CURRICULUM VITAE – GIACOMO DI BENEDETTO

PERSONAL INFORMATION

Family name, First name: Di Benedetto Giacomo

Languages: Italian (Mother tongue), English (C1), Spanish (B2), French (A2)

EDUCATION

- 2013 PhD in Biomedical Engineering (thesis: Diabetes mathematical modeling) Politecnico di Torino;
- 1995 Degree ("Laurea") in Electronic Engineering (thesis: “Dipole sources in epilepsy foci in EEG”) 100/100 Politecnico di Milano.

PROFESSIONAL QUALIFICATIONS

- CMVP (Certified Measurement and Verification Professional) under IPMVP guidelines by AEE and EVO organizations;
- From 2011 Register of Engineers

WORK EXPERIENCE

CURRENT POSITIONS

- October 2019 – Inibica (Institute for biomedical research and innovation in Cadiz) Cadiz, Spain. Innovation manager and International projects
- October 2019 - 7HC srl Rome CEO and partner, biological data platform
- October 2019 – Cellex srl Rome, partner, cellular culture bioreactors
- April 2011-: Enginlife Engineering Solutions, Torino, professional firm, partner and principal, consultancy on engineering research. Subcontractor for:
    - o September 2018 – Tody Engineering srl, Technical advisor for energy power plants in Middle East and North Africa countries;
    - o January 2014-: Zephyro SpA. Consultant as:
        - M&V Planner for Energy Efficiency Project in Israel (State of Israel, Ministry of Health, Tender EE1/2011 The implementation of energy efficiency measures in medical centres);
        - Researcher for STEER (Support Tool for Energy Efficiency pRogrammes in medical centres, id 645694) project (RISE call 2014 Horizon 2020);
        - M&V Planner for Italian and UK contracts.
    - o January 2013-: Consultant for statistical and mathematical modelling at SISST (Italian Society for the Study of Traumatic Stress);
    - o 2012: Politecnico di Torino in Probing (Engineering bioreactor prototyping) project (MISE call 2012);
    - o 2012: Biomicron s.r.l. in Biopath (Bioengineered barrier membranes for the treatment of dental bone pathologies) project (Manunet call 2011);
    - o 2011: Sorin Biomedica in Bioscent European Project (FP7 2007).

PREVIOUS POSITIONS

- May 2016 – April 2018: Ecole Centrale Lyon, Ampere Lab. Post doc Biomedical Engineering group on the project “EXposition des Travailleurs aux champs électromagnétiques Industriels » ;
- November 2014 – December 2018: Tecnologie srl, Milan, partner. Biomedical company for design and development of new implantable devices. Participation in Innovation in Sme Call 2015 (Seal of Excellence for 3AFree submission).
- January 2011 – December 2014: Bvisible srl, Milan, partner and principal, R&D director, design optimization of outofhome advertising campaign. Research Leader of GLOCALFINEART Fp7 IAPP Call (2013-2016) R&D Co-director of project CEI BioTic 2013 Analysis of Andalusian Emergent Art Market;

- March – July 2013: Mach Foundation, San Michele all'Adige, bioinformatics consultancy;
- Jan 2011- Apr 2012: Consultant CFO S.p.A., Milan, to design decision support system for market analysis and risk management;
- Jan 2009- Dec 2012: PhD student in biomedical engineering, Politecnico di Torino, Prof Montevecchi;
- May 2008 - Dec 2009: Consultant Sydema: developing of financial quantitative analysis system;
- Oct 2007- Dec 2008: Consultant Sineura, Milan, development of proposals and projects on FP7 program in Health and ICT for Health fields;
- May 2005- Dec 2008: Consultant Munus Art Investment, Milan, financial artistic indices, masterpiece price forecasting by using haedonic regression;
- May 2006- Dec 2007: Consultant Solianis Monitoring AG, Zürich, data analysis on non-invasive glucose sensor;
- May 2004- April 2006: Research assistant at Vestibulo-Oculomotor Lab, Neurophisiology Department Zurich University Hospital: Marie Curie ESR grant on SensoPrim EU project (www.sensoprim.de);
- Nov 2001- April 2004: Brainpower SA Lugano: research department to design and develop mathematical models for financial problems (Real Portfolio, Return and Risk Attribution, Portfolio optimisation, Asset Allocation, Real time funds forecasting);
- May-October 2001: Sorin Biomedica Cardio Saluggia: R&D Department design and process development of NiTinol stents;
- May 2000- April 2001: Research contract at project "Functional substitution, Artificial Organs and Organs Transplantations" Bioengineering Lab. (Senior Researcher Mauro Grigioni) Istituto Superiore di Sanità, Rome;
- July 1999 – April 2000: MURST Scholarship Applied Research Project in Microsystems, Microfluidic section Mi-Tech Lab., Arts Lab. (Prof P. Dario) Scuola Superiore di Studi Universitari e Perfezionamento Sant'Anna, Pisa ;
- Sept 1997 – June 1999: MURST Scholarship National Research Project II Technology in Cardiology, at: o Biomedical Engineering Department (Prof. Fumero) Politecnico di Milano;
  - o Ce.B.I.Te.C Centre for Bioengineering and Technological Innovations in Cardiology Ospedale San Raffaele Milano;
  - o Dideco S.p.A Mirandola.

