

Curriculum Vitae

Prof. Eng. Giuseppe Vignali



GENERAL INFORMATION

Born in Parma on 28/09/1979.

Graduated with 60/60 at the scientific high school “Guglielmo Marconi” of Parma in July 1998. Graduated with 104/110 in Mechanical Engineering Master degree at the University of Parma on 20/12/2004. State examination for the qualification to the profession of Engineer achieved in Parma on 13 July 2005.

In June 2005 he won an annual scholarship competition, funded by the Emilia Romagna Region, within the TECAL research laboratory, at the Department of Industrial Engineering, concerning "Analysis and rheology of food products with pieces and description of simulation model of the filling process ". From 1/1/2006 to 12/31/2008 he was enrolled at the XXI PhD course in Industrial Engineering at the University of Parma. In June 2006 he won a second annual scholarship competition funded by the Emilia Romagna Region, within the TECAL research laboratory, in the Department of Industrial Engineering, concerning "Industrialization of a filling system suitable for fluids with solid".

From 01/08/2007 to 01/08/2010 he worked at the Department of Industrial Engineering of the University of Parma as Unconfirmed University Lecturer for the Disciplinary Scientific Sector ING-IND/17. On 25/02/2009 he achieved the title of Ph.D. in Industrial Engineering, discussing a thesis entitled "Analysis and optimization of processes in the food industry", with Tutor Prof. Roberto Rizzo. From 01/08/2010 to 28/02/2015 he worked at the Department of Industrial Engineering of the University of Parma as confirmed University Lecturer for the Disciplinary Scientific Sector ING-IND/17.

From 01/03/2015 he has worked at the Department of Industrial Engineering (form 2017 Department of Engineering and Architecture) of the University of Parma with the title of **Associate Professor** for the Disciplinary Scientific Sector ING-IND/17 (09-B2). From 06/04/2018 he has achieved the National Scientific Qualification for the position of Full Professor for the Disciplinary Scientific Sector ING-IND/17 (09-B2) “Mechanical Industrial Systems”.

RESEARCH ACTIVITIES

The research activity carried out by Eng. Giuseppe Vignali, has been developed within the scientific disciplinary sector ING-IND / 17 "Mechanical Industrial Systems", and has led to a total of 110 publications produced (listed in detail in Annex 1 to the curriculum), divided as follows:

- 44 published or accepted for publication in international scientific journals with peer review [1] - [44]. Of these 24 are in journals indexed on the ISI database Web of Knowledge [1] - [24], and 35 indexed on the Scopus database [1] - [35]. Overall, international publications with peer review appeared in the following scientific journals:

- Journal of Cleaner Production (ISI and Scopus) (3 Articles)
- European Journal of Operation Research (ISI and Scopus) (1 Article)
- Journal of Food Engineering (ISI and Scopus) (2 Articles)
- Food and Bioprocess Technology (ISI and Scopus) (1 article)
- Safety Science (ISI and Scopus) (1 article)
- Computers & Industrial Engineering (ISI and Scopus) (1 article)
- IISE Transactions (1 article)
- Packaging Technology and Science (ISI and Scopus) (1 article)
- Journal of Food Process Engineering (ISI and Scopus) (1 article)
- International Journal of Logistics: Research and Applications (ISI and Scopus) (3 Articles)
- International Journal of Food Engineering (ISI and Scopus) (8 articles)
- International Journal of RF Technologies: Research and Applications (Scopus) (5 Articles)
- Journal of Quality in Maintenance Engineering (Scopus) (1 article)
- Advance Journal of Food Science and Technology (Scopus) (1 article)
- International Journal of Simulation and Process Modeling (Scopus) (2 Articles)
- Chemical Product and Process Modeling (Scopus) (1 article)
- International Journal of Business Performance and Supply Chain Modeling (1 article)
- International Journal of Engineering, Science and Technology (2 Articles)
- Int. J. Decision Sciences, Risk and Management (1 article)
- International Journal of Supply Chain and Inventory Management (1 article)
- Journal of Agricultural Science and Technology (1 article)
- Food Manufacturing Efficiency (2 Articles)
- Italian Beverage Technology (1 article)

- 5 editorials on ISI and Scopus international magazine [45-49]
- 1 Book (monograph) [50]
- 5 articles on international books [51-55]
- 33 published on Proceedings of International Scientific Conferences [56] - [88], of which 20 indexed on the Scopus database [56] - [75];
- 12 published in national scientific journals [89] - [100];
- 13 published on Proceedings of National Scientific Conferences [101] - [113]

The "research metrics", obtained from the Scopus database (www.scopus.com) and ISI Web Of Knowledge (www.webofknowledge.com), are as follows (data updated to 31 August 2018):

- SCOPUS (author ID 23486896700): 67 main documents with 308 citations (from 245 documents), H-index = 10.

- ISI Web of Knowledge: 27 documents with 139 total citations, H index = 7.

In addition to the previous ones, the following publications have been produced:

- 2 publications under review in ISI and Scopus international scientific journals

Giuseppe Vignali is Associate Editor for the journal "International Journal of Supply Chain and Inventory Management, Inderscience Publisher" and is part of the Editorial Board of the journal "International Journal of RF Technologies: Research and Applications, IOS press Publisher (indexed in Scopus and in ISI Emerging sources Citation Index WoS) "

Giuseppe Vignali has also worked as a referee for the following international scientific journals:

- Journal of Cleaner Production (ISI and Scopus): 6 manuscripts
- Eco Indicators (ISI and Scopus): 1 manuscript
- Omega (ISI and Scopus): 1 manuscript
- Chemical Engineering Journal (ISI and Scopus): 1 manuscript
- Waste Management (ISI and Scopus): 2 manuscripts
- International Journal of Production Economics (ISI and Scopus): 1 manuscript
- Computers & Operations Research (ISI and Scopus): 1 manuscript
- Resources, Conservation & Recycling (ISI and Scopus): 1 manuscript
- Journal of Food Engineering (ISI and Scopus): 1 manuscript
- Applied Mathematical Modeling (ISI and Scopus): 1 manuscript
- Computers & Industrial Engineering (ISI and Scopus) (1 article)
- Food Control (ISI and Scopus): 1 manuscript
- Food Research International (ISI and Scopus): 2 manuscripts
- Science of the Total Environment (ISI and Scopus): 1 manuscript
- Measurements (ISI and Scopus): 1 manuscript
- International Journal of Logistics: Research and Applications (ISI and Scopus): 1 manuscript
- Bioresources (ISI and Scopus): 1 manuscript
- Archives Of Industrial Hygiene And Toxicology (ISI and Scopus): 1 manuscript
- IEEE Transactions on Engineering Management (ISI and Scopus): 1 manuscript
- International Journal of Injury Control and Safety Promotion (ISI and Scopus): 1 manuscript
- Sustainability (ISI and Scopus): 1 manuscript
- International Journal of Food Engineering (ISI and Scopus): 2 manuscripts
- Facilities (Scopus): 1 manuscript
- Recent Patents on Food, Nutrition and Agriculture (Scopus): 1 manuscript
- International Journal of Engineering, Science and Technology: 1 manuscript
- Journal of Industrial Engineering: 1 manuscript

The research activity, with reference only to publications that have yet appeared or accepted for publication, can be mainly focused on themes concerning:

1. The feasibility study of plants in the food industry
2. Analysis and optimization of food industry processes
3. Numerical process simulation
4. The discrete event simulation
5. The safety of industrial plants
6. Evaluation of the life cycle of products, technologies and industrial plants
7. Packaging technologies for the food industry
8. Inventory management techniques and their optimization
9. Supply chain management methods and models
10. Application and evaluation of the impact of RFID technology.

