CURRICULUM OF SCIENTIFIC AND TEACHING ACTIVITY
Prof. Gaetano Sequenzia

Education

1993 – 1998 **Classical high school diploma** obtained at the State Classical High School "Mario Cutelli" of Catania, school year 1997/98, mark: 54/60.

July 2004 **Degree in Mechanical Engineering** obtained at the University of Catania on 21 July 2004, with a thesis developed as part of a training internship carried out at *Foster Wheeler Italia* in Milan - Final mark: **110/110 cum laude** - Average exam mark: **28.4**
Thesis title: "*Study of an advanced-technology fluidised-bed waste-to-energy plant for municipal solid waste for the province of Catania*"
Supervisor: Prof. Eng. G. Cammarata
Company tutor: Dr Eng. F. Gasparini (Foster Wheeler Italia)

January 2005 **Professional qualification to practise as an engineer (No. A4908).**

May 2005 Start of the **PhD programme** (three-year duration) in *Applied Mathematics for Engineering* at the University of Catania, Faculty of Engineering.

September 2008 Final examination for the **award of the PhD degree** in *"Applied Mathematics for Engineering".*

PhD thesis title: "*Application of mathematical methods for solid modelling and multibody analysis of a bio-inspired robot*"

Supervisor: Prof. Eng. Salvatore Massimo Oliveri

Organisation of and participation as speaker in scientific conferences in Italy or abroad

May 2006 Participation in the Seminar "From CAD to virtual reality in industrial design" organised by the University of Naples "Federico II" - PhD School in Industrial Engineering - Naples (IT), 22 - 23 May 2006.

September 2006 Participation in the ADM Study Days "Conceptual design methods for innovation" organised by the Faculty of Engineering of the University of Bologna - Forlì (IT), 14 - 15 September 2006.

February 2007 Participation in the ADM 2007 National Meeting organised by the Faculty of Engineering of the University of Bologna - Bologna (IT), 12 February 2007.

June 2007 Participation as speaker at the Joint International Congress Ingegraf/ADM – Perugia (IT), 6 – 9 June 2007.

March 2008	Participation in the ADM 2008 National Meeting organised by the Faculty of Engineering of the University of Modena and Reggio Emilia - Modena (IT), 13 March 2008.
September 2008	Participation as speaker at the XXXVII National Conference of the Italian Association for Stress Analysis (AIAS 2008) - Rome (IT), 10 - 13 September 2008.
September 2009	Participation in the ADM Technology Transfer Conference "Product Development Methods for Innovation" organised by the Polytechnic University of Turin - Turin (IT), 8 - 9 September 2009.
May 2010	Participation in the ADM 2010 National Meeting organised by the Faculty of Engineering of the University of Bologna - Bologna (IT), 07 May 2010.
June 2011	Participation as speaker at the International conference on Innovative Methods in Product Design (IMProVe 2011) - Venice (IT), 15 - 17 June 2011.
May 2014	Participation in the ADM 2014 National Meeting "The revolution in design teaching: the new ISO and ASME standards", organised by the Polytechnic University of Turin - Turin (IT), 28 May 2014.
July 2015	Participation in the ADM 2015 National Meeting organised by the University of Palermo - Palermo (IT), 2 - 3 July 2015.
September 2016	Participation as speaker at the International Joint Conference on Mechanics, Design Engineering & Advanced Manufacturing (JCM 2016) - Catania (IT), 14 - 16 September 2016.
September 2016	Member of the Organising Committee of the International Joint Conference on Mechanics, Design Engineering & Advanced Manufacturing (JCM 2016), held at the University of Catania from 14/09/2016 to 16/09/2016. The conference, international in scope, is organised biennially by the following associations: - ADM (National Association for Design and Methods of Industrial Engineering); - INGEGRAF (Spanish Association of Engineering Graphics); - AIP-PRIMECA (Inter-institutional Workshops for Production Engineering - IT Resource Centres for Mechanics).
December 2016	Participation as speaker at the 3rd National Review "Art is Science" organised by the Italian Association of Archaeometry, the University of Catania and the Ministry of Cultural Heritage and Tourism - Catania (IT), 2 - 4 December 2016.
February 2017	Participation as speaker at the ADM ING-IND/15 Workshop organised by the Polytechnic University of Milan - Milan (IT), 14 - 15 February 2017.

