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PROFESSIONAL EXPERIENCE

3/2015 on **Università degli Studi di Milano** Milano, Italy
Dipartimento di Informatica [*Computer Science Department*]
Professore Associato (Associate Professor, Italian SSD: INF/01)
Taught graduate and undergraduate classes on: digital signal processing, digital image and video processing, advanced programming.
Research interests include:

- Signal Processing of biological signals, with particular regard to ECG (atrial fibrillation, T-Wave alternans and repolarization heterogeneity).
- Time series analysis, with focus on non-linear methods and long range dependences in heart rate variability
- Biometrics and techniques which might help ensuring privacy when adopting identification procedures employing biometrics
- Assisted living / healthy aging facilitating technologies

1/2004-2/2015 **Università degli Studi di Milano** Milano, Italy
Dipartimento di Informatica [*Computer Science Department*]
Ricercatore Confermato (Assistant Professor, Italian SSD: INF/01)

1/2008–4/2010 **Sensure s.r.l.** Crema, Italy
Scientific advisor (part time) and co-owner
Sensure s.r.l. is a successful hi-tech industrial spin-off of the University of Milan, active in the field of quality control through machine vision and state-of-the-art neural classifiers. Prof. Sassi, with endorsement of the University, acted as part-time scientific advisor in the starting phase, up to the point in which the company started being profitable.

4/2003–12/2003 **Politecnico di Milano** Milano, Italy
Dipartimento di Bioingegneria [*Biomedical Engineering*]
Postdoctoral Researcher
Supervisor: Prof. S. Cerutti
Conducted research on ECG signals of patients undergoing atrial fibrillation in collaboration with prof. Pierre Maison-Blanche (Lariboisiere University Hospital, Paris, France) and Ela Medical (Paris, France).

10/2003–11/2003 **Imperial College** London, UK
Department of Mathematics
Visitor (Applied Mathematics division)
Supervisor: Prof. Richard V. Craster
Conducted research on spectral algorithms for reaction-diffusion equations.

9/2001–6/2002 **University of California at Santa Cruz** Santa Cruz (CA), USA
Baskin School of Engineer, Department of Applied Mathematics and Statistics
Postdoctoral Researcher
Supervisor: Prof. Neil J. Balmforth
Conducted research on non-Newtonian fluids (common in biology), in particular when one dimension of the fluid is in first approximation negligible with respect to the others (lubrication approximation).

3/1997–6/1997 **Hewlett-Packard Italiana s.p.a.** Cernusco s. N., Italy
Stage within the Medical Division
Supervisors: Piero Brambilla e Alberto Oggioni
Integration of a clinical data management system with intensive care instrumentations; developed a C prototypal version of a synchronous network driver and client.

RESEARCH PROJECTS AND GRANTS

11/2017–on **Scientific Coordinator** for the Università degli Studi di Milano unit in the project: "MY-ATRIA - MultidisciplinarY training network for ATrial fibRillation monItoring, treAtment and progression", call Horizon 2020 H2020-MSCA-ITN-2017 (Marie Skłodowska-Curie Innovative Training Networks). Grant agreement number: 766082 (budget of the unit: € 258,061.32 for one Early Stage Researcher).

9/2017–on **Scientific Coordinator** for the Università degli Studi di Milano, as Third Party of Flextronics S.p.A (Milano, Italia), in the project: "NESTORE - Novel Empowering Solutions and Technologies for Older people to Retain Everyday life activities", call EU Horizon 2020 H2020-SC1-2016-2017 (Personalised Medicine). Grant agreement number: 769643 (budget of the Third Party: € 40,000).

2017 **Beneficiary** of the "Fondo per il Finanziamento delle Attività Base di Ricerca (FFABR) 2017, Italian MIUR. Amount of the grant: € 3,000.

11/2016-on **Beneficiary** of the Transition Grant 2015-2017 - Linea 1A. Progetto "Unimi Partenariati H2020", Università degli Studi di Milano. Amount of the grant: € 5,000.