Scientific collaborations

Giuseppe Vignali has carried out his research both independently and collaborating with other researchers, among which the follows:

- Prof. R. Rizzo, Prof. G. Ferretti, Prof. R. Montanari, Prof. A. Rizzi, Prof. P. Casoli, Prof. E. Bottani, Prof. M. Bertolini, Eng. F. Solari, Eng. M Manfredi, Eng. M. Rinaldi, Mr. M. Folezzani, Mr. D. Marchini, Mr. M. Armenzoni, Mr. G. Romagnoli, Mr. D. Zatti, Mr. G. DePalma, Mr. G. Copelli, Eng. S. Spanu, Eng. D. Mosna, Eng. F. Ferrari, Eng. G. Vitale, Eng. R. Mantione (Department of Industrial Engineering and now Department of Engineering and Architecture, University of Parma)
- Prof. A. Bruzzone, Department of Production Engineering, Thermoenergetics and Mathematical Models, University of Genoa
- Prof. A. Grassi, Department of Sciences and Methods of Engineering, University of Modena and Reggio Emilia
- Eng. F. Longo, Department of Mechanical, Energy and Management Engineering, University of Calabria
- Eng. L. Monica, Eng. P. Nataletti, Eng. L. Di Donato, Eng. A. Ferraro (Department of Safety Technologies (DTS), Institute for Occupational Prevention and Safety "ISPESL" (now merged into the DIT "INAIL "), Rome)
- Ing L. Guerra (Department of Materials and Production Engineering, Federico II University, Naples)
- Eng. J. Wiklund, Dr. M. Stading (SIK - The Swedish Institute for Food and Biotechnology, Göteborg, Sweden)
- Prof. Rafael Gavara (CSIC - Instituto de Agroquímica y Tecnología de los Alimentos (IATA), Packaging Lab., Valencia, Spain)
- Dr. Selwyn Piramuthu, (University of Florida, Information Systems and Operations Management, Gainesville, United States)
- Dr. Mercadé-Prieto, Ruben (Soochow University, College of Chemistry, Suzhou, China)

He acted as tutor for the Doctorate Michele Manfredi at the XXVII doctorate cycle in Industrial Engineering at the Department of Industrial Engineering, University of Parma, working on issues of analysis of the life cycle of processes related to the food industry. He is acting as tutor for the PhD student David Mosna in Industrial Engineering XXXI cycle at the University of Parma.

He has also organized the following international conferences in collaboration with Italian and foreigner professors:

- Co-organizer and chairman of the track "Modeling and Simulation in Food, Beverage and Perishable Goods Industry" at the "MAS 2011 - The 10th International Conference on Modeling and Applied Simulation" conference, 12-14 September 2011, Rome, Italy.
- Co-organizer and chairman of the "Workshop on Modeling and Simulation of Food Processing and Operations" at the "MAS 2012 - The 11th International Conference on Modeling and Applied Simulation" conference, 19-21 September, 2012, Vienna, Austria
- Co-organizer of the "Workshop on Modeling and Simulation of Food Processing and Operations" at the "MAS 2013 - The 12th International Conference on Modeling and Applied Simulation" conference, 25-27 September, 2013, Athens, Greece.

- Co-organizer and chairman of the "Workshop on Modeling and Simulation of Food Processing and Operations" at the "MAS 2014 - The 11th International Conference on Modeling and Applied Simulation" conference, 09-12 September, 2014, Bordeaux, France.
- General chair with Ruben Mercade Prieto of the College of Chemistry, Chemical Engineering and Materials Science of Soochow University (CHINA) of the first "International Food Operations & Processing Simulation Workshop" at the I3M2015 conference 21-23 September 2015, Berggeggi, Italy .
- General chair of the second "International Food Operations & Processing Simulation Workshop" at the I3M2016 conference 26-28 September 2016, Larnaca, Cyprus
- General chair of the third "International Food Operations & Processing Simulation Workshop" at the I3M2017 conference 18-20 September 2017, Barcelona, Spain
- General chair of the forth "International Food Operations & Processing Simulation Workshop" at the I3M2017 conference 17-19 September 2018, Budapest, Hungary

Finally he acted as chairman for a specific session of the international conference CIGR Conference 2013. Guangzhou, 3-7 November 2013, at the invitation of Prof. Da-Wen Sun, organizer of the conference. In addition to this he has participated in numerous international and national conferences as a speaker.

Achievement of prizes and awards for scientific activity

One of his articles published on international conference proceedings (Rinaldi, M., Bottani, E., Ferretti, G., Armenzoni, M., Marchini, D., Solari, F., Vignali, G., Montanari, R. , 2012, "Advanced design of industrial mixers for fluid foods using Computational Fluid Dynamics", Proceedings of the 11th International Conference on Modeling and Applied Simulation (MAS 2012), ISBN 978-88-97999-02-7. , Wien, Austria) was awarded the best article (BEST PAPER AWARD) presented at the "MAS 2012 - The 11th International Conference on Modeling & Applied Simulation" conference. This article was then published in an extended version on the special issue of the international journal indexed ISI International Journal of Food Engineering, (2013), 9 (3), pp. 309-325.

Another of his articles published on international conference proceedings (Folezzani M., Manfredi M., Vignali, G. (2013) Analysis and Simulation of a Powders Dissolving System based on Hydrodynamic Controlled Cavitation CIGR Conference 2013. Guangzhou, 3-November 7, 2013.), selected for a poster exhibition, was awarded the best poster (BEST POSTER AWARD) of the international conference CIGR Conference 2013. Guangzhou, 3-7 November 2013.

All the details about my scientific activity can be found at ORCID <http://orcid.org/0000-0002-0129-4085>, Scopus Author ID: 23486896700 or google scholar: <https://scholar.google.it/citations?user=U6ym1L4AAAAJ&hl=it>

Coordination and participation of research projects

International and national research projects, eligible for funding on the basis of competitive calls for peer review:

2008/2010 - RISKOPRE - Management of operational risk and resilience of industrial and service systems - funded under the Prin 2007 projects, prot. 2007BETYY4. Scientific manager prof. Augustus of Julius. 24 months. Participant

2011/2013 INAIL (ex ISPESL) - Department of Safety Technologies - Sheet 02 / DTS / 2009 - "Development of a forecasting model, based on BBS (based behavior safety) methodology and soft-computing techniques, for the preventive analysis of behaviors that potentially lead to accidents in the workplace ". Research line: L38 - Technical reliability and human factor management - Research program: P08 - Risk management methodologies and management systems. 24 months. Scientific manager

2014 / in progress - Project SORT Project code SCN_00367 winner of the MIUR call for applications pursuant to Notice no. 391 / RIC of 05 July 2012 - SMART CITIES AND COMMUNITIES AND SOCIAL INNOVATION. 36 months. Participant.

2015/2016 SISOM Project "Intelligent systems for the Assistance and Support of Machine Interface Operators, sets of machines and work equipment in industrial processes - SISOM" winner in the BRIC 2015 INAIL call, 12 months, with others involved 3 university offices. Scientific Responsible of the entire project

2016 / in progress Project "Dairy cow in the Parmigiano Reggiano area: innovation and tradition for a sustainable breeding and quality products", winner of the call for measure 4 innovation plan funded by measure 16.1.01 of the RDP of Emilia Romagna. 36 months. Scientific Responsible of the University of Parma Unit.