June 2018 Member of the Scientific Committee of the International Joint Conference on Mechanics, Design Engineering & Advanced Manufacturing (JCM 2018), held at the Universidad Politécnica de Cartagena (Spain) from 20/06/2018 to 22/06/2018. The conference, international in scope, is organised biennially by the following associations:
- ADM (National Association for Design and Methods of Industrial Engineering);
- INGEGRAF (Spanish Association of Engineering Graphics);
- S-mart (Systems, Manufacturing, Academics, Resources, Technologies).

September 2019 Participation as speaker at the ADM2019 International Conference - Modena (IT), 09 - 10 September 2019.

June 2020 Member of the Scientific Committee of the International Joint Conference on Mechanics, Design Engineering & Advanced Manufacturing (JCM 2020), held at the Ecole Nationale Supérieure d'Arts et Métiers - Aix en Provence (France) from 02/06/2020 to 04/06/2020. The conference, international in scope, is organised biennially by the following associations:
- ADM (National Association for Design and Methods of Industrial Engineering);
- INGEGRAF (Spanish Association of Engineering Graphics);
- S-mart (Systems, Manufacturing, Academics, Resources, Technologies).

June 2020 Participation as speaker at the International Joint Conference on Mechanics, Design Engineering & Advanced Manufacturing (JCM 2020) - Aix-en-Provence (FR), 02 - 04 June 2020.

June 2021 Member of the Scientific Committee of the 30th International Conference on GRAPHICS ENGINEERING - Digital Engineering, its application in Research, Development and Innovation. Engineering and digital transformation in education, held at Universitat Politècnica de València (Spain) from 24/06/2021 to 25/06/2021. The conference, international in scope, is organised annually by INGEGRAF (Spanish Association of Engineering Graphics).

July 2021 Session Chair at the Remote Conference on Interactive Engineering for the Engineer of the Future for the "Interactive Manufacturing" session. The conference was organised by the Virtual Concept International Conference. 09 July 2021.

September 2024 Member of the Organising Committee of the ADM2024 International Conference, held at the University of Palermo from 11/09/2024 to 13/09/2024. The conference, international in scope, is organised annually by the National Association for Design and Methods of Industrial Engineering).

February 2025 Editor, together with Professors Paolo Di Stefano, Francesco Gherardini, Vincenzo Nigrelli, Caterina Rizzi and Davide Tumino, of the "Proceedings of the Fourth International Conference on Design Tools and Methods in Industrial Engineering, ADM 2024, September 11–13, 2024, Palermo, Ita-

ly" – Title "Design Tools and Methods in Industrial Engineering IV" Volume 1-2 - Part of the book series: Lecture Notes in Mechanical Engineering (LNME) ed. Springer Cham.

June 2025 Member of the Scientific Committee of the 34th International Conference in Graphical Engineering - Graphic AI: Future, Transformation, and Automation, held at the Escuela Técnica Superior de Ingeniería of the University of Seville from 25/06/2025 to 27/06/2025. The conference, international in scope, is organised annually by INGEGRAF (Spanish Association of Engineering Graphics).

September 2025 Session Chair for ADM 2025 – International Conference for the sessions "Image Processing and Application" and "Additive Manufacturing / Virtual and Augmented Reality". The conference is organised annually by the National Association for Design and Methods of Industrial Engineering. 03-05 September 2025.

Leadership of and participation in the activities of a research group characterised by national-level collaborations

May 2005/to date Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania (SSD ING-IND/15) from 2005 to date. The group is composed of one full professor and one fixed-term researcher. Within the group, the undersigned carries out research in the field of reverse engineering, virtual prototyping and rapid prototyping techniques.

Jan. 2006/Jan. 2007 Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania, coordinated by Prof. Salvatore Massimo Oliveri, as personnel assigned to carry out the research, for the project aimed at the geometric modelling and dynamic and structural analysis of the chain subsystem for controlling the timing system of high-performance engines, within the framework of the third-party agreement between the Department of Industrial and Mechanical Engineering of the University of Catania and Ferrari S.p.A.