3/2014–10/2015 **Scientific Coordinator** for the Università degli Studi di Milano unit in project: "SMARTA - Sistema di Monitoraggio Ambientale con Rete di sensori e Telemonitoraggio indossabile a supporto di servizi di salute, prevenzione e sicurezza per l' Active Aging" funded by Regione Lombardia through the call "Smart Cities" (budget of the unit: € 500,000).

2013 **Principal investigator** for the ISCRA class C project "Multiscale Investigation of Myocytes' Repolarization Heterogeneity". (6 months duration). Super-computing hours granted by CINECA: 402,000.

NATIONAL SCIENTIFIC HABILITATIONS

He obtained the following Italian National Scientific Habilitation (Abilitazione Scientifica Nazionale - ASN):

- full professor in Biomedical Engineering (09/G2, ING-INF/06) on 04-04-2018 (ASN 2016, 4th call);
- full professor in Computer Science (01/B1, INF/01) on 28-03-2018 (ASN 2016, 4th call);
- associate professor in Biomedical Engineering (09/G2, ING-INF/06) on 10-12-2014 (ASN 2013);
- associate professor in Computer Science (01/B1, INF/01) on 29-01-2014 (ASN 2012).

EDUCATION

11/1997–10/2000 **Politecnico di Milano** Milano, Italy
Dipartimento di Bioingegneria [*Biomedical Engineering*]
Dottorato di Ricerca in Bioingegneria (Ph.D. in Biomedical Engineering)
Ph.D. dissertation (defended on March 5, 2001): "Analysis of heart rate variability complexity through fractal and multivariate approaches". Supervisor: Prof. Sergio Cerutti
Research activities during the Ph.D.:

University of California at Santa Cruz, (CA, USA) & *ISAC-CNR*, Torino (Italy)
Supervisors: Prof. Neil J. Balmforth and Dr. Antonello Provenzale
Conducted research on hierarchically coupled maps. A large number of logistic maps were coupled together as a mathematical metaphor for complex natural systems with hierarchical organization. (3/2000–6/2000, 11/2000)

ISAC-CNR, Torino & *Politecnico di Milano***,** (Italy)
Supervisors: Dr. Antonello Provenzale and prof. Maria Gabriella Signorini
Conducted research on the possible multifractal structure of heart rate variability with application to 24-hours inter-beats series. (10/1999–4/2000)

Università degli Studi di Pavia (Italy) & *Politecnico di Milano* (Italy)
Supervisors: prof. Maria Gabriella Signorini and prof. Giovanni Magenes
Conducted research on fetal monitoring. (3/1999–6/2000)

Woods Hole Oceanographic Institution (MA) & *University of California at Santa Cruz* (CA), USA
Supervisor: Prof. Neil J. Balmforth
As GFD fellow, conducted research on phase-coupled nonlinear oscillators (continuous and discrete Kuramoto models). The transition to synchronization in the continuum model was analyzed. Numerical methods and perturbation theory were used to study the patterns of synchronization that form beyond transition. (6/1999–8/1999, 12/1999)

Columbia University, New York (NY), USA
Supervisor: Prof. Edward A. Spiegel
Conducted research on chaotic nonlinear dynamical system displaying riddled basins of attraction. (10/1998–12/1998).

10/1990–12/1996 **Politecnico di Milano** Milano, Italy
Laurea (equivalent to a Master & Bachelor degrees) in Electronic Engineering (*summa cum laude*)

Master's Thesis (defended on December 20, 1996, in Italian): "Studio dell'entropia approssimata per la classificazione di serie temporali: applicazioni al segnale di variabilità cardiaca" (Heart Rate Variability signals classification through Approximate Entropy).
Supervisors: Prof. Sergio Cerutti and prof. Maria Gabriella Signorini

FELLOWSHIPS

- 2003, «SNIA S.p.A. - dott. Ennio Denti» postdoctoral fellowship, Politecnico di Milano, Italy.
- 1999; «GFD Fellow», Geophysical Fluid Dynamics Program, Woods Hole Oceanographic Institution, MA, USA.
- 1998, «Isabella Sassi Bonadonna» fellowship, Associazione Elettrotecnica ed Elettronica Italiana (AEI), Italy.