2016 / ongoing Project "New paradigms for the design, construction and operation of machines and plants for the food industry", winner of the Axis 1 announcement, Action 1.2.2 POR FESR 2014-2020, 24 months. Participant.

2017 / in progress W-Artemys Project "Wearable solutions in augmented reality for the operator's safety in manufacturing plants" winner in the BRIC 2016-18 INAIL tender, 24 months, involving 2 other universities. Scientific Responsible of the entire project

International and national research projects, funded by public or private institutions:

2011/2014 - SITEIA.PARMA - Interdepartmental Center on Security, TEcnologies, Agri-food Innovation "of the Technopole of the University of Parma - project co-financed by the Emilia-Romagna Region in the Regional Operational Program 2007/2013 European Regional Development Fund (PORFESR), activity I.1.II "Creation of technopoles for industrial research and technology transfer" 36 months.

2011/2014 - CIPACK - Interdepartmental Center PACKaging of the Technopole of the University of Parma - project co-financed by the Emilia-Romagna Region in the Regional Operational Program 2007/2013 European Regional Development Fund (POR-ERDF), activity I.1 .II "Creation of technopoles for industrial research and technology transfer". 36 months. Scientific manager

2011/2014 - RFID & Vis Labs - interdepartmental center of the Technopole of the University of Parma - project co-financed by the Emilia-Romagna Region in the Regional Operational Program 2007/2013 European Regional Development Fund (POR-FESR), activity I.1 .II "Creation of technopoles for industrial research and technology transfer" 36 months. Participant

He coordinated the following private research projects as scientific leader:

2009-2010 Company A-Due Srl; responsible for the research project entitled "Study of a new dust dissolution system", of the Department of Industrial EngineerEng.

2009 Company A-Due Srl; responsible for the research project entitled "Study of a new system for sanitizing systems with integrated chemicals production", of the Department of Industrial EngineerEng.

2010-2011 Martini SpA company responsible for the research project entitled "Study of a new Sponges formation and packaging system", of the Department of Industrial EngineerEng.

2011-2012 Company Zanichelli Meccanica SpA; responsible for the research project entitled "Study of a new system for filling liquid food with small pieces" as part of the "Ti.Be.Na Lab - Laboratory project of innovative process technologies for beverages from natural raw materials" , co-funded by the Emilia Romagna region within the call "From the productive districts to the technological districts" DGR n ° 1631/2009 of the Department of Industrial Engineering on behalf of the CIPACK Interdepartmental Center

2011-2012 Company A-Due SpA; responsible for the research project entitled "Prototyping and designing a dissolving powders for beverages" in the "Ti.Be.Na Lab - Laboratory of innovative process technologies for beverages from natural raw materials" project, co-funded by the Emilia Romagna region within the call for proposals "From the productive districts to the technological districts" DGR n ° 1631/2009 of the Department of Industrial Engineering on behalf of the CIPACK Interdepartmental Center of the University of Parma

2011-2012 Company A-Due SpA; responsible for the research project entitled "Rheological characterization of food fluids with parts, cells and fibers" as part of the "Ti.Be.Na Lab - Laboratory of innovative process technologies for beverages from natural raw materials" project, co-funded by the Emilia Romagna region within the call for proposals "From the productive districts to the technological districts" DGR n ° 1631/2009 on behalf of the CIPACK Interdepartmental Center of the University of Parma

2011-2012 Company Zanichelli Meccanica SpA; responsible for the research project entitled "Study of the rheological behavior of food liquids with size" in the project of the "Ti.Be.Na Lab - Laboratory of innovative process technologies for beverages from natural raw materials", co-funded by Emilia Romagna region within the call "From the productive districts to the technological districts" DGR n ° 1631/2009 on behalf of the CIPACK Interdepartmental Center of the University of Parma

2012-2013 Company Zanichelli Meccanica SpA; responsible for the research project entitled "Design and experimental development of a filling system for drinks in pieces" as part of the "Ti.Be.Na Lab" project - Laboratory of innovative process technologies for beverages from natural raw materials ", Co-funded by the Emilia Romagna region within the call for proposals" From the productive districts to the technological districts "DGR n ° 1631/2009 of the CIPACK Interdepartmental Center of the University of Parma

2012 Company TME Srl; responsible for the research project entitled "Study and proposal of a packaging system for coffee capsules" of the CIPACK Interdepartmental Center of the University of Parma

2012 Company Celli S.p.A.; responsible for the research project entitled "Study of a new beverage carbonation system" of the Department of Industrial EngineerEng.

2013 Company A-Due SpA; responsible for the research project entitled "Study of homogenizing syrup systems for the preparation of beverages" in the context of his own project of the Laboratory of Ti.Be.Na Lab - Laboratory of innovative process technologies for beverages from natural raw materials "." co-funded by the Emilia Romagna region within the call for proposals

"From the productive districts to the technological districts" DGR n ° 1631/2009 on behalf of the CIPACK Interdepartmental Center of the University of Parma

2014/2015 Davines Company; responsible for the research project entitled "Evaluation model of packaging for cosmetics" on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2015/2016 Company TME S.r.l. responsible for the research project entitled "Study of an oxygen reduction system for coffee capsules" on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2015/2016 Company DPG Srl responsible for the research project entitled "Analysis of shelf life of bread in tubs", on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2016/2017 Company GEA Procomac SpA, responsible for the research project entitled "Study of the plasma and ozone-based decontamination process and integration with the process of blowing a PET container for controlled contamination bottling lines" on behalf of of the CIPACK Interdepartmental Center of the University of Parma.

2016/2017 Company Vetromeccanica Srl, responsible for the research project entitled "Optimization of the process of mechanical removal of condensate from the bottle body by means of air jets" on behalf of the CIPACK Interdepartmental Center of the University of Parma

2016/2017 Company GEA Procomac SpA, responsible for the research project entitled "CFD simulation of the VHP sterilization process of polymeric containers for aseptic technologies" on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2016/2017 SIDEL SpA, company, responsible for the research project entitled "Energy optimization of food beverage packaging processes", on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2017 Company TME SpA, responsible for the research project entitled "Study, design and testing of a module for ultrasound sealing of capsules", on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2017 Company TME SpA, responsible for the research project entitled "Module for the insertion of capsules in protective casing with gas barrier, totally recyclable" on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2017 Company TME SpA, responsible for the research project entitled "Study of a module for hypobaric packaging with inert gas of powdery products and in single-dose compostable capsules", on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2017 Company PROMEC S.r.l., responsible for the research project entitled "Study, design and testing of a bottle decontamination system based on innovative technologies" on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2017 Company GEA Procomac SpA, responsible for the research project entitled "Study and characterization of the effect of plasma and / or ozone on the packaging material: PET bottles, caps in HDPE or PE, PET preforms or PET plates" on behalf of the CIPACK Interdepartmental Center of the University of Parma.

2017 / in progress Company Davines SpA, responsible for the research project entitled "Analysis of environmental impact on Davines company products" on behalf of the Department of Engineering and Architecture of the University of Parma.

2018 / in progress Agricultural Company Chiesa Virginio, responsible for the research project entitled "The design, the assistance to the delivery installation and the commissioning of the pilot plant facility" on behalf of the SITEIA.PARMA Interdepartmental Center of the University of Parma.

Furthermore, on behalf of the CIPACK inter-departmental center, third party services have been carried out with the companies SIDEL SpA, GEA Mechanical Equipment.