May 2006/Sept. 2006 Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania, coordinated by Prof. Salvatore Massimo Oliveri, as personnel assigned to carry out the research, for the project aimed at the dynamic and structural analysis of a self-levelling kit to be applied to combine harvesters, within the framework of the third-party agreement between the Department of Industrial and Mechanical Engineering of the University of Catania and the company Carapezza.

Mar. 2008/Mar. 2009 Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania, coordinated by Prof. Salvatore Massimo Oliveri, as personnel assigned to carry out the research,

for the project aimed at the geometric modelling and structural optimisation of components of the timing system of high-performance engines, within the framework of the third-party agreement between the Department of Industrial and Mechanical Engineering of the University of Catania and Ferrari S.p.A.

Jan. 2012/Dec. 2014 Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania, coordinated by Prof. Salvatore Massimo Oliveri, within the research project "STEM-STELO Development and fine-tuning of systems and technologies for the construction of machines and for the improvement of project logistics and exceptional transport" – PON Research and Competitiveness 2007-2013 - PON01_02380. The research activities were carried out in collaboration with FAGIOLI S.P.A., Polytechnic University of Bari and University of Messina. Specifically, the undersigned was involved in the industrial research activities envisaged by O.R. 2 - "Operating Procedures: Assembly, Handling and Tailing".

Sept. 2013/Dec. 2015 Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania, coordinated by Prof. Salvatore Massimo Oliveri, within the research project "DASAMOCS (Advanced Devices for the Active Safety of Complex Lifting Operating Machines)" - POR FESR Sicily 2007-2013 – Line 4.1.1.1. . The research activities were carried out in collaboration with the companies DEMETRA S.r.l., CENPI S.C.R.L., Sikelia Service S.p.A. and with the University of Perugia. Specifically, the undersigned dealt with the following industrial research activities: - Preliminary cognitive approach; - Functional simulations in the laboratory.

Jan. 2016/Feb.2022 Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania, coordinated by Prof. Salvatore Massimo Oliveri, within the research project "AMELiE - Advanced framework for Manufacturing Engineering and product Lifecycle Enhancement" – PO FESR SICILIA 2014-2020 - action 1.2.1_03 – code PON03PE_00206_1 - CUP G76I20000060007. The research activities are carried out in collaboration with the University of Palermo, the CNR (National Research Council) and 10 company partners. The undersigned is specifically involved in the industrial research activities envisaged by O.R. 2 - Act.2.2 "Definition of innovative models in the production process".

Feb. 2018/June 2020 Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania, coordinated by Prof. Salvatore Massimo Oliveri, within the research project "Asset management in the Internet-of-Things Era: The evolution of Reliability, Availability, Maintenance for Safety and Security and Performance of industrial plants" - Research Plan 2016-2018 - line of intervention 2 - Scientific research funded by the University. The activities are carried out in collaboration with the research groups belonging to SSD ING-IND/17 and ING-IND/13. The undersigned is specifically involved in the research activities envis-

aged by WP2 - UAV 3D reconstruction and augmented reality for fault diagnosis and maintenance.

June 2020/to date Participation in the research activities of the Design and Methods of Industrial Engineering group of the University of Catania, coordinated by Prof. Salvatore Massimo Oliveri, within the research project "GOSPEL - Management and Optimisation of Complex Production and Distribution Systems" - Research Incentive Plan (PIACERI) 2020-2022 - Scientific research funded by the University. The activities are carried out in collaboration with the research groups belonging to SSD ING-IND/17, ING-IND/16 and ING-IND/35. The undersigned is specifically involved in the research activities envisaged by WP1.5 - Identification of mechanical components subject to failure.

Jan. 2022/to date Responsibility for and co-direction of scientific activities within the framework of a framework agreement between the University of Catania and STMicroelectronics. The research activities involve professors and research fellows belonging to SSD ING-IND/15 and related SSDs. The research activities concern the following topics: "Design and implementation of systems for the advanced modelling of power devices, in the form of "discretes" and power modules, in order to carry out complete multiphysics characterisation from a reliability perspective."