LANGUAGE SKILLS

Mother-tongue: Italian. Fluent in: English.

ADDITIONAL INFORMATION

IEEE senior member since 2012 (member since 2006).

AEIT member (IEEE Italian sister society) since 1998.

ESC (European Society of Cardiology) active member of the e-Cardiology working group.

Licenced in Italy to the profession of engineer since 1998.

Date and place of birth: October 16, 1971 in Mantova (Italy). Nationality: Italian.

DIRECTION OF RESEARCH ACTIVITIES

Organization Activity

Director of the Biomedical Signal Processing (BiSP) laboratory, in the Computer Science department of the University of Milan (from July 2008 to June 2015 and from February 2018 to today).

Director of the Biomedical Signal Processing (BiSP) group, in the Computer Science department of the University of Milan (from July 2008).

Supervisor of the post-doc (Italian type A) Dr Massimo Walter Rivolta, for the research: "Study of a new ECG-based parameter, the V-index, for risk stratification of cardiac events". From 01-06-2015 on.

Supervisor of the post-doc (Italian type B) Dr Md. Aktaruzzaman, for the research: "Sviluppo di algoritmi per il monitoraggio con sensori wearable dell'attività fisica e del ritmo veglia/sonno a supporto dell'active aging" (Development of algorithms for monitoring, using wearable sensors, physical activity and sleel to support active ageing). From 01-03-2015 to 29-02-2016.

Supervisor of the post-doc (Italian type B) Dr Massimo Walter Rivolta, for the research: "Telemonitoraggio con sensori wearable a supporto dell'active aging: sviluppo di algoritmi di analisi dei dati rilevati" (Telemonitoring using werable sensors to support active ageing: developments of algoritms for the analysis of data collected"). From 01-12-2014 to 31-05-2015.

Promoter and coordinator of a research cooperation agreement between the University of Milan and Benefattori Cremaschi ONLUS foundation. The agreement has the objective to test and validate new algorithms, based on wearable sensors and machine learning, to estimate the fall risk. The agreement was signed in 2017.

Promoter and coordinator of a research cooperation agreement between the University of Milan and Cooperativa Sociale Nikolajewka ONLUS (a large Italian no-profit rehabilitation center, offering residential and rehabilitation programs for persons with mid- to very severe motor disabilities). The agreement, meant to develop new computer interfaces in the context of assistive technologies, was signed in 2010.

Supervision of Ph.D. students

Since 2015, Prof. Sassi is **advisor** of Tewodros Mulugeta Dagnew, Ph.D. degree in computer science (Dottore di Ricerca in Informatica, 31° ciclo), Università degli Studi di Milano for the research entitled: "Neuroimaging and Machine Learning based Diagnosis of Neuropsychiatric-disorders".

From 2014 to 2017, Prof. Sassi was **advisor** of Ebadollah Kheirati Roonizi, Ph.D. degree in computer science (Dottore di Ricerca in Informatica, 29° ciclo), Università degli Studi di Milano for the research entitled "Adaptive Model-Based Cardiac Signals Analysis and Feature Extraction".

From 2012 to 2015, Prof. Sassi was **advisor** of Md Aktaruzzaman, Ph.D. degree in computer science (Dottore di Ricerca in Informatica, 27° ciclo), Università degli Studi di Milano for the research entitled "Feature Extraction and Classification Through Entropy Measures"

From 2012 to 2015, Prof. Sassi was **advisor** of Massimo Walter Rivolta, Ph.D. degree in computer science (Dottore di Ricerca in Informatica, 27° ciclo), Università degli Studi di Milano for the research entitled "Non-Blind Source Separation and Feature Extraction: Theory, Approach and Studies in Cardiac Signals".

