

## **PROF. PRIMO ZINGARETTI**

(November 2017)

Dipartimento di Ingegneria dell'Informazione – DII  
Università Politecnica delle Marche

### **Résumé**

Primo Zingaretti was born

He received the Laurea degree in Electronic Engineering from the University of Ancona in 1984.

From 1984 to 1989 he has been employed as a collaborator at the Computer Science Institute of the University of Ancona and at the same time in the R&D department of the Italian research institute INRCA, where he mainly dealt with the electronic management of clinical data and the introduction of artificial intelligence tools in the automatic processing of biomedical data and digital image processing, in particular.

From 1990 to 2002 he was enrolled as a technician at the Computer Science Institute of the University of Ancona. From 2002 to 2011 he was enrolled as a Senior Researcher in SSD ING-INF/05 at the Faculty of Engineering of the Polytechnic University of Marche in Ancona; from 2011 until now he has served as Associate Professor at the same University where he, among others, has lectured "Multimedia Systems" ("Informatica Multimediale"), "Computer Graphics" ("Informatica grafica") and "Data processing systems" ("Sistemi di elaborazione dell'informazione").

He has been supervisor of 8 PhD students who successfully graduated in "Artificial Intelligent Systems" at the Polytechnic University of Marche, where he is currently sitting in the Board of Teachers. He has been examiner for the final discussion of other PhD programs, among which the ones delivered by University of Parma and University of Padua.

His main research interests have been in the areas of artificial intelligence (machine learning and decision support systems), (mobile) robotics, intelligent mechatronic systems, computer vision, pattern recognition, image and signal processing, image understanding and retrieval, information systems, learning, e-health and e-government. Robotics vision (aerial, ground and underwater autonomous systems), geographical information systems (GIS) and Ambient Assisted Living (AAL) have been the main application areas.

He was one of the Promotor of the European Conference on Mobile Robots – ECMR, the Program Chair of the 1st edition – ECMR 2003, Radziejowice/Warsaw, Poland and the General Chair of the 2nd edition ECMR 2005, Ancona, Italia. More recently he is working on intelligent mechatronic systems (in particular, he was the General Chair of Mechatronic and Embedded Systems and Applications - MESA'11, Washington DC, USA and MESA'14, Senigallia, Italy as well as the Program Chair of MESA'10, Qingdao, China) and on interoperability problems in e-government systems, as well as databases and information systems, in particular geographical ones (GIS).

Great attention was directed to the technological transfer of research results. In particular, he was founder member of the two university spin-off SI2G – Intelligent Geographical Information Systems and EVE - Enjoy Visual Experience and a specific interest was devoted to industrial applications and factory automation resulting the scientific and/or technical manager of many national and international research projects, funded by private companies or by public organizations, such as University, European Commission (directly or by POR-FESR regional programs), Italian Ministry of Economic Development (MISE), Italian Ministry of Research and Education (MIUR), etc. (see list of more important below).

He is the author or co-author of more than 200 scientific papers in book chapters, journals or conference proceedings, General Chair and Program Chair of international Conferences and member of the Organizing or Scientific Committees of several national and international conferences, Associate Editor of the International Journal of Intelligent and Robotic Systems (IJINT), Guest Editor of special issues for IEEE Transactions on Intelligent Transportation Systems and for the Journal of Intelligent and Robotic Systems, reviewer for several international journals and conferences, Senior Member of IEEE - Institute of Electrical and Electronics Engineers, Member of ASME – American Society of Mechanical Engineers, Co-founder of AI\*IA - Associazione Italiana di Intelligenza Artificiale and Member of GIRPR - Gruppo Italiano Ricercatori in Pattern Recognition, Evaluator of research projects for the European Commission, for the Ministry of Education, the Ministry of Economic Development and several Italian regions.