In addition, he has participated in several research programs, of which the proff. Antonio Rizzi, Roberto Montanari and Angelo Montenero have been the project leaders.

TEACHING ACTIVITY

University

A. A. 2005/2006

Exercises in the teaching of "Food Industry Plants" for students of the Master Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Food Industry Plants A" for students of the Degree in Management Engineering at the Faculty of Engineering of the University of Parma.

Exercises in the teaching "Materials and Technologies for Food Packaging (Module B)" for students of the Master Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Safety of Industrial Plants" for the Bachelor Degree in Management Engineering at the Faculty of Engineering of the University of Parma.

A. A. 2006/2007

Exercises in the teaching of "Food Industry Plants" for students of the Master Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Food Industry Plants A" for students of the Bachelor Degree in Management Engineering at the Faculty of Engineering of the University of Parma.

Exercises in the teaching "Materials and Technologies for Food Packaging (Module B)" for students of the Master Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Safety of Industrial Plants" for the Bachelor Degree in Management Engineering at the Faculty of Engineering of the University of Parma.

A. A. 2007/2008

Owner of the teaching "Materials Technology and Plants for Food Packaging (module B - 4 CFU)" for students of the Master Degree in Mechanical Engineering of the Food Industry and Management Engineering at the Faculty of Engineering of the University of Parma .

Exercises in the teaching of "Food Industry Plants" for students of the Master Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Safety of Industrial Plants" for the Bachelor Degree in Management Engineering at the Faculty of Engineering of the University of Parma.

A. A. 2008/2009

Owner of the teaching "Materials Technology and Plants for Food Packaging (module B - 4 CFU)" for students of the Master Degree in Mechanical Engineering of the Food Industry and Management Engineering at the Faculty of Engineering of the University of Parma.

Owner of the "Laboratory of Mechanical Installations" for students of the Bachelor Degree in Mechanical Engineering at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Food Industry Plants" for students of the Master Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Safety of Industrial Plants" for the Bachelor Degree in Management Engineering at the Faculty of Engineering of the University of Parma.

A. A. 2009/2010

Owner of the course "Materials Technology and Plants for Food Packaging (module B- 4 CFU)" for students of the Specialized Degree Course in Mechanical Engineering of the Food Industry and Management Engineering at the Faculty of Engineering of the University of Parma.

Holder of the teaching "Quality and Safety Management (module 1 - 5 CFU)" for students of the Master of Science in Management Engineering at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Food Industry Plants" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

A. A. 2010/2011

Owner of the teaching "Materials Technology and Plants for Food Packaging (module B - 6 CFU)" for students of the Master's Degree Program in Mechanical Engineering of the Food Industry and Management Engineering at the Faculty of Engineering of the University of Parma .

Holder of the teaching "Quality and Safety Management (module 1 - 5 CFU)" for students of the Master of Science in Management Engineering at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Food Industry Plants" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

A. A. 2011/2012

Owner of the teaching "Materials Technology and Plants for Food Packaging (module B - 6 CFU)" for students of the Master's Degree Program in Mechanical Engineering of the Food Industry and Management Engineering at the Faculty of Engineering of the University of Parma .

Holder of the teaching "Quality and Safety Management (9 CFU)" for students of the Master's Degree in Management Engineering at the Faculty of Engineering of the University of Parma.

Exercises in the teaching of "Food Industry Plants" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Faculty of Engineering of the University of Parma.

For the Faculty of Medicine and Surgery, he has carried out teaching support activities for the teaching of "Quality Management" of the three-year degree teaching in Prevention Technician in the environment and in the workplace.

He also held a 3 CFU module entitled "Technologies and plants for food packaging" as part of the 1st level University Masters in Packaging, promoted by the "Department of General and Inorganic Chemistry, Analytical Chemistry, Physical Chemistry" of University of Parma, and carried out at the Faculty of Chemistry of the aforementioned University.

A. A. 2012/2013

Owner of the teaching "Materials and Technologies for Food Packaging (Module B - 6 CFU)" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

Exercises in the teaching of "Food Industry Plants" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

He has carried out didactic support activities for the teaching of "Quality Management" of the three-year degree in Technician of prevention in the environment and in the workplace, of the Department of Clinical and Experimental Medicine.

He also held a 3 CFU module entitled "Technologies and equipment for food packaging" as part of the First Level University Masters in Packaging, promoted and implemented by the Department of Chemistry of the University of Parma.

A. A. 2013/2014

Owner of the teaching "Materials and Technologies for Food Packaging (Module B - 6 CFU)" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

Owner of the teaching "Quality and Safety Management (9 CFU)" for students of the Master's Degree in Management Engineering at the Department of Industrial Engineering of the University of Parma. Part of the teaching uses the teaching of "Safety in the workplace" of the three-year degree teaching in Technician of prevention in the environment and in the workplace, of the Department of Clinical and Experimental Medicine.

Exercises in the teaching of "Food Industry Plants" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

A. A. 2014/2015

Owner of the teaching "Materials and Technologies for Food Packaging (Module B - 6 CFU)" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

Exercises in the teaching of "Food Industry Plants" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

A. A. 2015/2016

Owner of the teaching "Materials and Technologies for Food Packaging (Module B - 6 CFU)" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

Owner of the teaching "Quality and Safety Management (9 CFU)" for students of the Master's Degree in Management Engineering at the Department of Industrial Engineering of the University of Parma. Part of the teaching uses the teaching of "Safety in the workplace" of the three-year degree teaching in Technician of prevention in the environment and in the workplace, of the Department of Clinical and Experimental Medicine.

Exercises in the teaching of "Food Industry Plants" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

He also held a 2 CFU module entitled "Technologies and equipment for food packaging" as part of the 1st level University Masters Teaching in Packaging, promoted and implemented by the Department of Chemistry of the University of Parma.

A. A. 2016/2017

Owner of the teaching "Materials and Technologies for Food Packaging (Module B - 6 CFU)" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Industrial Engineering of the University of Parma.

Owner of the teaching "Quality and Safety Management (9 CFU)" for students of the Master's Degree in Management Engineering at the Department of Industrial Engineering of the University of Parma. Part of the teaching uses the teaching of "Safety in the workplace" of the three-year degree teaching in Technician of prevention in the environment and in the workplace, of the Department of Clinical and Experimental Medicine.

Exercises in the teaching of "Food Industry Plants" for students of the Master's Degree in Mechanical Engineering of the Food Industry at the Department of Engineering and Architecture of the University of Parma.

He also held a 2 CFU module entitled "Technologies and equipment for food packaging" as part of the 1st level University Masters Teaching in Packaging, promoted and implemented by the Department of Chemistry of the University of Parma.

A. A. 2017/2018

Owner of the teaching "Materials Technology and Plants for Food Packaging (module B - 6 CFU)" for students of the Master's Degree in Engineering of Plants and Machines of the Food Industry at the Department of Engineering and Architecture of the University of Studies of Parma.

Holder of the teaching "Quality and Safety Management (12 CFU)" for students of the Master's Degree in Management Engineering at the Department of Engineering and Architecture of the University of Parma. Part of the teaching uses the teaching of "Safety in the workplace" of the three-year degree teaching in Technician of prevention in the environment and in the workplace, of the Department of Clinical and Experimental Medicine.

For the university teachings in which he has assisted, Giuseppe Vignali has covered other educational activities such as assistance to students and participation in the examination panels for profit.