From 2009 and 2012, Prof. Sassi was **co-advisor** of Che-Wei Lin, Joint Ph.D. degree in computer science (Dottore di Ricerca in Informatica, 24° ciclo), Università degli Studi di Milano and National Cheng Kung University (Tainan, Taiwan) for the research entitled: "Development of a Wearable Sensor System in Health Promotion and Open Research Objectives on Parkinson's Disease Severity Recognition and Fall Risk Prediction".

Supervision of Bachelor and Master Students

At the Computer Science department of the University of Milan, Dr. Sassi supervised about 42 bachelor ("Laurea triennale") or master degree ("Laurea Magistrale") theses. Other 7 theses were jointly supervised. The main topics covered were: biomedical and biometrics applications, web applications, signal processing, image processing, artificial vision, embedded applications. At the moment he is supervising a bacher thesis and a master thesis in cooperation with the Université de Nice-Sophia Antipolis (Prof. Olivier Meste, Laboratorio I3S).

INVITED TALKS

He was invited to give the following talks during international conferences:

- "PDF-ECG and proposed tools: A framework to preserve and present the digital ECG – two birds, one stone?", a the 2017 annual conference of the International Society for Computerized Electrocardiology (ISCE), St. Simons Island, GA, USA, 19-23 April 2017.
- "Electrocardiographic Data Exchanges" at the 3rd e-Cardiology & e-Health Conference, 2016, Berlin, Germany.
- "Present use of ambulatory Holter recordings" at the 2nd e-Cardiology & e-Health Conference, 2014, Bern, CH.
- "Assessing spatial repolarization heterogeneity from electrocardiographic recordings: numerical simulations and clinical applications" at the STAFF 2014 meeting, MIT Endicott House, Dedham, MA, USA
- "Nonlinear analysis of heart rate variability: does it provide new information?", at the 2011 annual conference of the International Society for Computerized Electrocardiology (ISCE), San José, CA, USA.

ACTIVITIES FOR INTERNATIONAL JOURNALS

Since March 2015 is a member of the International Advisory Board of Physiological Measurement.

He acted as **reviewer** for the following international journals:

- IEEE Transactions on Biomedical Engineering
- IEEE Transactions on Information Forensics & Security
- IEEE Transactions on Instrumentation & Measurement
- Computer Methods and Programs in Biomedicine
- Computers in Biology and Medicine
- Medical & Biological Engineering & Computing
- Annals of Biomedical Engineering
- Methods of Information in Medicine
- Medical Engineering and Physics
- Biomedical Signal Processing and Control
- IEEE Systems Journal
- Signal Image and Video Processing
- Journal of Electronic Imaging
- Journal of Engineering Mathematics
- Chaos: An Interdisciplinary Journal of Nonlinear Science
- Chaos, Solitons & Fractals Journal of Non-Newtonian Fluid Mechanics
- Journal of Electrocardiology

- Physiological Measurement
- European Journal of Applied Physiology
- Engineering in Medicine and Biology Magazine
- Frontiers in Computational Physiology and Medicine
- Physica A: Statistical Mechanics and its Applications
- Journal on Computational Intelligence in Bioinformatics and Systems Biology
- Journal of Systems Architecture

ORGANIZATION OF SCIENTIFIC CONFERENCES

He was **general Co-Chair** of the 6th EAI International Conference on Wireless Mobile Communication and Healthcare - MOBIHEALTH 2016, Milan (Italy) November 14-16, 2016

He was a **member** of the **Local Organizing Committee** for IEEE EMBC 2015 (International Conference of the IEEE Engineering in Medicine and Biology Society), which was held in Milan in August 2015

He was **organizer** and **track chair** of the following international workshops:

- Fourth International Workshop on Computational Intelligence Techniques for Industrial and Medical Applications, CITIMA, within the Signal Image Technology & Internet Based Systems conference, SITIS, Jaipur, India, December 4-7, 2017.
- Third International Workshop on Computational Intelligence Techniques for Industrial and Medical Applications, CITIMA, within the Signal Image Technology & Internet Based Systems conference, SITIS, November 28-December 1, 2016 - Naples, Italy.
- Second International Workshop on Computational Intelligence Techniques for Industrial and Medical Applications, CITIMA, within the Signal Image Technology & Internet Based Systems conference, SITIS, November 23-27, 2015 - Bangkok, Thailand.
- First International Workshop on Computational Intelligence Techniques for Industrial and Medical Applications, CITIMA, within the Signal Image Technology & Internet Based Systems conference, SITIS, November 23-27, 2014, Marrakech, Morocco

He was **organizer** and **session chair** of the following sessions of international conferences

- "Fractal Methods in Complexity Analysis" within the 9th Conference of the European Study Group on Cardiovascular Oscillations (ESGCO 2016), Lancaster, UK, April 10-14, 2016.
- "Telecardiology" within the 8th Conference of the European Study Group on Cardiovascular Oscillations (ESGCO 2014), Fai della Paganella, Italy, May 28-31, 2014.

He was **session chair** of the following sessions of international conferences

- "Long Term Monitoring" within the conference Computing in Cardiology 2017, Rennes (France), September 24-27, 2017.
- "Cardiac Pressure and Bloodflow" within the conference Computing in Cardiology 2016, Vancouver (Canada) September 11-14, 2016.
- "Signal Processing in Physiological Systems IV: Cardiovascular Signals" within the 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Milan (Italy), August 25-29 2015.
- "Fetal Signal Modelling and Analysis" within the conference Computing in Cardiology 2015, Nice (France) September 6-9, 2015.
- "Blood Pressure Systems" within the conference Computing in Cardiology 2014, Boston (MA, USA) September 7-10, 2014.
- "Ventricular Repolarization" within the conferecen Computing in Cardiology 2013, Zaragoza (Spain) September 22-25, 2013.

PROGRAMME COMMITTEE MEMBERSHIPS AND REVIEW ACTIVITIES FOR SCIENTIFIC CONFERENCES

He was a member of the **Programme Committee** of the following international conferences:

• Euromicro Conference on Digital System Design (DSD), Special Session On Advanced Systems For Health, Wellness And Personal Assistance (ASHWPA), (years: 2015, 2016, 2017 and 2018)

• IEEE Workshop on Biometric Measurements and Systems for Security and Medical Applications, BioMS (years: 2010, 2011, 2012, 2013 and 2014)

• IEEE International Conference on Computational Intelligence and Virtual Environments for Measurements Systems and Applications, CIVEMSA (years: 2013, 2014, 2015, 2016, 2017 and 2018).

• IEEE International Conference on Computational Intelligence for Measurement Systems and Applications, CIMSA (years: 2006, 2007, 2008, 2009, 2010, 2011 and 2012)

• IEEE International Conference on Virtual Environments, Human-Computer Interfaces, and Measurement Systems, VECIMS (years: 2011 and 2012)

• IEEE International Conference on Information Technology and Applications, ITAB (in 2010)

• Conference of the European Study Group on Cardiovascular Oscillations, ESGCO (in 2014)

• IEEE International Symposium on INnovations in Intelligent SysTems and Applications, INISTA (years: 2014, 2015, 2016, 2017 and 2018)

• International Conference on Bio-inspired Systems and Signal Processing - BIOSIGNALS (years: 2016, 2017, 2018 and 2019).

• IEEE International Symposium on Biomedical Imaging – ISBI (in 2016).

• Computing in Cardiology (CinC) (in 2017 and 2018).

• 2nd Healthcare Interoperability and Pervasive Intelligent System workshop (HiPIS@ICTH 2018), held with the 8th International Conference on Current and Future Trends of Information and Communication Technologies in Healthcare (ICTH 2018), November 5-8, 2018, Leuven, Belgium.