FELLOWSHIPS AND AWARDS

2016 Post-Doc Fellowship Ampere Lab Ecole Centrale Lyon;

2015 Seal of excellence by European Community with the project 3Afree with Tecnologie srl and Enginlife Engineering Solutions ("3Aafree was successful in a highly competitive evaluation process as innovative project proposal");

2015 Senior Post-Doc Fellowship Erasmus School of History, Culture and Communication (ESHCC) at Erasmus University Rotterdam;

2009 PhD Fellowship in Industrial Engineering Politecnico di Torino (Italy);

2008 Research contract, Politecnico di Torino, Prof Montevecchi;

2005 Marie Curie ESR grant on SensoPrim EU project University Hospital Zurich ;

2001 National Research Council grant on Morphological studies of vascular prostheses. Department of Mechanics Palermo University;

2000 Research contract at project Functional substitution, Artificial Organs and Organs Transplantations, Bioengineering Lab. (Senior Researcher Mauro Grigioni) Istituto Superiore di Sanità, Rome;

1999 MURST Scholarship Applied Research Project in Microsystems Scuola Superiore di Studi e Perfezionamento Sant'Anna, Pisa;

1997 MURST Scholarship National Research Project II Technology in Cardiology. Politecnico di Milano, Dideco SpA Mirandola;

PARTICIPATION IN INTERNATIONAL PROJECTS

2020- Lear at 7HC for PARENT (PremAtuRe nEwborn motor and cogNitive impairmenTs: Early diagnosis) project presented at ITN call 2020 Horizon 2020.

2020- Lear and research leader at Enginlife Engineering Solutions for RRREMAKER (Reuse Reduce Recycle AI-based platform for automated and scalable Maker culture in Circular economy) project presented at RISE call 2020 Horizon 2020.

2019- Lear and Research Leader at Enginlife Engineering Solutions for VIRTUOUS (Virtual tongue to predIct the oRganoleptic profile of mediterranean IngredienTs and their effect on hUman hOmeostasis by means of an integrated compUtational multiphysicS platform) project presented at RISE call 2019 Horizon 2020.

2017- Lear and Research Leader at Enginlife Engineering Solutions for WARMEST (A Wide technologicAl Remote sensing system for the Monitoring of the state of cultural hEritage Sites: building an inTegrated model for maintenance based on climate change) project presented at RISE call 2017 Horizon 2020.

2015-2018 – Researcher at Zephyro SpA for STEER, Support Tool for Energy Efficiency pRogrammes in medical centres, (id 645694) project presented at RISE call 2014 Horizon 2020;

2015 Senior Post-Doc Erasmus School of History, Culture and Communication (ESHCC) at Erasmus University Rotterdam in Glocalfineart (id 612213), Fp7 IAPP call 2013;

2014 – Research Leader of Bvisible srl in Glocalfineart (id 612213), Fp7 IAPP call 2013;

2013 – Industrial co-director of CEI BioTic 2013 Analysis of Andalusian Emergent Art Market

PUBLICATIONS

>20 SCI papers, over 600 citations (Source:Scholar), h index 9. More than 50 posters and presentations in international and national congress.

International Journals:

P1. Luca Navarini, Francesco Caso, Luisa Costa, Damiano Currado, Liliana Stola, Fabio Perrotta, Lorenzo Delfino, Michela Sperti, Marco A Deriu, Piero Ruscitti, Viktoriya Pavlych, Addolorata Corrado, Giacomo Di Benedetto, Marco Tasso, Massimo Ciccozzi, Alice Laudisio, Claudio Lunardi, Francesco Paolo Cantatore, Ennio Lubrano, Roberto Giacomelli, Raffaele Scarpa, Antonella Afeltra, Cardiovascular Risk Prediction in Ankylosing Spondylitis: From Traditional Scores to Machine Learning Assessment Rheumatology and Therapy 2020 doi: 10.1007/s40744-020-00233-4

P2. Vittoria Ardino, Giacomo Di Benedetto, The economic case of psychosocial care of Unaccompanied Foreign Minors (UAMs) in Italy: A brief policy report in "MALTRATTAMENTO E ABUSO ALL'INFANZIA" 2/2017, pp. 55-79,

P3. Belen Mazuecos, Marilena Vecco, Daniele Liberanome, Giacomo Di Benedetto. The Impact of Intrinsic and Sociological Factors on an Emerging Visual Artist's Career: Local Case Study of the Andalusian Art System. DOI: 10.18848/2326-9987/CGP/v12i04/1-16

P4. Predicting the Metabolic Condition After Gestational Diabetes Mellitus from Oral Glucose Tolerance Test Curves Shape Morbiducci U., Di Benedetto G., Gaetano L., Kautzky-Willer A., Pacini G., Tura A. Annals of Biomedical Engineering 2014 May;42(5):1112-20.