He has also served as a speaker for more than 125 degree theses presented at the Faculty of Engineering and then at the Department of Industrial Engineering of the University of Parma, for the following degree courses:

- Master's degree / specialization in Mechanical Engineering of the Food Industry;

- master's degree / specialist in Management Engineering;
- Master's degree / specialization in Mechanical Engineering;
- three-year degree in Mechanical Engineering;
- three-year degree in Management Engineering.

Other Educational Activities

October 2005 - March 2006

Lecturer in training Cisita Parma S.r.l., in the teaching of "Industrial Logistics Technician".

November 2005 - February 2006

Teacher En.A.I.P Parma, in the Post Graduate teaching of "Automatic Machines for Life Science Industries".

Febbraio 2006 - March 2006

Lecturer in training Cisita Parma S.r.l., in the teaching of "Food Designer".

October 2006 - April 2007

Lecturer in training Ce.S.R.A Codogno (LO), in the teaching of "Industrial Automation Technician".

December 2006 - March 2007

Teacher En.A.I.P. Parma, in the Post Graduate teaching of "Automatic Machines for Life Science Industries".

March 2007 - July 2008

Lecturer of the Consorzio Nettuno in the teledidactic teaching of "Impianti Meccanici AB" for the three-year degree course in Mechanical Engineering.

January 2008 - February 2008

Professor of the University of Parma in the "Training Path aimed at the analysis, research, training and verification of scientific principles and technical procedures related to sterilization processes in the agri-food sector" (Ref. Advanced Mechanical Notice Emilia Romagna - Directorial Decree n.2938 / Ric. 28 November 2005 DM28621), at Procomac SpA

March 2008 - July 2008

Lecturer of the Consorzio Nettuno in the tele-didactic teaching of "Impianti Meccanici AB" for the three-year degree course in Mechanical Engineering.

January 2016 - September 2016

Lecturer and Head of the University of Parma in the IFTS teaching "Technician for the maintenance of machinery and plants for the agri-food industry" (Ref. BTS IFTS 4270 / Rer Emilia Romagna), at Cisita Parma Srl.

December 2016 - June 2017

Lecturer and Head of the University of Parma in the IFTS teaching "Expert technician in environmental safety and quality of products and processes - REF: P.A 2016-5692 / RER", at Demetra Formazione Srl.

January 2017 - September 2017

Lecturer and Head of the University of Parma in the IFTS teaching "Technician for the maintenance of machinery and plants for the agri-food industry" (Ref P.A 2016-5687 / RER), at Cisita Parma Srl.

March 2017 - May 2017

Teacher in the ITS teaching: "Superior technician for food design and production technologies" Rif.P.A 2016-5643 / RER, provided by ITS Tech and Food Foundation, with lessons at Cisita Parma.

April 2017 - May 2017

Lecturer in ITS teaching "Higher technician for marketing technologies and enhancement of food products." Teaching PA 2016-5644 / RER, provided by ITS Tech and Food Foundation, with lessons at IFOA Reggio Emilia.

ACADEMIC AND INSTITUTIONAL ACTIVITIES

In the academic field, he held the following positions within the University of Parma:

- Quality Assurance Manager for the Master's Degree in Mechanical Engineering, Food Industry, which since 2015/16 has changed its name into Plant Engineering and Food Industry Machines (from the academic year 2012/2013 to today);

- Member of the Academic Board of the PhD program in Industrial Engineering (from December 2009 to today);

- Member of the Student Practical Evaluation Committee ("Student Practices Commission") of the Master's Degree in Mechanical Engineering Food Industry of the University of Parma (from the academic year 2010/2011 to 2015/16);

- Alternate Member of the Selection Committee for the selection of students enrolled in the Master's Degree in Mechanical Engineering of the Food Industry of the University of Parma (from the academic year 2008/2009 to 2015/16).

- Member of the Committee for Foreign Languages for the Faculty of Engineering from the academic year 2010/11 to date (from 2012/13 for the Department of Industrial Engineering and from 2017 Department of Engineering and Architecture).

- President of the Commission for Foreign Languages for the Department of Industrial Engineering from the academic year 2012/13 to date (from 2017 Department of Engineering and Architecture).

- Scientific Manager of the Interdepartmental Center for Packaging CIPACK of the University of Parma from 2012 to date.

- Director of the Center of Excellence for Research and Technological Innovation of the University of Parma from 2014 extended until 31 September 2018.

- Responsible for the Quality Assurance of the Master's Degree in Mechanical Engineering of the Food Industry (from 2015/16 renamed in Plant Engineering and Food Industry Machines) from the year 2014/2015

Institutional Activities for the Disciplinary Scientific Sector:

- member of the Executive Committee of the ING-IND / 17 "Mechanical Industrial Plants" sector for the two-year period 2009-2010, in the role of researcher.

Parma, 5th September 2018

Signed

A handwritten signature in black ink, appearing to read "Giuseppe Vignali". The signature is written in a cursive style with a large initial 'G'.

Annex 1 Curriculum - List of publications

Prof. Eng. Giuseppe Vignali

Manuscripts in international journal

Manuscripts in international journals, ISI and Scopus indexed

1. **Bottani E., Monica L., Vignali G.** (2009). Safety management systems: Performance differences between adopters and non-adopters, *Safety Science*, Vol. 47, pp. 155–162.
2. **Bottani, E.; Montanari, R.; Vignali, G., Guerra, L.** (2011). A Survey on Packaging Materials and Technologies for Commercial Food Products, *International Journal of Food Engineering*: Vol. 7: Iss. 1, Article 12.
3. **Guerra, L., Romagnoli, G., Vignali, G.** (2012). Extraction of Golden Delicious apple puree: Experimental comparison of three different methods *Journal of Food Engineering*, 110 (2), pp. 169-174.
4. **Bottani, E., Cecconi, M., Vignali, G., Montanari, R.** (2012). Optimisation of storage allocation in order picking operations through a genetic algorithm. *International Journal of Logistics Research and Applications*, 15 (2), pp. 127-146.
5. **Bottani, E., Ferretti, G., Vignali, G.** (2013). Experimental analysis of a beverage carbonation system equipped with a venturi nozzle. *Journal of Food Process Engineering*, 36 (3), pp. 302-315.
6. **Bottani, E., Ferretti, G., Manfredi, M., Vignali, G.** (2013). Modeling and thermo-fluid dynamic simulation of a fresh pasta pasteurization process. *International Journal of Food Engineering*, 9 (3), pp. 327-339.
7. **Ferretti, G., Montanari, R., Solari, F., Vignali, G.** (2013). Advanced design of industrial mixers for fluid foods using computational fluid dynamics. *International Journal of Food Engineering*, 9 (3), pp. 309-325.
8. **Manfredi, M., Vignali, G.** (2014). LCA of a packaged tomato puree: a comparison of environmental impacts produced by different life cycle phases. *Journal of Cleaner Production*, 73, pp. 275-284.
9. **Manfredi, M., Vignali, G.** (2015). Comparative Life Cycle Assessment of hot filling and aseptic packaging systems used for beverages. *Journal of Food Engineering*, 147, pp. 39–48