He was a member of the **conference editorial board**, of the **international scientific committee**, or acted as a **reviewer** for the following international conferences:

• Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC (years: 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018)

• Mediterranean Conference on Medical and Biological Engineering and Computing, MEDICON (years: 2010 and 2013)

• IEEE Symposium Series on Computational Intelligence, SSCI (years: 2013 and 2014)

• Bio- and Medical Informatics and Cybernetics, BMIC (years: 2010 and 2011)

• International Joint Conference on Neural Networks, IJCNN (years: 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018)

• International Conference on Knowledge-Based and Intelligent Information & Engineering Systems, KES (years: 2006, 2007 and 2008)

• Conference of the European Study Group on Cardiovascular Oscillations, ESGCO (in 2016)

• International Conference on Information and Communication Technology Research, ICTRC (in 2015).

• IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems, EESMS (in 2015)

• IEEE Symposium on Computational Intelligence in Biometrics and Identity Management, CIBIM (in 2015)

• Biosignal Interpretation Workshop (BSI) (years: 2012 and 2016).

• IEEE International Conference on Biomedical and Health Informatics (BHI) (in 2016)

• Computing in Cardiology (CinC) (years: 2015, 2016).

• IEEE International Environmental Engineering Conference (nell'anno 2018).

EVALUATION ACTIVITIES

In 2011 he participated as a **Panel Member** (Biomedical Engineering subarea) in the evaluation process to select the funded research projects for the Health Sciences 2010 call of the Portuguese Foundation for Science and Technology (Fundação para a Ciência e a Tecnologia, FCT).

He is a **panel member** of the commission which assess the applications and grants the AEIT (Associazione Elettrotecnica ed Elettronica Italiana) «Isabella Sassi Bonadonna» research fellowship ($16.000 - $25.000).

He is a **panel member** of the commission which assess the applications and grants the «Francesco Rodella» research fellowship (Associazione Rodella onlus, Montichiari, BS, €10.000).

Doctoral Commissions

President of the "Commissione giudicatrice per il conferimento del titolo di dottore di ricerca del Corso di Dottorato in Bioingegneria - XXIX ciclo", Politecnico di Milano and **member** of the joint Doctorate Commission (Comisión de Doctorado) for the degree "Ph.D. in Biomedical Engineering", University of Zaragoza (Spain), (joint doctorate), for the candidate Alba Pilar Martin Yebra. Title of the thesis: "Assessment of ventricular repolarization instability and cardiac risk stratification in different pathological and abnormal conditions". Date: 17-11-2017.

Member of the "Commissione giudicatrice per il conferimento del titolo di dottore di ricerca del Corso di Dottorato in Ingegneria dell'Informazione - XXIX ciclo e della Scuola di dottorato in Scienze dell'Ingegneria - Curricula "E-learning" e "Ingegneria biomedica, elettronica e delle telecomunicazioni" - XXVIII ciclo, Università Politecnica delle Marche, Ancona (Ph.D. in Computer Engineering and in Biomedical Engineering). 18 candidates. Dates: 23 and 24 March 2017.

Member of the Doctorate Commission (Comisión de Doctorado) for the title "Ph.D. in Biomedical Engineering" of Julia Ramírez García at the Instituto Universitario de Investigación en Ingeniería de Aragón, University of Zaragoza (Spain). Title of the thesis: "Prediction of Cardiac Death Risk by Analysis of Ventricular Repolarization Restitution from the Electrocardiogram Signal". Date: 20-03-2017.

Member of the Doctorate Commission for the title "Doctor Internacional en Ingegnería Informatica" (PhD) of José Carlos Calvo al CITIC-UGR Department of Computer Architecture and Computer Technology, University of Granada (Spain). Title of the thesis: "A parallel multi-objective optimization procedure for protein structure prediction". Date: 15-10-2012.

TEACHING

Undergraduate and graduate courses

"**Digital Signal Processing Elements**" ("Elaborazione dei Segnali"), for Bachelor Degree ("Laurea Triennale") students at Università degli Studi di Milano, Milan Campus, degree in Informatica per la Comunicazione Digitale. Taught in Italian, during the academic years: 2017/2018 (48 hours).