P5. Non-esterified fatty acid dynamics during oral glucose tolerance test in women with former gestational diabetes. Tura A, Pacini G, Winhofer Y, Bozkurt L, Di Benedetto G, Morbiducci U, Roden M, Kautzky-Willer A. Diabet Med. 2012 Mar;29(3):351-8.

P6. Caduff A, Lutz HU, Heinemann L, Di Benedetto G, Talary MS, Theander S., Dynamics of blood electrolytes in repeated hyper- and/or hypoglycaemic events in patients with type 1 diabetes. Diabetologia. 2011 Oct;54(10):2678-89.

P7. Cerizza C, Campanini E, Di Benedetto G, Menchise C., Sports, dietary habits, self-perception and BMI in a sample of young Italian athletes. Sport Sciences for Health, Vol. 6, No. 2. (1 July 2011), pp. 67-75

P8. Caduff A, Heinemann L, Talary MS, Di Benedetto G, Lutz HU, Theander S., A 4-h hyperglycaemic excursion induces rapid and slow changes in major electrolytes in blood in healthy human subjects. Acta Diabetol. 2011 May 15. [Epub ahead of print]

P9. Morbiducci U, Di Benedetto G, Kautzky-Willer A, Deriu MA, Pacini G, Tura A., Identification of a model of non-esterified fatty acids dynamics through genetic algorithms: the case of women with a history of gestational diabetes. Comput Biol Med. 2011 Mar;41(3):146-53.

P10. Deriu M.A., Bidone T.C., Mastrangelo F., Di Benedetto G., Soncini M., Montevecchi F.M., Morbiducci U., Biomechanics of actin filaments: a computational multi-level study. J Biomech. 2011 Feb 24;44(4):630-6.

P11. Gaetano L., Di Benedetto G., Tura A., Balestra G., Montevecchi F.M., Kautzky-Willer A., Pacini G., Morbiducci U. "A Self-organizing map based morphological analysis of oral glucose tolerance test curves in women with gestational diabetes mellitus", Stud Health Technol Inform. 2010;160:1145-9.

P12. Thomassen J.S., Di Benedetto G., Hess B.J., Decoding 3D search coil signals in a non-homogeneous magnetic field, Vision Research, 2010, June 18, 50(13)

P13. U. Morbiducci, G. Di Benedetto, A. Kautzky-Willer, G. Pacini, A. Tura. Improved usability of the Minimal Model of insulin sensitivity based on automated approach and Genetic Algorithms for parameter estimation. Clin Sci (Lond). 2007 Vol 112(4)

P14. M. Grigioni, U. Morbiducci, G D'Avenio, G Di Benedetto, C Del Gaudio. A novel formulation for blood trauma prediction by a modified power-law mathematical model. Biomechanics and Modeling in Mechanobiology 2005 Dec;4(4):249-60.

P15. Grigioni M., Daniele C., Morbiducci U., Di Benedetto G., D'Avenio G., Barbaro V. Evolutive algorithms in beat-by-beat estimation of the left ventricular mechanics. Annali Istituto Superiore di Sanita' 2004; 40(4): 401-409.

P16. Grigioni M, Daniele C, Morbiducci U, D'Avenio G, Di Benedetto G, Barbaro V. Morphological analysis of in vivo velocity field in the alteration of the vasomotor tone. Int J Artif Organs. 2004 Oct;27(10):868-81.

P17. Grigioni M, Daniele C, Morbiducci U, D'Avenio G, Di Benedetto G, Barbaro V. The Power-law Mathematical Model for Blood Damage Prediction: Analytical Developments and Physical Inconsistencies. Artif Organs. 2004 May; 28(5):467-75.

P18. Grigioni M., Daniele C., Morbiducci U., Di Benedetto G., D'Avenio G., Barbaro V. Computational model of the fluid dynamics of a cannula inserted in a vessel: incidence of the presence of side holes in blood flow. J Biomech. 2002 Dec;35(12):1599-612.

P19. Grigioni M., Daniele C., Morbiducci U., Di Benedetto G., D'Avenio G., Barbaro V. Potential mechanical blood trauma in vascular access devices: a comparison of case studies. Int J Artif Organs. 2002 Sep;25(9):882-91.

