

CURRICULUM VITAE

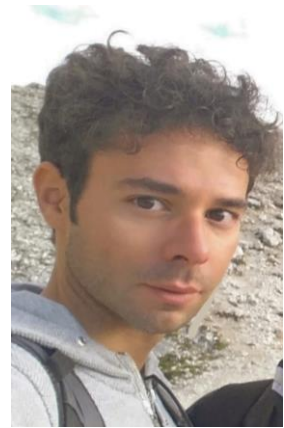
Ing. Ilario DE VINCENZO – PhD

Work:

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GENERAL INFORMATION

Place of birth

Ilario De Vincenzo was born in Trani (BT) – Italy on December 28th 1989.

Education

- Ph. D. in Mechanical and Management Engineering, 2014-2016, Politecnico di Bari – Italy. Dissertation: *“Emergence and exploitation of collective intelligence of groups”*.
- Qualification as Engineer, 2014, Italian Association of Engineers. Score: 323/360.
- Summa cum laude Master degree in Mechanical Engineering, November 14th 2013, Politecnico di Bari – Italy. Thesis in Fluid Machines: *“Analysis and optimization of a return channel for centrifugal compressor”*, supported by a General Electric Oil & Gas scholarship.
- Summa cum laude Bachelor degree in Mechanical Engineering, July 18th 2011, Politecnico di Bari – Italy. Thesis in Fluid dynamics: *“Tumbling inside a combustion chamber model”*.
- Summa cum laude Diploma as Mechanical Engineering specialist, 2003-2008, Istituto Tecnico Industriale Sen. Onofrio Iannuzzi, Andria (BT) – Italy.

Research experience in other research institute

- Visiting PhD at Centre for Nonlinear Science at University of North Texas (UNT), Denton – Texas (US), June 3rd-December 26th 2016.
- Summer School in *Nanotribology*, Technical University of Denmark (DTU), Copenhagen – Denmark, August 18th-29th 2014.
- Summer School in *Energy harvesting at micro and nano scales*, Noise in Physical Systems laboratories (NiPS), Perugia – Italy, July 14th-18th 2014.

Prizes and awards

- April 2013. Prizewinner of a master thesis scholarship funded by General Electric Oil & Gas.
- June 2008. Recognized for his relevant school achievements, he was invited by the National Order of Merit for Labor to participate in a contest to get a position in the prestigious college of excellence “Lamaro Pozzani” in Rome. Mr. De Vincenzo declined the offer.
- August 2008. Prizewinner “First place in state examinations 2007/2008” by the Rotary International club of Trani, District 2120.
- February 2008. Winner of an educational trip to Rome at the Quirinale, where, along with other Italian students, he met the Italian Republic President Giorgio Napolitano.

TEACHING ACTIVITIES

Academic Years 2014 - 2016

- Teaching assistant of:
 - * *Mechanics of Machines I - II*, M.Sc. Engineering Degree, Politecnico di Bari.
 - * *Aircraft Dynamics and simulation*, M.Sc. Engineering Degree, Politecnico di Bari.
- Lecture notes and teaching material for courses:
 - * *Mechanics of Machines I - II*, M.Sc. Engineering Degree, Politecnico di Bari.
 - * *Tribology and stochastic processes*, PhD Course in Mechanical Engineering, Politecnico di Bari.

WORK EXPERIENCE

- Code Architects Automation s.r.l.
1-3, Via Campania, 70029, Santeramo in Colle (BA) – Italy. <https://www.codearchitects.com/>
Research and development mechanical engineer. Inside a high skilled multidisciplinary group, including, automation engineers, electrical engineers, beyond software developers, Mr. De Vincenzo is responsible for the mechanical design area.

His activity covers all the processes involved in the mechanical design of machines, mainly industrial robots and self-driving vehicles (SDV) for logistics: mathematical modeling, programs development to simulate physical phenomena, vehicle design, structural optimization, technical drawings execution, production supervision, implementation of navigation strategies for the autonomous guide.

It is worth emphasizing the significant contribution Mr. De Vincenzo gave in the development of the first company's SDV: he submitted a patent for an innovative omnidirectional wheel conceived, making it a product and icon for the company; he designed the vehicle mechanics, noteworthy an innovative frame and lifting system, both in the patenting process.