"**Bioengineering Informatics**" ("Bioingegneria Informatica"), for Master Degree ("Laurea Magistrale") students at Università degli Studi di Milano, Crema campus, master degree in Computer Science. Teaching activity: 48 hours of classes (6 ECTS). Taught in English in the academic years: 2015/2016, 2017/2018.

"**Statistics and Data Analysis**" ("Statistica e Analisi dei Dati, Modulo I"), for Bachelor Degree ("Laurea Triennale") students at Università degli Studi di Milano, Milan Campus, degree in Sicurezza dei Sistemi e delle Reti Informatiche. Taught in Italian, during the academic years: 2017/2018 (3 ECTS, 24 hours).

"**Methods for Signal Processing**" / "Digital Signal Processing" ("Elaborazione di Segnali"), for Master Degree ("Laurea Magistrale") students at Università degli Studi di Milano, Crema campus, master degree in Computer Science. Teaching activity: 48 hours of classes (6 ECTS). Taught in English in the academic years: 2016/2017, 2014/2015, 2013/2014, 2012/2013, 2011/2012. Taught in Italian in the academic years: 2010/2011, 2009/2008.

"**Intelligent Systems**", for Master Degree ("Laurea Magistrale") students at Università degli Studi di Milano, Crema campus, master degree in Computer Science. Teaching activity: 48 hours of classes (6 ECTS). Taught in English in the academic year: 2015/2016.

"**Digital Image Processing**" ("Elaborazione di Immagini"), for Bachelor Degree ("Laurea Triennale") students at Università degli Studi di Milano, Crema campus, degree in Computer Science. Dr Sassi was the coordinator of the course (5 ECTS). Taught in Italian, during the academic years: i) 2008/2009 (40 hours), ii) 2007/2008 (20 hours), iii) 2006/2007 (20 hours), iv) 2005/2006 (4 hours).

"**Elements of Digital Image and Video Processing**" ("Elementi di Elaborazione di Immagini e Video"), for Bachelor Degree ("Laurea Triennale") students at Università degli Studi di Milano, Milan Campus, degree in Informatica per la Comunicazione Digitale. Taught in Italian, during the academic years: 2016/2017, 2015/2016 (48 hours).

"**Object-Oriented Programming Laboratory**" ("Laboratorio di programmazione ad oggetti") for Bachelor Degree ("Laurea Triennale") students at Università degli Studi di Milano, Crema campus, on-line degree in Computer Security. Teaching activity: pre-recorded on-line classes (3 ECTS), in Italian. Academic years in which the course was offered: i) 2010/2011, ii) 2009/2010, iii) 2008/2009, iv) 2007/2008, v) 2006/2007

"**Programming Laboratory**" ("Laboratorio di Informatica applicata") for Bachelor Degree ("Laurea Triennale") students at Università degli Studi di Milano, Crema campus, degree in Computer Science. Teaching activity: 24 hours of classes and 24 of active laboratory (6 ECTS), in Italian. Academic years in which the course was taught: i) 2008/2009, ii) 2007/2008, iii) 2006/2007, iv) 2005/2006, v) 2004/2005, vi) 2003/2004.

"**Web technologies: server-side programming**" ("Tecnologie Web, modulo II"), for Bachelor Degree ("Laurea Triennale") students at Università degli Studi di Milano, Crema campus, degree in Computer Science. Teaching activity: 20 hours of classes (2.5 ECTS), in Italian, during the academic year 2005/2006.

"**Electronics**", laboratory sessions for Bachelor Degree ("Laurea Triennale") students at Università degli Studi di Milano, Crema campus, degree in Computer Science, 2004.