June 2022/to date Scientific supervisor designated by STMicroelectronics within the framework of an agreement for the activation of No. 1 (one) additional position for the XXXVIII-cycle PhD programme in "Systems, Energy, Computer and Telecommunications Engineering". The financial contribution of STMicroelectronics is motivated by the specific interest in carrying out the following research topic: "Experimental characterisation and integrated CAD-CAE/FEM modelling aimed at the structural optimisation, from a reliability perspective, of power electronic devices", consistent with the programmes of the PhD Course proposed by the University of Catania.

June 2022/to date Scientific supervisor designated by STMicroelectronics within the framework of an agreement for the activation of No. 1 (one) additional position for the XXXVIII-cycle PhD programme in "Systems, Energy, Computer and Telecommunications Engineering". The financial contribution of STMicroelectronics is motivated by the specific interest in carrying out the following research topic: "Experimental characterisation and integrated CAD-CAE modelling aimed at the thermo-fluidic optimisation, from a reliability perspective, of power electronic devices", consistent with the programmes of the PhD Course proposed by the University of Catania.

June 2022/Apr. 2023 Scientific supervisor within the framework of a research fellowship announced by the University of Catania for SSD ING-IND/15 "Design and Methods of Industrial Engineering". Title of the research activity: "Integrated CAD/CAE design aimed at the multiphysics optimisation of power electronic devices". The research fellowship was awarded by contract dated 01/06/2022 to Dr Eng. Davide Maria Amoroso.

Sept. 2022/Oct.2023 Scientific supervisor within the framework of a research fellowship announced by the University of Catania for SSD ING-IND/15 "Design and Methods of Industrial Engineering". Title of the research activity: "Integrated CAD/CAE modelling aimed at the mechanical and thermal optimisation of power electronic devices from a reliability perspective". Eng. Biagio Schifano was the successful candidate for the above-mentioned research fellowship.

Sept. 2022/to date Responsibility for and co-direction of scientific activities within the framework of a framework agreement between the University of Catania and STMicroelectronics. The research activities involve professors and research fellows belonging to SSD ING-IND/15 and related SSDs. The research activities concern the following topics: "Design and implementation of systems for the advanced modelling of power devices, in the form of "discretes" and power modules, in order to carry out complete multiphysics characterisation from a reliability perspective."

Jan.2023/June 2024 Participation in research activities within the research project "TETI - Innovative technologies for control, monitoring and safety at sea" - PON "Research and Innovation" 2014-2020. CUP: B72C20000170005. In particular, the assignment concerned the following project activities/phases named: - Activity 1.1 - Development of sensors for measuring chemical, physical, biological and acoustic parameters for marine monitoring; Activity 1.3 - Construction of the sensors and their validation. The activities were carried out in collaboration with the research group belonging to SSD ING-IND/25.

Jan.2024/to date Participation in research activities within the research project "Smartee-Plants: Smart Energy-Efficiency wastewater treatment Plants" - Action 1.1.1 "Qualified investments for the development and strengthening of research and innovation capacity" of the Complementary Operational Programme (POC) 2014-2020 for the implementation of the projects selected through Action 1.1.5 – CUP G57H18002050006 (Scientific Supervisor Prof. Giuseppe Mancini). The activities are carried out in collaboration with the research group belonging to SSD ING-IND/25.

Jan.2024/to date Participation in research activities within the research project "Carbon Nanostructures from Agricultural Waste for Solid-State Hydrogen Storage - CIRCOLARE" Code: RSH2A_000015 CUP: F57G25000160006 funded by the Ministry of the Environment and Energy Security (MASE) for the achievement of the objectives set out in the National Recovery and Resilience Plan (PNRR) pursued by Investment 3.5 "Hydrogen research and development", Mission 2 "Green revolution and ecological transition", Component 2 "Renewable energy, hydrogen, grid and sustainable mobility" (M2C2 - 3.5). The activities are carried out in collaboration with the research group belonging to SSD ING-IND/25. Duration and period: 3 years, from 01.07.2023 to 30.06.2026.