10. **Bottani E., Rizzi A., Vignali G.** (2015). Improving logistics efficiency of industrial districts: a framework and case study in the food sector. *International Journal of Logistics Research and Applications*, 18 (5), pp. 402-423.
11. **Manfredi M, Fantin V, Vignali G, Gavara R.** (2015). Environmental assessment of antimicrobial coatings for packaged fresh milk. *Journal of Cleaner Production* 95, pp. 291-300.
12. **Bottani E., Montanari R., Rinaldi M., Vignali G.** (2015). Modelling and multi-objective optimization of closed loop supply chains: a case study. *Computers & Industrial Engineering*, 87, pp. 328–342.
13. **Solari F., Girolimetti G., Montanari R., Vignali G.** (2015). A New Method for the Validation of Ultraviolet Reactors by Means of Photochromic Materials. *Food and Bioprocess Technology*, 8 (11), pp. 2192-2211.
14. **Mosna D., Vignali G.** (2015). Three-Dimensional CFD Simulation of a “Steam Water Spray” Retort Process for Food Vegetable Products. *International Journal of Food Engineering*, 11 (6), pp. 715-729.
15. **Bertolini, M., Bottani, E., Vignali, G., Volpi, A.** (2016). Comparative Life Cycle Assessment of Packaging Systems for Extended Shelf Life Milk. *Packaging Technology and Science*, 29 (10), pp. 525-546.
16. **Spanu, S., Vignali, G.** (2016). Modelling and Multi-objective Optimisation of the VHP Pouch Packaging Sterilisation Process. *International Journal of Food Engineering*, 12 (8), pp. 739-752.
17. **Spanu S, Mosna D, Vignali G** 2016. CFD Analysis of Coffee Packaging in Capsules using Gas Flushing Modified Atmosphere Packaging, *International Journal of Food Engineering*, 12 (9), pp. 875-887.
18. **Mosna D., Vignali G., Bottani E., Montanari R.** 2016. Life Cycle Assessment of a New Feed Production Obtained by Wasted Flour Food Collected from the Distribution and Retail Phases. *International Journal of Food Engineering*, 12 (9), pp. 807-825.
19. **Vignali G.** 2017. Environmental assessment of domestic boilers: A comparison of condensing and traditional technology using life cycle assessment methodology. *Journal of Cleaner Production*, 142, pp. 2493-2508.
20. **De Santis R., Montanari R., Vignali G., Bottani E.** 2018. An adapted ant colony optimization algorithm for the minimization of the travel distance of pickers in manual warehouses. *European Journal of Operational Research*, 267 (1), pp. 120-137.
21. **Ferrari, F., Vignali, G.** (2018). Modeling and Simulation of Nitrogen Injection in Olive Oil. *International Journal of Food Engineering*, 14(2), DOI: 10.1515/ijfe-2017-0121.
22. **Vignali, G., Bertolini, M., Bottani, E., Di Donato, L., Ferraro, A., Longo, F.** (2018). Design and testing of an augmented reality solution to enhance operator safety in the food industry. *International Journal of Food Engineering*, 14 (2), art. no. 20170122

23. **Bottani, E., Mannino, F., Vignali, G., Montanari, R.** (In press) A routing and location model for food waste recovery in the retail and distribution phase. *International Journal of Logistics Research and Applications*, pp. 1-22. DOI: 10.1080/13675567.2018.1458826
24. **Bottani E., Vignali G.**, (in press). Augmented reality technology in the manufacturing industry: a review of the last decade. *IISE Transactions*, DOI: 10.1080/24725854.2018.1493244

Further manuscripts in international journals indexed only in Scopus

25. **Bottani E., Rizzo R., Vignali G.** (2007). Simulation and Analysis of Fluid Dynamic Behaviour of Foods during Filling Processes, *Chemical Product and Process Modeling*: Vol. 2 : Iss. 3, Article 18.
26. **Bertolini, M., Ferretti, G., Montanari, R., Rizzi, A., Vignali, G.** (2012). A quantitative evaluation of the impact of the RFID technology on shelf availability. *International Journal of RF Technologies: Research and Applications*, 3 (3), pp. 159-180.
27. **Bertolini, M., Ferretti, G., Vignali, G., Volpi, A.** (2013). Reducing out of stock, shrinkage and overstock through RFID in the fresh food supply chain: Evidence from an Italian retail pilot. *International Journal of RF Technologies: Research and Applications*, 4 (2), pp. 107-125.
28. **Vignali, G., Volpi, A.** (2013). Analysis and evaluation of cooking parameters for sweet bakery products. *Advance Journal of Food Science and Technology*, 5 (7), pp. 843-854.
29. **Armenzoni, M., Solari, F., Marchini, D., Montanari, R., Bottani, E., Vignali, G., Ferretti, G.** (2013). Advanced design of the pasta drying process with simulation tools. *International Journal of Simulation and Process Modelling*, 8 (2-3), pp. 104-117.
30. **Bottani, E., Vignali, G.; Ferretti, G.; Montanari, R.** (2014). An empirical study on the relationships between maintenance policies and approaches among Italian companies. *Journal of Quality in Maintenance Engineering*, 20 (2), pp. 135-162.
31. **Bottani E., Manfredi M., Vignali G., Volpi A.** (2014). Life Cycle Assessment of RFID implementation in the fresh food supply chain. *International Journal of RF Technologies: Research and Applications*, 6 (1) pp. 51-71
32. **Armenzoni M., Montanari R., Vignali G., Bottani E., Ferretti G., Solari F., Rinaldi M.** (2015). An integrated approach for demand forecasting and inventory management optimisation of spare parts. *International Journal of Simulation & Process Modelling*, 10 (3), 223-240.
33. **Piramuthu S., Rizzi A., Vignali G., Volpi A.** (2015). Benchmarking of RFID devices for apparel applications: an experimental approach. *International Journal of RF Technologies: Research and Applications*, 6 (2-3).

34. **Bertolini M, Bottani E, Romagnoli G, Vignali G.** (2015). The impact of RFID technologies on inventory accuracy in the apparel retailing: Evidence from the field. *International Journal of RF Technologies* 6 (4), pp. 225-246.
35. **Vitale, G., Mosna, D., Bottani, E., Montanari, R., Vignali, G.** (2018). Environmental impact of a new industrial process for the recovery and valorisation of packaging materials derived from packaged food waste. *Sustainable Production and Consumption*, 14, pp. 105-121. DOI: 10.1016/j.spc.2018.02.001

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36. **Bottani E., Ferretti G., Rizzo R., Vignali G.** (2006). “Volumetric filling in aseptic bottling: limit and potentials”, *Italian Beverage Technology*, vol XV, n°44, pp 5-19;
37. **Bertolini M., Vignali G.** (2009). An analytical method for halon alternative selection in fire suppression systems design, *Int. J. Decision Sciences, Risk and Management*, Vol. 1, Nos. 3/4, pp. 180-198;
38. **Ferretti G., Rizzo R., Vignali G.** (2009). A two-dimensional axial symmetric simulation model for continuous ohmic heating of hazelnut cream and carrot puree, *Food Manufacturing Efficiency*, Volume 2, Issue 3, pp. 11-20;
39. **Rizzo R., Romagnoli G., Vignali G.** (2010). Process parameter optimization in the design of a pasteurizer for fresh filled pasta, *Food Manufacturing Efficiency*, Volume 3, Issue 1, pp. 25-34;
40. **Bottani E., Rizzo R., Vignali G.** (2010). Selecting the Packaging System for Liquid Foods Using an ANP Model, *Journal of Agricultural Science and Technology*, Volume 4, No.2, pp 56-67;
41. **Bigliardi, B., Bottani E., Montanari, R., Vignali G.** (2010). Successful New Product Development in the food packaging industry: evidence from a case study. *International Journal of Engineering, Science and Technology*, 2(9), 13-24;
42. **Bottani E., Ferretti G., Montanari R., Vignali G.** (2012). The impact of (S,s) policy on supply network performance: a simulation study. *International Journal of Business Performance and Supply Chain Modelling*, 4 (2), pp 164-201.
43. **Bottani E., Ferretti G., Montanari R., Vignali G., Longo F., Bruzzone A.** (2013). Design of supply networks with optimized safety stock levels. *International Journal of Engineering, Science and Technology*, 5 (2), pp. 93-109.
44. **Bottani E., Mantovani M., Montanari R., Vignali G.** (2017) Inventory management in the presence of inventory inaccuracies: An economic analysis by discrete-event simulation. *International Journal of Supply Chain and Inventory Management*, 2 (1), pp. 39-73