Lectures and seminars

Invited lecture: "**Computer and Information Ethics**" ("Forme della responsabilità nell'ambito dell'informatica"), 6 hours within the course in applied ethics (prof. Frediano Sessi), degree in Computer Engineering, University of Pavia. The lecture was offered in the years: i) 2011, ii) 2010, iii) 2009

Seminar: "**Communication Networks: Error Control, Flow Control**", 6 hours within the course Sistemi di Elaborazione dell'informazione (prof. Ernesto Damiani), bachelor degree in Computer science, Università degli Studi di Milano, 2005.

Seminar: "**Batch shell programming**", 4 hours within the course Sistemi Operativi (prof. Vincenzo Piuri), bachelor degree in Computer science, Università degli Studi di Milano, 2004.

M.S. programs ("Master di II livello")

"**Statistical Methods in Medical Research**" ("Metodi statistici per la medicina") for Specialization Master ("Master di II livello", 2nd level Master under the Bologna agreement) students at Politecnico di Milano, "Master Innovazione in Chirurgia". Teaching activity: 10 hours of classes, in Italian during the academic year: 2007/2008.

"**Soft Computing for Medical Application**", for Specialization Master ("Master di II livello", 2nd level Master under the Bologna agreement) students at Università degli Studi di Milano, degree: "Soft Computing for Industrial Applications – IMSCIA". Teaching activity: online lessons, in English during the academic year: 2003/2004

Ph.D. programs

"**Advanced Topics in Signal Processing**" for Ph.D. students at Università degli Studi di Milano, Ph.D. degree in computer science. Teaching activity: 12 hours, in English, during the academic years: 2015/2016.

"**Advanced Intelligent Systems**" (module) for Ph.D. students at Università degli Studi di Milano, Ph.D. degree in computer science. Teaching activity: 6 hours (out of 12 for the full course), in English, during the academic years: 2015/2016.

"**Fundamentals of digital image processing**" (module) ("Fondamenti di elaborazione del segnale multi-dimensionale") for Ph.D. ("Dottorato di Ricerca") students at Università degli Studi di Milano, Ph.D. degree in computer science. Teaching activity: 6 hours (out of 24 for the full course), in English, during the academic years: 2014/2016, 2011/2012.

"**Fundamentals of digital signal processing**" (module) ("Fondamenti di elaborazione del segnale mono-dimensionale"), for Ph.D. ("Dottorato di Ricerca") students at Università degli Studi di Milano, Ph.D. degree in computer science. Teaching activity: 6 hours (out of 24 for the full course), in English, during the academic year 2009/2010.

He gave the following lectures at the Ph.D. school of Politecnico di Milano, Italy:

- "**Nonlinear dynamics in biological systems and signals**" ("Studio delle dinamiche non lineari nei sistemi e nei segnali biologici"), 3 hours, in Italian, within the Ph.D. course "Advanced topics in biomedical signal processing" ("Complementi di Elaborazione di Segnali e Dati Biomedici"), Ph.D. degree in Biomedical Engineering, Politecnico di Milano. The lecture was offered in the years: v) 2010, iv) 2007, iii) 2005, ii) 2004, i) 2003.
- "**Long time correlations and fractals signals**" and "Entropy and regularity", 3 hours, in English, within the Ph.D. course "Advanced Methods of Biomedical Signal and Data Processing", Ph.D. degree in Biomedical Engineering, Politecnico di Milano. The lecture was offered in the years: iv) 2018, iii) 2016, ii) 2014, i) 2012.

- "**Who are you? Biometric human identification through biosignals**" (3 hours) within the Ph.D. course "Biosignal Processing 4 All: Applications in Affective-Computing, Biometric and Neuromarketing". Ph.D. degree in Biomedical Engineering, Politecnico di Milano. The lecture was offered in 2017.

PUBLICATION METRICS

- Google Scholar: h-index = 21; citations = 1536; g-index = 35.
- Scopus: h-index = 19; citations = 1137; g-index = 30;
- Web of Science/ISI: h-index = 15; citations = 838; g-index = 26;

BIBLIOGRAPHY

A. Published papers

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