Responsibility for scientific studies and research entrusted by qualified public or private institutions

Dec. 2008/Dec. 2009 Responsibility for scientific research entrusted through a research fellowship (former Law 449/1997) announced by the University of Catania for SSD ING-IND/15 "Design and Methods of Industrial Engineering" and SSD ING-IND/13 "Applied Mechanics". Title of the research programme: "Feasibility study and design of a machine for harvesting artichokes". This programme, with an overall duration of 1 year, was funded by the Regional Province of Catania.

May 2011/Nov.2011 Coordinated and continuous collaboration assignment conferred following a public selection based on qualifications by the Department of Agri-food and Environmental Systems Management of the University of Catania, within the research project "MIPAAF-OIGA 2008 – Autonomous-guided mobile vehicle for the distribution of pesticides in greenhouses". The professional service lasted 6 months, during which the candidate handled the technical-scientific aspects relating to the preparation of the detection devices for the laboratory and field tests envisaged by the project.

Apr. 2012/Apr. 2018 Responsibility for scientific research entrusted through a research fellowship (Law 240/2010) announced by the University of Catania for SSD ING-IND/15 "Design and Methods of Industrial Engineering". Title of the research programme: "Solid modelling and multibody analysis of a self-erecting portal lifting system". This programme, initially lasting two years, was then repeatedly renewed, for an overall duration of 6 years, as summarised in the following timeline:
- from 04/2012 to 04/2014, initial two-year period;
- from 04/2014 to 04/2015, first annual renewal;
- from 04/2015 to 04/2016, second annual renewal;
- from 04/2016 to 04/2017, third annual renewal;
- from 04/2017 to 04/2018, fourth (and last) annual renewal.

Dec. 2018/Dec.2021 Full-time fixed-term researcher (Art. 24, paragraph 3, letter b), Law 240/2010) for SSD ING-IND/15 "Design and Methods of Industrial Engineering" - University of Catania - Department of Electrical, Electronic and Computer Engineering (DIEEI).

December 2019 Scientific supervisor, together with Prof. Salvatore Massimo Oliveri and Prof. Michele Lacagnina, within the third-party agreement between the Government Management of the Circumetnea Railway of Catania and the University of Catania, approved by the Council of the Department of Electrical, Electronic and Computer Engineering on 18 December 2019. The activity concerned "The analysis of the fracture of an axle".

Jan. 2020/Apr. 2020 Scientific Supervisor of a research grant within the research programme "Methodological development of integrated procedures for thermo-electro-mechanical characterisation and simulation of power electronic devices" –

Scientific research funded by the University of Catania - Department of Electrical, Electronic and Computer Engineering. The research grant was awarded, following a public selection, to Dr Daniele Guarnera (D.R. 149 of 20/01/2020).

Mar.2021/to date **Coordinator (PI) of the research project "MEPROSEMICON – "CAD/CAE design methodologies aimed at the design and optimisation of semiconductor devices for automotive applications" - Research Incentive Plan (PIACERI) 2020-2022 – Line of Intervention 3 "Starting Grant" -.**

From December 2021 Associate Professor for SSD ING-IND/15 "Design and Methods of Industrial Engineering" - University of Catania - Department of Electrical, Electronic and Computer Engineering (DIEEI).

June 2022/to date Scientific supervisor designated by STMicroelectronics within the framework of an agreement for the activation of No. 1 (one) additional position for the XXXVIII-cycle PhD programme in "Systems, Energy, Computer and Telecommunications Engineering". The financial contribution of STMicroelectronics is motivated by the specific interest in carrying out the following research topic: "Experimental characterisation and integrated CAD-CAE/FEM modelling aimed at the structural optimisation, from a reliability perspective, of power electronic devices", consistent with the programmes of the PhD Course proposed by the University of Catania. Eng. Giuseppe Bua was the successful candidate for the above-mentioned PhD programme.

June 2022/to date Scientific supervisor designated by STMicroelectronics within the framework of an agreement for the activation of No. 1 (one) additional position for the XXXVIII-cycle PhD programme in "Systems, Energy, Computer and Telecommunications Engineering". The financial contribution of STMicroelectronics is motivated by the specific interest in carrying out the following research topic: "Experimental characterisation and integrated CAD-CAE modelling aimed at the thermo-fluidic optimisation, from a reliability perspective, of power electronic devices", consistent with the programmes of the PhD Course proposed by the University of Catania. Eng. Luca Donetti was the successful candidate for the above-mentioned PhD programme.