P20. Grigioni M, Daniele C, Morbiducci U, Di Benedetto G, D'Avenio G, Barbaro V. Il sistema cardiovascolare fetale: un modello numerico che utilizza gli algoritmi genetici come metodo di identificazione. Rapporto ISTISAN, aprile 2002; pagine 33.

P21. Grigioni M, Carotti A, Daniele C, D'Avenio G, Morbiducci U, Di Benedetto G, Albanese S, Di Donato R, Barbaro V. "A mathematical model of the fetal cardiovascular system based on genetic algorithms as identification technique". Int J Artif Organs 2001; 24: 286-296.

P22. M Grigioni, C Daniele, U Morbiducci, G Di Benedetto, G D'Avenio, V Barbaro Blood cells damage prediction by using CFD as evaluation parameter in perfusion, ". Int J Artif Organs 2000; 23: 118.

P23. Grigioni M., Daniele C., Morbiducci U., Di Benedetto G., D'Avenio G.: A parametric model of cannula to investigate hemolysis by using CFD. Engineering in Medicine and Biology Society, 2000. Proceedings of the 22nd Annual International Conference of the IEEE, Volume: 2 , 23-28 July 2000 Pages:1154 - 1157 vol.2.

P24. Ravazzani P., Tognola G., Grandori F., Budai R., Locatelli T., Cursi M., Di Benedetto G., Comi G.: Temporal segmentation and multiple source analysis of short-latency median nerve SEP, Journal of Medical Engineering and Technology, 19, 1995, pp.70-76.

Research collaboration past and/or currently.

Academia

Inibica, Biomedical Research and Innovation Institute, Cadiz, Spain; University of Granada, Plant Physiology and Pharmacy Department Granada Spain; University of Granada, Artificial Intelligence Department Granada Spain; University of Granada, Fine Arts Faculty Granada Spain;
Ampere Lab Ecole Central Lyon, France;
Afeka college, Energetic Department Tel Aviv Israel;
Industrial Systems Institute, Athena Research and Innovation Centre Patras Greece;
Electronic and Information Technology Department, Politecnico di Milano Italy; Industrial Bioengineering Group Mechanical Department, Politecnico di Torino Italy; Bioelectromagnetics Group ISIB, Institute of Biomedical Engineering Politecnico di Milano Italy; Metabolic Unit, ISIB, Institute of Biomedical Engineering CNR Padova Italy;Valves and Vessels Lab Istituto Superiore di Sanità Rome Italy; Laboratory of Biological Structure Mechanics Politecnico di Milano Italy; CRIM - Center for Applied Research in Micro and Nano Engineering Scuola Superiore di studi universitari e perfezionamento Sant'Anna Pisa Italy; Health Psycology, Psycology Faculty, Clinical Psycology Università Vita - Salute San Raffaele Milano Italy; SISST (Italian Society for the Study of Traumatic Stress) Italy;
Vestibulo-Oculomotor Lab Neurophysiology Department, Universitätspittal Zürich, Switzerland;
ECARES - European Center for Advanced Research in Economics and Statistics Université Libre de Bruxelles Belgium;
Erasmus School of History, Culture and Communication Erasmus University Rotterdam Netherlands.

Private sector

R&D Department Biovotion AG Zürich Switzerland;
Stent and valves Department Sorin Biomedica SpA Saluggia Italy;
Blood Management Department Dideco SpA Mirandola Italy;
R&D Department Brainpower SA (now Bloomberg) Lugano Switzerland;
R&D Department Zephyro SpA Italy.
R&D Department InSybio Patras Greece

References

Prof Umberto Morbiducci , Full Prof Industrial Bioengineering Group Aerospace and Mechanics Department Politecnico di Torino, Italy.

Prof Marco Deriu , Associate Prof Industrial Bioengineering Group Aerospace and Mechanics Department Politecnico di Torino, Italy.

Prof Ana Garcia Lopez , Full Professor and past vice-dean Faculty of Fine Arts University of Granada Spain.

Prof Belen Mazuecos Full Professor Faculty of Fine Arts University of Granada

Prof Vanessa Martos Associate Professor Department of Plant Physiology University of Granada

Prof Athanasios Kalogeras , Research Director Industrial Systems Institute, Patras, Greece Prof Javier Ordonez , Associate Professor Civil Engineering University of Granada Spain

Dr Moshe Tshuva Department of Mechanical Engineering, Afeka College, Tel Aviv, Israel

Dr Giovanni Pacini , Research Director of ISIB CNR Italy.

Dr Ornella Ieropoli R&D Director Sorin Group

Dr Andreas Caduff ____ CEO of Biovotion AG, Zurich Switzerland.

Mr Mario Neval Sales and Portfolio Development Director Edison facility management Italy.