Editorials

Editorials in international journals indexed ISI and Scopus

45. **Bottani, E., Grassi, A., Montanari Prof., R., Vignali, G.** (2013). Special issue "Selected papers from the workshop on modelling and simulation of food processing and operations of the MAS 2012 conference (Wien, September 19-21, 2012)" *International Journal of Food Engineering*, 9 (3), pp. 239-240.
46. **Bottani, E., Grassi, A., Montanari Prof., R., Vignali, G.** (2014). Special section "Selected Papers from the Workshop on Modeling and Simulation of Food Processing and Operations of the MAS 2013 Conference (Athens, September 25–27, 2013)" *International Journal of Food Engineering*, 10 (4), pp.: 543–544.
47. **Bottani, E., Grassi, A., Montanari Prof., R., Vignali, G.** (2015). Special Section "Selected papers from the workshop on Modeling and Simulation of Food Processing and Operations of the MAS 2014 conference (Bordeaux, September 10–12, 2014)" *International Journal of Food Engineering*, 11 (6), pp.: 713–714.
48. **Bottani E., Longo F., Mercadé-Prieto R., Vignali G.** (2016). Special Issue "Selected Papers from the First International Food Operations & Processing Simulation Workshop – FoodOPS 2015 (September 21–23, 2015, Bergeggi, Italy)" *International Journal of Food Engineering*, 12 (9), 805-806
49. **Bottani, E., Longo, F., Vignali, G.** (2018). Special issue "selected papers from the first international food operations & processing simulation workshop - FoodOPS2016 (September 26-28, 2016, Larnaca, Cyprus)", *International Journal of Food Engineering*, 14 (2), art. no. 20180034

Books (monographs)

50. **Ferretti G., Rizzo R., Vignali G.** (2017). *Ingegneria Alimentare*. Chiriotti Editori, pp. 1-1084. Pinerolo (TO), ISBN 978-88-96027-34-9.

Chapters in international books

51. **Bottani E., Rizzo R., Vignali G.** (2008). Numerical Simulation of Turbulent Air Flows in Aseptic Clean Rooms. In: Petrone Giuseppe, Cammarata Giuliano. "Recent Advances in Modelling and Simulation". (pp. 633-650). ISBN: 978-3-902613-25-7. VIENNA: I-TECH (AUSTRIA).
52. **Bottani E, Montanari R, Rinaldi M, Vignali G** (2015). Intelligent Algorithms for Warehouse Management, in *Intelligent Techniques in Engineering Management*, 645-667 Springer editor.

53. **Vignali G.** (2016) Life-Cycle Assessment of Food-Packaging Systems. In: *Environmental Footprints and Eco-design of Products and Processes*, Subramanian Senthilkannan Muthu (Eds): Environmental Footprints of Packaging, Springer editor (pp 1-22).
54. **Vitale G., Vignali G.** (2017). Life Cycle Assessment of Food Packaging, In Reference Module in Food Science, Elsevier, 2017, ISBN 9780081005965, <https://doi.org/10.1016/B978-0-08-100596-5.21427-3>.
55. **Ferrari F., Vignali G.** (2018). CFD of food packaging sterilization and filling. In "Computational Fluid Dynamics in Food Processing 2ed." - CRC Press Book. ISBN 9781138568310

Manuscripts in international conference proceedings

Manuscripts on international conferences proceedings indexed in Scopus

56. **De Palma G., Rizzo R., Vignali G.** (2009). Multi Objective Optimization of Pervaporation Process for Food Products. Atti del 5th International Technical Symposium CIGR, Aug 31st - Sept 2nd, 2009 Potsdam, Germany (ISSN 0947-7314);
57. **Bottani E., Rizzo R., Vignali G.** (2009). Selecting the Most Suitable Packaging Technology for Liquid Foods Using an ANP Model. Atti del 5th International Technical Symposium CIGR, Aug 31st - Sept 2nd, 2009 Potsdam, Germany (ISSN 0947-7314);
58. **Bottani E., Vignali G.** (2011). Optimization of Bakery Products Manufacturing through Process Capability Analysis. Atti del 6th International Technical Symposium CIGR - section VI, April 18 -20st, 2011 Nantes, France (ISBN:978-2-7466-3203-5);
59. **Vignali G.** (2011). Modeling and design of an aroma recovery equipment integrated in a fruit juice and puree production system. Atti del 6th International Technical Symposium CIGR -section VI, April 18 -20st, 2011 Nantes, France (ISBN:978-2-7466-3203-5);
60. **Vignali G.** (2011). Analysis and comparison of emerging sugar dissolution systems, Proceedings 6th International Technical Symposium CIGR -section VI, April 18 -20st, 2011 Nantes, France (ISBN:978-2-7466-3203-5);
61. **Casoli P., Copelli G., Manfredi M., Vignali G.** (2011). Modelling and simulation of the sterilization process of pouch packaging in an aseptic line. Proceedings of the "10th International Conference On Modeling And Applied Simulation", September 12-14 2011 Rome, Italy (ISBN 978-88-903724-5-2);
62. **Bottani E., Ferretti G., Folezzani M., Manfredi M., Montanari R., Vignali G.** (2012). Modeling and thermo-fluid dynamic simulation of a fresh pasta pasteurization process. In: -. Proceedings of the 11th International Conference on Modeling and Applied Simulation (MAS 2012). Wien, Austria, 19-21 Settembre 2012, vol. 1, p. 335-342, Genova:DIME - Università di Genova, ISBN: 9788897999027;