Aug. 2023/to date Scientific supervisor designated by STMicroelectronics within the framework of an agreement for the activation of No. 1 (one) additional position for the XXXIX-cycle PhD programme in "Systems, Energy, Computer and Telecommunications Engineering". The financial contribution of STMicroelectronics is motivated by the specific interest in carrying out the following research topic: "Advanced and Integrated CAD-CAE-AI techniques for mechanical and thermal optimization of power electronics devices to improve reliability performances", consistent with the programmes of the PhD Course proposed by the University of Catania. Eng. Biagio Schifano was the successful candidate for the above-mentioned PhD programme.

Nov. 2023/to date Scientific supervisor of the Reverse Engineering and Rapid Prototyping laboratory belonging to the Department of Electrical and Electronic Engineering (DIEEI) of the University of Catania.

Jan.2025/to date Scientific tutor, designated by the teaching board of the PhD programme in "Systems, Energy, Computer and Telecommunications Engineering" – XL CYCLE, for the position assigned to Eng. Michele Fiore. Title of the research programme: "Reliability of SiC Power Devices under Extreme Conditions: Modelling and Prediction with Integrated CAD Methods and Artificial Intelligence".

Mar. 2025/to date Member of the Scientific Council of BRIT (Bio-nanotech Research and Innovation Tower), as scientific supervisor of the "EOS FORMIGA P110 3D Printer" equipment.

Scientific responsibility for international and national research projects admitted to funding on the basis of competitive calls providing for peer review

Feb. 2022/Dec.2023 Scientific supervisor of the research project "AMELiE - Advanced framework for Manufacturing Engineering and product Lifecycle Enhancement" – PO FESR SICILIA 2014-2020 - action 1.2.1_03 – code PON03PE_00206_1 - CUP G76I20000060007. The research activities are carried out in collaboration with the University of Palermo, the CNR (National Research Council) and 10 company partners.

Participation in editorial boards of journals of recognised prestige

Jan. 2017/ Apr. 2017 Academic Editor for the Journal of Sensors, Ed. Hindawi Publishing Corporation. ISSN: 1687-7268. This journal is indexed in Scopus.

June 2017 Guest Editor of a thematic issue of the International Journal on Interactive Design and Manufacturing (IJIDeM), Ed. Springer Paris. ISSN: 1955-2513. This journal is indexed in Scopus.

Oct. 2017/to date Member of the editorial board of the journal "Modelling and Simulation in Engineering", Ed. Hindawi Publishing Corporation. ISSN: 1687-5591. This journal is indexed in Scopus.

May 2019/to date Member of the editorial board of the International Journal on Interactive Design and Manufacturing (IJIDeM), Ed. Springer Paris. ISSN: 1955-2513. This journal is indexed in Scopus.

Feb. 2021/to date Member of the editorial board, as Topic Editor, of the journal "Materials", Ed. MDPI. ISSN: 1996-1944. This journal is indexed in Scopus.

Participation in the teaching board of PhD programmes accredited by the Ministry

Since A.Y. 2020/2021 Member of the teaching board of the PhD programme in "Systems, Energy, Computer and Telecommunications Engineering" – Department of Electrical, Electronic and Computer Engineering of the University of Catania.

Achievement of national prizes and recognitions for research activity

April 2018 Award of the National Scientific Qualification as Associate Professor in competition sector 09/A3 – Industrial Design, Machine Design and Metallurgy. The qualification was conferred unanimously by the Commissioners and is valid from 06/04/2018 to 06/04/2024.

June 2020 Award, as co-author, of the best paper prize in the "Manufacturing Engineering" session of the International Joint Conference on Mechanics, Design Engineering & Advanced Manufacturing (JCM 2020) - Aix-en-Provence (FR), 02 - 04 June 2020. Article title: "Analysis of warpage induced by thick copper metal on semiconductor device".

