantic Scene Analysis and Information Retrieval

<ul style="list-style-type: none"> <li>• Description</li> <li>• Total grant</li> </ul>	<p><i>Partner, Funding Organization: European Commission (contract IST-2001-32795)</i> € 899'909</p>
<ul style="list-style-type: none"> <li>• Dates (from – to)</li> <li>• Name of the project</li> </ul>	<p>10/2001-01/2004 <i>SPATION: Services Platforms and Applications for Transparent Information management in an in-hOme Network</i></p>
<ul style="list-style-type: none"> <li>• Description</li> <li>• Total grant</li> </ul>	<p><i>Partner, Funding Organization: European Commission (contract IST-2000-28304)</i> € 3'407'412</p>
<ul style="list-style-type: none"> <li>• Dates (from – to)</li> <li>• Name of the project</li> <li>• Description</li> <li>• Total grant</li> </ul>	<p>09/1998-02/2000 <i>AVIR: Audio Visual Indexing and Retrieval for non IT Expert Users</i> <i>Partner, Funding Organization: European Commission (contract ESPRIT-28798)</i> € 2'050'000</p>

**SELECTED PUBLICATIONS AND RESEARCH REPORTS**

(out of more than 350 publications)

- M. Kunt, M. Bénard, & R. Leonardi: "Recent Results in High Compression Image Coding", in *IEEE Transactions on Circuits and Systems*, ISSN 0098-4094, Vol. CAS-34(11): 1306-1336, Nov. 1987, doi: 10.1109/TCS.1987.1086071.
- C. Guillemot, F. Pereira, L. Torres, T. Ebrahimi, R. Leonardi, & J. Ostermann: "Distributed Monoview and Multiview Video Coding", in *IEEE Signal Processing Magazine*, ISSN 1053-5888, SPM-24(5): 67-76, Sep. 2007. doi: 10.1109/msp.2007.904808, eid=2-s2.0-85032750897, WOS:000250416000009.
- L. Canini, S. Benini, & R. Leonardi, "Affective Recommendation of Movies Based on Selected Connotative Features", in *IEEE Transactions on Circuits and Systems for Video Technologies*, ISSN 1051-8215 (published on-line Aug. 2012), vol. TCSVT-23(4):636-647, Apr. 2013. doi: 10.1109/TCSVT.2012.2211935, eid=2-s2.0-84875993671, WOS:000317393400006.
- F. Guerrini, M. Dalai, & R. Leonardi: "Minimal Information Exchange for Secure Image Hash-Based Geometric Transformations Estimation", in *IEEE Transactions on Information Forensics and Security*, ISSN 1556-6013, eISSN: 1556-6021, Vol. TIFS-15: 3482-3496, Apr. 2020, doi: 10.1109/TIFS.2020.2990793, eid=2-s2.0-85086892378, WOS: 000545212900004.
- A. Gnutti, F. Guerrini, & R. Leonardi: "Combining Appearance and Gradient Information for Image Symmetry Detection", in *IEEE Transactions on Image Processing*, ISSN 1057-7149, eISSN 1941-0042, Vol. TIP-30:5708-5723, 2021 (on-line: 17/06/2021), doi: 10.1109/TIP.2021.3085202, PubMed ID=34138706, eid=2-s2.0-85109115662, WOS:000664999300001.

**PERSONAL SKILLS  
AND COMPETENCES**

*Acquired in the course of life and career  
but not necessarily covered by formal  
certificates and diplomas.*

**MOTHER TONGUE**

**OTHER LANGUAGES**

- Reading skills
- Writing skills
- Verbal skills

**SOCIAL SKILLS  
AND COMPETENCES**

*Living and working with other people, in  
multicultural environments, in positions  
where communication is important and  
situations where teamwork is essential.*

**ORGANISATIONAL SKILLS  
AND COMPETENCES**

*Coordination and administration of  
people, projects and budgets; at work, in  
voluntary work.*

**ADDITIONAL INFORMATION**

**FRENCH / ITALIAN**

**ENGLISH / GERMAN / SPANISH**

Excellent / Good / Good

Excellent / Good / Basic

Excellent / Basic / Basic

OPENNESS, EFFECTIVE INTERPERSONAL COMMUNICATION, COMMITMENT, OPTIMISM, LEADERSHIP  
Multilingual proficiencies

Regular or visiting positions held for many years in Europe and/or USA

Delegate to International Relations at University of Brescia

Interdisciplinary work, goal-oriented perspective

COOPERATIVE WORKING, PROJECT MANAGEMENT, PARTICIPATION AND/OR COORDINATION AT NATIONAL  
& INTERNATIONAL ENVIRONMENTS

- Multi-project management and coordination (technical and financial)
- Participation to international evaluation and auditing committees for many national and international funding agencies, for auditing and evaluation of international projects
- Participation to standardization activities for ISO / ITU
- Group head (10-20 people), PhD program coordination at home institution
- Held various positions as General Chair, Finance Chair, Technical Program Chair of internationally recognized events (conferences, workshops)

FOUNDING MEMBER (2009) AND ACTING PRESIDENT (2021-2024) OF "GRUPPO TELECOMUNICAZIONI E  
TECNOLOGIE DELL'INFORMAZIONE (GTTI)", NATIONAL ACADEMIC COMMUNITY ENTITY AIMING AT  
PROMOTING AND ENHANCING CULTURAL ACTIVITIES, TRAINING AND RESEARCH IN TELECOMMUNICATIONS  
AND INFORMATION TECHNOLOGIES

REFERENCES AVAILABLE UPON REQUEST

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016,  
I hereby express my consent to process and use my data provided in this CV.

Rome, 03/05/2022



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**Riccardo Leonardi**