Besides his technical duties, Mr. De Vincenzo covered management tasks, coordinating daily the activities involving other companies and research institutes in the execution of a long-term collaborative project supported by European financing. Moreover, his attitude to speak with people and customers, besides his interest in management strategies, let him be involved in public talks and decision making connected with marketing strategies. February 2018-Now.
- Biotec s.r.l.
51, Via Oliere e Saponerie meridionali, 70056, Molfetta (BA) – Italy. <http://www.biotecgroup.it/>
Research and development chief engineer: design and optimization of new machines, devices and technologies for water and air depuration systems, mainly through UV and ozone lamps; fluid dynamic and structural machines optimization using simulation software; programming PLCs and electronic devices for the intelligent remote management of the plants; optimization of the production processes; drafting of technical reports for public tenders; coordinator of the mechatronic engineering team; recruiting director. August 2017-January 2018.
- Politecnico di Bari - Dept. of Mechanics, Mathematics and Management
182, V.le Japigia, 70126, Bari – Italy
Research Fellowship for the study of rheology phenomena, aimed at modeling the phenomena of friction, wear, and leakage in valves operations. April-July 2017.
- Autofficina De.Car di De Vincenzo Carlo
3, Via Carrara Pantano, 76011, Bisceglie (BT) – Italy.

Since he was a child, Dr. De Vincenzo followed his father's activity of mechanic and electrician, assisting him in the advent of electronics in processes related to the mechanics of the new generation of cars, specializing his expertise in the diagnostic of the electronic control units which regulate and govern the operation of modern combustion engines.

- Studio of Architecture di Pier Paolo Sinigaglia
3, Via Camere del Capitolo, 76011, Bisceglie (BT) – Italy.

During the high school summer vacations, Mr. De Vincenzo attended an Engineering and Architecture studio in his town, collaborating on writing technical reports about buildings certifications and drawing floor plans using AutoCAD.

COURSES AND CERTIFICATION

- First certificate of English (B2 level), Linguistic Centre Politecnico di Bari - Italy.
- Advanced course for Solidworks, Easy-d-rom, Bari (BA) – Italy.
- AutoCAD advanced course, ITIS Sen. Onofrio Iannuzzi, Andria (BT) - Italy.
- Internship in computer aided design of mechanical structures, Politecnico di Bari - Italy.
- Internship in computational fluid dynamics, Politecnico di Bari - Italy.
- Visual simulation and prototyping course using Solid Edge, Politecnico di Bari - Italy.
- Siemens PLC course, ITIS Sen. Iannuzzi, Andria (BT) - Italy.
- Siemens CNC course in machine tools numerical control, ITIS Sen. Iannuzzi, Andria (BT) - Italy.
- Driving licenses: A3, B.

PERSONAL SKILLS

- Mother tongue: Italian.
- Other languages: English, full proficiency (C1 level) in understanding, speaking and writing.
- Communication skills: Excellent capabilities in team building, teamwork and organization; the aptitude for dialogue and the natural predisposition to establish good interpersonal relationships, as well as the tendency to trust people, have always allowed to Dr. De Vincenzo of efficiently communicate with his colleagues, integrating himself in the teamwork.
- Managerial skills: Good knowledge in resource management, time scheduling, budget and costs estimation, project phases monitoring; typical DMAIC approach in problem solving (defining, measuring, analyzing, improving, controlling); application of Lean Production principles.
- Digital competencies:
 - * O.S.: Windows, Linux (Ubuntu, openSUSE).
 - * Microsoft Office package: MS Excel, Word, Project, Visio, PowerPoint, Access.
 - * Latex: Scientific Workplace, MiKTeX.
 - * Programming languages: proficient user of Fortran, Mathematica, Visual Studio and MATLAB, good knowledge of C, C++ and Python language.
 - * Web Design: Adobe Illustrator, Adobe Photoshop.
 - * CAE software: Solid Works, AutoCAD, Solid Edge, Ansys Mechanical, Ansys Fluent, Ansys ICEM CFD, Ansys CFX, Siemens Unigraphics NX, COMSOL Multiphysics, Gambit.