63. **Rinaldi M., Bottani E., Ferretti G., Armenzoni M., Marchini D., Solari F., Vignali G., Montanari R.** (2012). Advanced design of industrial mixers for fluid foods using Computational Fluid Dynamics. In: -. Proceedings of the 11th International Conference on Modeling and Applied Simulation (MAS 2012). Wien, Austria, 19-21 Settembre 2012, vol. 1, p. 292-301, Genova:DIME - Università di Genova, ISBN: 9788897999027;
64. **Rinaldi M., Bottani E., Ferretti G., Armenzoni M., Marchini D., Solari F., Vignali G., Montanari R.** (2012). Supply chain simulation: A study on reorder policies for perishable food products. In: -. Proceedings of the 11th International Conference on Modeling and Applied Simulation (MAS 2012). Wien, Austria, 19-21 Settembre 2012, vol. 1, p. 308-315, Genova:DIME - Università di Genova, ISBN: 9788897999027;
65. **Folezzani, M. Manfredi, M. Vignali, G.** (2013). Modelling and multi-objective optimization of the VHP sterilization process of pouch packaging. Proceedings of the 11th International Conference on Modeling and Applied Simulation (MAS 2013), Atene, 25-27 settembre 2013. (ISBN: 9788897999171);
66. **Armenzoni M., Montanari R., Vignali G., Bottani E., Ferretti G., Solari F., Rinaldi M.** (2013). A simulation approach for spare parts demand forecasting and inventory management optimization. Proceedings of the 25th European Modeling & Simulation Symposium (EMSS2013), Atene, 25-27 settembre 2013 (ISBN: 9788897999164);
67. **Folezzani, M. Manfredi, M. Vignali, G.** (2014). CFD simulation of a retort process for food vegetable products. Proceedings of the 12th International Conference on Modeling and Applied Simulation (MAS 2014). Bordeaux, 10-12 settembre 2014 (ISBN: 9788897999348);
68. **Bottani, E., Montanari, R., Vignali, G.** (2014). The impact of inventory inaccuracies on inventory policies: an economic analysis by discret event simulation. In: Longo, F., De Bonis, F., Merkurjev, Y. (eds.), Proceedings of the 2nd International Workshop on Innovation for Logistics (WINLOG 2014), ISBN 978-88-97999-48-5, pp.51-58. November 20-21, 2014, Campora S.Giovanni (Italy).
69. **Spanu S., Vignali G.,** (2015) Cfd analysis of coffee packaging in capsules using gas flushing modified atmosphere packaging, Proceeding of The 1st international Food Operations & Processing Simulation Workshop, September 21-23, 2015, Bergeggi (SV).
70. **Mosna D., Vignali G.,** (2015) Life cycle assessment of a new feed production obtained by wasted flour food collected from the distribution and retail phases. Proceeding of The 1st international Food Operations & Processing Simulation Workshop, September 21-23, 2015, Bergeggi (SV).
71. **Ferrari F., Spanu S., Vignali G.** (2016) Modelling and simulation of nitrogen injection in vegetable olive oil. Proceeding of The 2nd international Food Operations & Processing Simulation Workshop, pp 39-49. September 26-28, 2016, Larnaca Cyprus.
72. **Spanu S., Bertolini M., Bottani E., Vignali G., Di Donato L., Ferraro A., Longo F.** (2016) Feasibility study of an Augmented Reality application to enhance the operators' safety in the usage of a fruit extractor. Proceeding of The 2nd international Food

Operations & Processing Simulation Workshop, pp 70-79. September 26-28, 2016, Larnaca Cyprus.

73. **Mosna D., Vignali G.** (2017). Life cycle assessment of a spreadable cream made from parmesan cheese. Proc. of the Int. Workshop on Simulation for Energy, Sustainable Development & Environment 2017, pp. 44-53, September 18-20, 2017, Barcelona Spain. ISBN 978-88-97999-92-8.
74. **Mantione R., Vignali G.** (2017) Market analysis of dairy products produced in the Parmigiano-Reggiano area. Proceedings of the International Food Operations and Processing Simulation Workshop, 2017 pp. 82-92, September 18-20, 2017, Barcelona Spain. ISBN 978-88-97999-86-7
75. **Rosi G., Vignali G., Bottani E.**, "A Conceptual Framework for the Selection of an "Industry 4.0" Application to Enhance the Operators' Safety: The Case of an Aseptic Bottling Line," 2018 IEEE International Conference on Engineering, Technology and Innovation (ICE/ITMC), Stuttgart, 2018, pp. 1-9. DOI: 10.1109/ICE.2018.8436336

Other manuscripts in international conferences with peer review

76. **Bottani E., Vignali G., Volpi A.** (2006). An Experimental Analysis of Volumetric Filling Applications in Aseptic Bottling. Atti del 2006 CIRG Section VI, International Symposium on FUTURE OF FOOD ENGINEERING, Warsaw, Poland 26-28 Aprile 2006 (ISBN: 9788391612927);
77. **Ferretti G., Montanari R., Rizzo R., Vignali G.** (2006). Ionising Radiation for Food Packaging Sterilisation. Atti del 3rd Central European Congress on Food, Sofia, Bulgaria, 22-24 Maggio 2006;
78. **Bertolini M., Montanari R., Rizzo R., Vignali G.** (2007). Design Of Aseptic Filling Valves for Carbonated Beverages using Ehedg Guidelines. Poster Section, EHEDG-EFFOST Conference, Lisboa 14-16 November 2007;
79. **Bottani E., Guerra L., Montanari R., Vignali G.** (2008). A survey on packaging materials and technologies for commercial food products. Poster Section, International Conference FOOD FACTORY 2008, Laval, 4-5 Giugno 2008;
80. **Zatti D., Wiklund. J, Stading M, Vignali G.** (2009). Determination of velocities profiles in hyperbolic contraction using ultrasound velocity profiling. Annual Transactions of the Nordic Rheology Society, Vol. 17, pp 277-280, Reykjavik, August 18-20, 2009;
81. **Guerra L., Romagnoli G., Vignali G.** (2010). Experimental analysis and product comparison of three different apple puree extraction techniques. FoodINNOVA 2010. International Conference on Food Innovation; Valencia, 25 -29 ottobre 2010;
82. **Ferretti G., Folezzani M., Vignali G.** (2011). Analysis and simulation of a powders dissolution system based on the hydrodynamic controlled cavitation. In: Proceedings of 2011 Effost Annual Meeting. Berlin, 9-11 novembre 2011;

83. **Rinaldi M., Montanari R., Solari F., Armenzoni M., Marchini D., Bottani E., Vignali G.** (2012). Analysis and evaluation of energy efficiency of a shrinkwrap-packer. In: Proceedings of the International Conference on Renewable Energies and Power Quality. Santiago de Compostela (Spain), 28-30 Marzo 2012, ISBN: 9788461566488
84. **Rinaldi M., Ferretti G., Montanari R., Bottani E., Vignali G., Solari F., Armenzoni M., Marchini D.** (2012). Energy classification of a shrinkwrap-packer. In: -. Proceedings of the International Conference on Power and Energy Systems. Hong Kong, 12-13 Aprile, 2012, p. 460-466, Information Engineering Research Institute, ISBN: 9781612750118
85. **Manfredi, M., Vignali, G.** (2012). Application of LCA Methods in tomato industries: A comparison of the environmental impact between tomato cultivation and sauce processing. EFFOST 2012. Montpellier, 20-23 novembre 2012.
86. **Folezzani M., Manfredi M., Vignali, G.** (2013). Analysis and Simulation of a Powders Dissolution System based on Hydrodynamic Controlled Cavitation. Proceedings of CIGR Conference 2013. Guangzhou, 3-7 novembre 2013.
87. **Vignali G., Montanari R. Solari F. Marchini D. Armenzoni M.** (2013). A New Method For The Validation Of UV Reactors Through The Use Of Photochromic Materials. Proceedings of CIGR Conference 2013. Guangzhou, 3-7 novembre 2013.
88. **Mosna D., Spanu S., Vignali G.** (2015) Life Cycle Assessment of a packaging recovery process from collected food waste. Proceeding of "Global Cleaner Production & Sustainable Consumption Conference", 1 - 4 November 2015 | Sitges, Barcelona, Spain

Manuscripts in national journals and magazines

89. **Bottani E., Vignali G., Rizzo R., Ferretti G.** (2006). Dimensionamento di una linea di imbottigliamento mediante analisi simulativa. *Industrie delle Bevande*, anno 35, n°201, pp 1-10;
90. **Bertolini M., Rizzo R., Vignali G.** (2006). Analisi e riprogettazione di un impianto per la produzione di pasta alimentare secca. *Tecnica Molitoria*, anno 57, n°3, pp 275-289;
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Signed