## Concise CV

### Education

December 1984 *Laurea degree in "Electronic Engineering" at the University of Ancona*

### University Employments

2011–pres. *Associate Professor in SSD ING-INF/05 of "Multimedia Systems" ("Informatica Multimediale"), "Computer Graphics" ("Informatica grafica") and "Data processing systems" ("Sistemi di elaborazione dell'informazione") at the Department of Information Engineering (DII) of the Università Politecnica delle Marche in Ancona (Italy)*

2002–2011 *Senior Researcher in SSD ING-INF/05 at the Department of Ingegneria Informatica, Gestionale e dell'Automazione (DIIGA) of the University of Ancona (Italy)*

1996–2002 *Data processing functionary at the Istituto di Informatica of the University of Ancona (Italy)*

1990–1996 *Data processing collaborator at the Istituto di Informatica of the University of Ancona (Italy)*

### Ph.D. Activities

2002-pres. *Member of the Board of Teachers of the Ph.D. program "Artificial Intelligent Systems" at the Polytechnic University of Marche in Ancona*

2002-pres. *Supervisor of 8 Ph.D. students*

### Professional Memberships

16-06-2007-pres. *Senior Member of IEEE - Institute of Electrical and Electronics Engineers*

01-10-2011-pres. *Member of ASME – American Society of Mechanical Engineers*

01-12-1988-pres. *Co-founder of AI\*IA - Associazione Italiana di Intelligenza Artificiale*

06-06-1998-pres. *Member of GIRPR - Gruppo Italiano Ricercatori in Pattern Recognition*

### Summary of major fields of Expertise

- Intelligent mechatronics and embedded systems (Cyber-physical systems)
- (Mobile) Robotics (aerial, ground and underwater autonomous systems)
- Artificial intelligence (Machine learning and Decision Support Systems)
- Computer Vision and Pattern Recognition
- Image and signal processing
- (Geographical) Information Systems
- Ambient Assisted Living (AAL)

### Research Project Grants

2006-2008. PRIN 2005 "Integrazione sensoriale per la gestione e controllo di veicoli autonomi eterogenei"

2010-2013 ARTEMIS-JU n. 100233: "R3-COP – Resilient Reasoning Robotic Co-operating Systems"

2011-2014 FP7-REGIONS n. 266422: "JADE - Joining innovative Approaches for the integration and Development of transnational knowledge of clusters policies related to independent of Elderly"

2011-2015 MISE: FIT A01/2215/1/2/X16 HBA 2.0 – Human Behaviour Analysis – "Studio progettazione e prototipazione di un innovativo sistema di visione artificiale per l'analisi dei comportamenti umani in ambito domestico e commerciale"

2011-2015 MISE: FIT E01/0865/1/2/3/X16 – Water View - "Studio, progettazione e prototipazione di un sistema per il mapping e la classificazione di casi a rischio di bacini fluviali e lacustri attraverso l'uso di sistemi robotici autonomi e piattaforme sensoriali evolute"

2013-2014 private companies: "B3WORLD: innovativo sistema per la distribuzione di calzature Made In Marche sui mercati internazionali"

2013-2014 private companies: FU2R: soluzioni tecnologicamente avanzate nel settore dell'arredamento per affrontare i mercati americano e russo

2013-2014 private companies:

2013-2014 private companies:

2013-2015 DGR 1464/11 Regione Marche: "HDOMO 2.0 – Human Based Domotics" in the project "Casa intelligente per una longevità attiva ed indipendente dell'anziano"

2013-2015 private companies: "ANGELHOME: Studio, progettazione e prototipazione di un innovativo sistema domotico per l'analisi dei comportamenti fisici e del decadimento delle capacità mentali di utenti deboli, integrato a controlli automatici e interattivi della sicurezza e del comfort dell'abitazione e della persona"

2013-2016 MIUR CTN01\_00128\_297089: "D4ALL - Design for All - Software integration and advanced Human Machine Interfaces in design for Ambient Assisted Living"