March 2022 Inclusion in the list of potential Tutors of the Scuola Superiore di Catania (higher education centre of the University of Catania) for the four-year period 2021/2022-2024/2025.

July 2022/to date Positive evaluation as Associate Professor for the scientific-disciplinary sector ING-IND/15 - Design and Methods of Industrial Engineering, competition sector 09/A3 – Industrial Design, Machine Design and Metallurgy, belonging to the Department of Electrical, Electronic and Computer Engineering, for the purpose of participation in the procedure for forming the 2022 local Commissions of the University of Catania. Specifically, the undersigned successfully passed the evaluation envisaged by Art. 6, paragraphs 7 and 8, of Law 240/2010, as established by the "University regulation concerning the evaluation of university professors and researchers for the purpose of participation in the procedure for forming local commissions, pursuant to Art. 6, paragraphs 7 and 8, of Law 240/2010", issued by D.R. 276 of 30.1.2020.

February 2023 Award of the National Scientific Qualification as Full Professor in competition sector 09/A3 – Industrial Design, Machine Design and Metallurgy. The qualification was conferred unanimously by the Commissioners and is valid from 13/02/2023 to 13/02/2033.

Teaching activity at university level

Since A.Y. 2005/2006 Teaching collaboration in conducting the exercises for the courses "Industrial Technical Drawing" and "Geometric Modelling of Machines"

of the degree programmes in Mechanical Engineering and Management Engineering at the University of Catania.

From October 2008 Subject expert in the scientific-disciplinary sector ING-IND/15 (Design and Methods of Industrial Engineering).

October 2012 Award, following public selection (call No. 857 of 05/03/2012), by the University of Catania, of the teaching assignment for the teaching module "Drawing" (No. 20 hours), within the project PON01_02380 "STEM-STELO Development and fine-tuning of systems and technologies for the construction of machines and for the improvement of project logistics and exceptional transport" - training intervention "FORMATELO – Training on Exceptional Transport and Logistics".

A.Y. 2011/2012 Teaching assignment (No. 9 hours) at the Scuola Superiore di Catania – University of Catania - within the training course "Geometric modelling in CAD/CAE design methodologies", coordinated by Prof. Salvatore Massimo Oliveri and addressed to ordinary students of the School, enrolled in the degree programmes of the University of Catania for A.Y. 2011-2012. Assignment conferred following a resolution of the Scientific Committee of the Scuola Superiore di Catania.

A.Y. 2018/2019 Contract teaching assignment for the course "Industrial technical drawing" (M-Z / 2nd year - teaching commitment in co-teaching of 37 hours, in addition to holding examinations and providing student reception and assistance throughout the academic year), at the degree programme in Industrial Engineering – University of Catania - Department of Electrical, Electronic and Computer Engineering (DIEEI).

Since A.Y. 2019/2020 Lecturer in charge of the course "Industrial technical drawing" (M-Z channel / 2nd year), at the degree programme in Industrial Engineering – University of Catania - Department of Electrical, Electronic and Computer Engineering (DIEEI).

Other academic activities and professional experiences characterised by research activity

Since A.Y. 2005/2006 Co-supervisor of numerous bachelor's and master's degree theses relating to the scientific-disciplinary sector ING-IND/15 (Design and Methods of Industrial Engineering).

From September 2006 Affiliation as a member of the National Association for Design and Methods of Industrial Engineering (ADM).

From September 2008 Scientific reviewer for the "Journal of Engineering for Gas Turbines and Power" Ed. ASME (American Society of Mechanical Engineers).

Mar. 2012/Apr. 2016 Professional service as scientific expert for the ex ante, in itinere and final evaluation of research and development and innovation projects within Axis IV P.O. FESR Sicily 2007/2013. This assignment was conferred following a public call aimed at forming the long list of scientific experts to support the evaluation activities of industrial research and/or experimental development and technological innovation projects implemented with the contribution of the resources of the aforementioned Community programme. Specifically, the professional activity concerned the ex ante evaluation of No. 3 research projects and the in itinere/final evaluation of No. 4 research projects.

