Giovanna A. Fargione

DIIM -Dipartimento di Ingegneria Civile e Architettura Università di Catania -Italia

Viale Andrea Doria 6 -95125 Catania -Italia
Tel. +39 095 7382419
Mobile +3204332246

E-mail: gfargion@dii.unict.it

Giovanna Fargione, graduated in Electrotechnical Engineering (Address Industrial Automation) at the Faculty of Engineering of Catania.

He received his PhD in Structural Mechanics in 1998.

Assistant Professor in the SSD "Mechanical Design and Construction of ING-IND 14 Machines", at the Department of Industrial Engineering of the University of Catania from 01.10.2001.

Associate Professor in the SSD "Mechanical Design and Construction of ING-IND 14 Machines", at the Department of Industrial Engineering of the University of Catania from 01.10.2015.

Applied in the use of the numerical-experimental methods of structural material analysis, in the introduction of artificial intelligence tools for the enhancement of mechanical design tools such as CNN Soft Computing and genetic algorithms, in functional analysis and in the optimization of mechanical applications within mechatronics, in integrated product design, has developed a particular interest in the themes of characterization materials in particular by working on the Thermographic method applied to fatigue. She has dedicated herself to engineering applications, the Integration of Design for Manufacture and Manufacture Assembly (DFMa) and DFS (Design for Service) techniques in Product Design, and Product Design for Product Requirements Environment), with specific reference to the issues related to life cycle simulation, design for assembly and disassembly, structured methods for optimal material selection, treating these issues in close relationship with the assumptions and tools of traditional mechanical design.

In relation to these fields of research has published more than 80 articles on, acts of conferences, and national and international journals.

Results in technology transfer

International Patent:European Patent Office. Number 01830233.1-1264 on 06.11.01
Owner of STMicroelctronics S.r.l.
Authors: Fargione G.; Caponetto R.; Diamond O.; Tringali D.
"Method and apparatus for controlling a vehicle suspensien system based on sky hook approach".

Research themes developed

- Material fatigue
- Mechatronics
- Non-Destructive Controls
- Applications of image processing and soft-computing techniques within the
- industrial design and mechanical design
- Mechanical control systems (active safety)
- Passive safety in vehicles dedicated to disabled users
- Product architecture design (Material selection; DFX; Design criteria)
- Mechanical design in industrial plants
- Green Design

Collaborations with national companies and entities

Since 2004 he has collaborated with Erg, Lukoil, ENI, Red Bridge Engineering, PPC, on issues related to the design of industrial plants.
Since 2016 he has been working with Sasol, a plant located in Augusta, on design issues aimed at the sustainability of industrial plants.

Research collaborations with foreign countries.

- Since 2013, he has been collaborating with the Berkeley-based research organization "Molecular Foundry (TMF)" with the research project: "An Analysis of the Molecular Foundry's Industrial Collaborations: Recommendations for Program Enhancements and Changes". The same project resulted in scientific work being published.
- Since 2013, I have collaborated with Professor Li H.SHU of the University of Toronto on "Creativity in Conceptual Design by Biomimetic approach". The same project resulted in scientific work being published.

Activities in scientific publishing

Reviewer per ASME per le riviste Journal of Fatigue e per Mecatronics
Reviewer per i convegni Internazionali SCI2001 SCI2002 SCI2003 SCI2004 SCI2005 SCI2006 SCI2007 SCI2008 SCI2011 SC2014 (The World Multi-conference on Systemics, Cybernetics and Informatics, Orlando, Florida, USA).
Reviewer per la rivista Mecatronics ASMEE/IEEE.

Reviewer per Intel. Manufacturing Springer Science e per ASME Journals Manufacturing Science and Engineering.
Reviewer e per Mathematical Problems in Engineering, Special Issue: Theory and Applications of Fractional Order Systems, HINDAWI, ISSN: 1024-123X
Reviewer for international magazines Computer-Aided Design (Elsevier), Computers & Industrial Engineering(Elsevier).

Impact of scientific production

Scopus database from January 2020 revelation

- Total number of citations: 395
- h-index: 6