2014-pres. DGR 247/14 Regione Marche: "ROAD" in the project "DCE Marche"

2014-pres. DGR 1464/2011 Regione Marche: "NEXTONE" in the project "DCE Marche"

2015-pres. MISE FCS 129 - "Studio, progettazione e realizzazione di un innovativo sistema per la diagnostica ferroviaria"

2016-pres. POR MARCHE FESR 2014-2020 project n. 15344 - "ENERGIS: ENERgy Geographical Information System" in the project "Promozione della ricerca e dello sviluppo negli ambiti della specializzazione intelligente"

2016-2016 EU project IPA Adriatic CBC Programme 2007-2013 1°TCE/0010/0: "HIVES — High-Level Innovation for a Value-Driven Exploitation of a Joint S3 in The Adriatic Area";

2016-2016 EU project IPA Adriatic CBC Programme 2007-2013 1°TCE/0011/0: "WELLFOOD - Adri- lonian Cluster Towards Innovation"

## Services to the Profession

2005	Director of PSFMR'05, International School on Perception and Sensor Fusion in Mobile Robotics, Ancona, Italy, Sept. 1-7, 2005
2006	Director of PSFMR'06, 2nd International School on Perception and Sensor Fusion in Mobile Robotics, Fermo, Italy, Sept. 11-16, 2006
2010-2011	Chair of the Technical Committee MESA "Mechatronic and Embedded System Applications" of the ASME Design Engineering Division (DED)

## Journal Services

1990-pres	Reviewer for several journals
2004	Guest Editor for the journal Robotics and Autonomous Systems, Elsevier, ISSN: 0921-8890, Vol. 48(1), 1-61 (special issue on "Selected papers from European Conference on Mobile Robots- ECMR'03")
2006	Guest Editor for the journal Robotics and Autonomous Systems, Elsevier, ISSN: 0921-8890, Vol. 54(9), 719-778 (special issue on "Selected papers from 2nd European Conference on Mobile Robots- ECMR'05")
2012-pres.	Associate Editor of the Journal of Intelligent and Robotic Systems (JINT), Publisher: Springer Netherlands, ISSN: 0921-0296
2016	Guest Editor for the Journal of Intelligent & Robotic Systems (JINT), Springer Netherlands, ISSN: 0921-0296, Vol. 81(2) (special issue on "Current Developments in Robotics and Mobile Machines")
2015	Guest Editor for the IEEE Transactions on Intelligent Transportation Systems, IEEE ITS Society, ISSN: 1524-9050, Vol. 16(6) (special issue on "Mechatronic and Embedded Systems and Applications in ITS")
2017	Guest Editor for the Journal of Intelligent & Robotic Systems (JINT), Springer Netherlands, ISSN: 0921-0296 (special issue on "Mechatronic and Embedded Systems for Robotics and Mobile Machines" (in print)
2017	Guest Editor for the IEEE Transactions on Intelligent Transportation Systems, IEEE ITS Society, ISSN: 1524-9050: special issue on "Applications of Mechatronic and Embedded Systems in Intelligent Transportation Systems" (in print)

## Conference Services

1990-pres	Reviewer for several conferences
2003	Program Chair of ECMR'03, European Conference on Mobile Robots, Radziejowice/Warsaw, Poland, Sept. 4-6, 2003
2005	General Chair of ECMR'05, European Conference on Mobile Robots, Ancona, Italia, Sept. 7-10, 2005
2010	Program Chair of IEEE/ASME MESA'10, 6th IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, Qingdao, China, July 15-17, 2010
2011	General Chair of ASME/IEEE MESA'11, 7th ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, Washington, USA, August 28-31, 2011
2013	Vice Program Chair of MED'13 (2013), 21th Mediterranean Conference on Control and Automation, Athens, Greece, June 25-28, 2013
2014	General Chair of ASME/IEEE MESA'14, 10th ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, Senigallia, Italy, Sept. 10-12, 2014