From October 2014 ***Scientific reviewer for the "SAE International Journal of Aerospace" – Ed. SAE International.***

June 2015 Award of the qualification of "EOS P110 System Operator" issued by EOS e-Manufacturing Solutions (11 June 2015). This qualification enabled the undersigned to participate in the research activities of SSD ING-IND/15 in the field of Rapid Prototyping at BRIT (Bio-nanotech Research and Innovation Tower) of the University of Catania.

Mar. 2018/to date Admission, following public selection based on qualifications, to the "Roster" of experts for the evaluation of research projects in the thematic area ET6 (Smart Cities and Communities) - P.O. F.E.S.R. 2014/2020 - Regional Innovation Strategy for Smart Specialisation 2014/2020 – S3 Sicily.

From May 2019 Scientific reviewer for the "Journal on Computing and Cultural Heritage (JOCCH)" – Ed. ACM Digital Library.

Feb.2021/Mar.2022 Scientific reviewer for the following PhD theses:
- Dr Chiara Santarelli - University of Florence - PhD Course in Information Engineering - CYCLE XXXIII;
- Dr Andrea Petruccioli - University of Bologna - PhD Course in Automotive Engineering for Intelligent Mobility - CYCLE XXXIV.

Scientific output

Publications in international journals indexed in SCOPUS

1. *Flexible multibody model of desmodromic timing system*
G. Sequenzia, S.M. Oliveri, M. Calì
Mechanics based design of structures and machines, Ed. Taylor & Francis group
1539-7742, Volume 37, Issue 1, 2009, Pages 15 – 30

2. *The "Guerriero di Castiglione": reconstructing missing elements with integrated non-destructive 3D modelling techniques*

G. Fatuzzo, G. Mussumeci, S.M. Oliveri, **G. Sequenzia**
Journal of Archaeological Science, Ed. ELSEVIER
Volume 38, 2011, Pages 3533-3540

3. *Experimental methodology for the tappet characterization of timing system in I.C.E.*
G. Sequenzia, S.M. Oliveri, M. Calì
Meccanica, Ed. Springer
Volume 48, Number 3, 2013, Pages 753-764 - DOI 10.1007/s11012-012-9629-z

4. *An advanced multibody model for evaluating rider's influence on motorcycle dynamics*
G. Sequenzia, S.M. Oliveri, G. Fatuzzo and M. Calì
Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics, Volume 229 no. 2, 2015, Pages 193-207 - DOI: 10.1177/1464419314557686

5. *Meshing angles evaluation of silent chain drive by numerical analysis and experimental test*
M. Calì, **G. Sequenzia,** S.M. Oliveri and G. Fatuzzo
Meccanica, Ed. Springer
Vol. 51, Issue 3, 2016 Pages 475-489 - DOI 10.1007/s11012-015-0230-0

6. *Dynamics of a high-performance motorcycle by an advanced multibody/control co-simulation*
R Barbagallo, **G Sequenzia**, SM Oliveri and A Cammarata
Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics, Vol. 230, Issue 2, 2016, Pages 207-221 - DOI 10.1177/1464419315602825

7. *Interactive re-design of a novel variable geometry bicycle saddle to prevent neurological pathologies*
G. Sequenzia, G. Fatuzzo, S. M. Oliveri and R. Barbagallo
International Journal on Interactive Design and Manufacturing (IJIDeM)
Vol. 10, Issue 2, Pages 165-172 - DOI 10.1007/s12008-015-0293-0

8. *Modified chain algorithm to study planar compliant mechanisms*
A. Cammarata, **G. Sequenzia**, S. M. Oliveri and·G. Fatuzzo
International Journal on Interactive Design and Manufacturing (IJIDeM)
Vol. 10, Issue 2, 2016 Pages 191-201 - DOI 10.1007/s12008-016-0299-2

9. *Virtual anthropology and rapid prototyping: A study of Vincenzo Bellini's death masks in relation to autopsy documentation*
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For further information:
https://www.researchgate.net/profile/Gaetano_Sequenzia
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The undersigned declares that he has been informed, pursuant to Legislative Decree 196/2003, that the data reported above will be used within the procedure for which this declaration is made.

Catania, 09/07/2026 ***Prof. Gaetano Sequenzia***