PATENTS

1. De Vincenzo, I., Mannone, D., Lombardi, R.N., *Omnidirectional wheel*, Patent application SIB BI5359R.

SCIENTIFIC PUBLICATIONS

International Archive Journals peer-review

1. De Vincenzo, I., Giannoccaro, I., Carbone, G., & Grigolini, P. (2017). *Criticality triggers the emergence of collective intelligence in groups*. *Physical Review E*, 96(2), 022309.
<https://doi.org/10.1103/PhysRevE.96.022309>
2. De Vincenzo, I., Giannoccaro, I., Carbone, G. (2017). *How social network features and organizational structure impact team performance in uncertain environments*. *Emergence: Complexity and Organization*, 19(2). [10.emerg/10.17357.03a0541223537bc7607aa7035475ba39](https://doi.org/10.17357.03a0541223537bc7607aa7035475ba39)

3. De Vincenzo, I., Massari, G.F., Giannoccaro, I., Carbone, G., Grigolini, P. (2017). *Mimicking the collective intelligence of human groups as an optimization tool for combinatorial problems*. Chaos Solitons & Fractals, 110, 259–266. doi: [10.1016/j.chaos.2018.03.030](https://doi.org/10.1016/j.chaos.2018.03.030).
4. De Vincenzo, I., Giannoccaro, I., Carbone, G. (2016). *The human group optimizer (HGO): mimicking the collective intelligence of human groups as an optimization tool for combinatorial problems*. arXiv preprint:1608.01495.
5. De Vincenzo, I., Giannoccaro, I., Carbone, G., Grigolini, P. (2018). *A self-organized optimization algorithm mimicking the collective intelligence of human groups*. Submitted to IEEE Transactions on Evolutionary Computation.

International congresses with peer review

6. Giannoccaro, I., De Vincenzo, I., Carbone, G., *Ising model of the dynamics of inter-organizational teams*, European Conference on Complex Systems, September 22nd-26th, 2014, Lucca (Italy).
7. Giannoccaro, I., De Vincenzo, I., Carbone, G., *An Ising-based approach to the study of inter-organizational team dynamics*. The IEEE International Conference on Industrial Engineering and Engineering Management, pp. 1209-1213, December 9th-12th, 2014, Selangor (Malaysia). doi: 10.1109/IEEM.2014.7058830.
8. De Vincenzo, I., Giannoccaro, I., Carbone, G., *Factors affecting the performance of autonomous teams with project leader: a social network approach*. IFKAD 2015, June 10th-12th, 2015, Bari (Italy). ISBN 978-88-96687-07-9, ISSN 2280-787X.
9. De Vincenzo I., Giannoccaro I., Carbone G., *Mimicking Human Groups in Solving Optimization Problems*, 19° International Working Seminar on Production Economics, February 22nd-26th, 2016, Innsbruck (Austria).
10. De Vincenzo, I., Giannoccaro, I., Carbone, G., *The Human Group Optimization (HGO) algorithm: Exploiting the collective intelligence of human groups as an optimization tool for complex landscapes*, CSSSA 2016, September 19th-23rd, 2016, Roma (Italy).

Other publications

11. De Vincenzo, I., *Emergence and exploitation of collective intelligence of groups*, PhD Thesis in Mechanical and Management Engineering, Politecnico di Bari, January 2017.

PERSONAL INTEREST AND HOBBIES

- Outside his work hours, Dr. De Vincenzo is an eager musician. He plays acoustic guitar.
- He loves and regularly practices endurance sports, swimming, cycling and running, considering them a key factor for reaching a satisfying mental and physical wellness.
- He has a strong inner motivation to socialize, bring people together and learn from different cultures, which resulted in an extensive travel experience (over 15 countries in 2 continents), in company of family and friends.

I hereby authorize the use of my personal information within the rules of the Italian Law: art. 13 D. Lgs. 196/2003 and art. 13 GDPR (EU Regulation 2016/679)

I also declare that all the information reported in the present curriculum vitae are true under articles 46 e 47 of Italian D.P.R. n. 445/2000.

BISCEGLIE, SEPTEMBER 18TH 2019

ILARIO DE VINCENZO

