



# Giulio Allesina

## Curriculum Vitae

### Posizione

- 03 Luglio 2021– **Professore Associato**, *Dipartimento di Ingegneria "Enzo Ferrari"*, Università di Modena e Reggio Emilia, Via Vivarelli 10/1, 41125 Modena, Italy.  
Settore scientifico disciplinare: ING-IND/10, Settore concorsuale 09-C2.
- 03 Luglio 2018– **Ricercatore a tempo determinato di tipo B (RUTD-B)**, *Dipartimento di Ingegneria "Enzo Ferrari"*, Università di Modena e Reggio Emilia, Via Vivarelli 10/1, 41125 Modena, Italy.  
Settore scientifico disciplinare: ING-IND/10, Settore concorsuale 09-C2.
- 02/07/2018 – **Ricercatore a Tempo Determinato tipo A (RUTD-A)**, *Dipartimento di Ingegneria "Enzo Ferrari"*, Università di Modena e Reggio Emilia, Via Vivarelli 10/1, 41125 Modena, Italy.  
Settore scientifico disciplinare: ING-IND/10, Settore concorsuale 09-C2.
- 01/02/2013 – **Sono state ricoperte le seguenti posizioni presso il, Dipartimento di Ingegneria "Enzo Ferrari"**, Università di Modena e Reggio Emilia, Via Vivarelli 10/1, 41125 Modena, Italy.  
(1) Assegno di ricerca (ex L. 449/1997, SSD ING-IND/10) da parte del Centro Interdipartimentale per la Ricerca Applicata e i Servizi nel Settore della Meccanica Avanzata e della Motoristica dell'Università di Modena e Reggio Emilia. InterMech - MO.RE. Ricerca dal titolo: "Analisi del processo di gassificazione di biomasse legnose in reattori downdraft stratified. Studio analitico-sperimentale dell'utilizzo di calorimetri Junkers per l'analisi dei gas " dal 01-02-2013 al 31-01-2014. (2) Assegno di ricerca (ex L. 449/1997, SSD ING-IND/10) da parte dell'Università degli Studi di Modena e Reggio Emilia, ricerca dal titolo: "Valutazione d'interventi per l'impiego di FER per soddisfare la richiesta di calore ed energia elettrica dell'Università di Modena e Reggio Emilia" - "Feasibility study of renewable energy CHP applications in the University of Modena and Reggio Emilia (Allegato contratto) dal 16-02-2014 al 15-02-2015 Rinnovato fino al 15-02-2016. (3) Borsa di ricerca del Dipartimento di Ingegneria 'Enzo Ferrari' per lo studio di: "Metodi avanzati per l'efficienza energetica in edilizia" dal 01-03-2016 al 01-09-2016

### Formazione

- 2010–2012 **Ph.D.**, *Dipartimento di Ingegneria "Enzo Ferrari"*, Università di Modena e Reggio Emilia, Via Vivarelli 10/1, 41125 Modena, Italy, Ph.d. school: High Mechanics and Automotive Design and Technology.  
Titolo della tesi: "Experimental and analytical investigation of downdraft stratified gasifiers"
- 2006–2008 **Laurea Magistrale in Ingegneria Meccanica con voto: 110/110 e lode**, *Dipartimento di Ingegneria "Enzo Ferrari"*, Università di Modena e Reggio Emilia.  
Titolo della tesi: "Applicazione della tecnologia termoacustica: costruzione di un refrigeratore a onde stazionarie "
- 2004–2006 **Laurea Triennale in Ingegneria Meccanica con voto: 110/110 e lode**, *Dipartimento di Ingegneria "Enzo Ferrari"*, Università di Modena e Reggio Emilia.  
Titolo della tesi: "Trattamento laser di cromia plasma sprayed: ottimizzazione dei parametri di processo"

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## Didattica a.a. 2022-23

- 1° e 2° semestre Fisica tecnica - [Laurea triennale in ingegneria meccanica] 60 ore su 120; Corso su ciclo Annuale Unico
- 2° semestre Energy management in industry - [Laurea magistrale in sustainable industrial engineering] Nessun partizionamento 60 ore su 120

## Responsabilità di Progetti di ricerca

- 2021 FO.R.M.A. - FONti Rinnovabili nel Mondo Agricolo. Progetto nell'ambito del DM n. 1062 del 10-08-2021 (PON) 2014-2020 Azione IV.6. L'obiettivo del progetto di ricerca è guidare la transizione verso la sostenibilità e la decarbonizzazione di aziende agro-industriali specializzate nell'allevamento di bovini per la produzione di prodotti caseari. Il caso-studio individuato è la società agricola Hombre Srl, azienda-leader tra i produttori di Parmigiano Reggiano.
- 2019-2022 Utilizzo di biomassa da canapa industriale per la produzione di energia e nuovi biochemicals, finanziato dal Programma Operativo Nazionale (PON) del MIUR, Area di Specializzazione Chimica verde. Responsabile dell'OR7 (conversione energetica dei sottoprodotti della filiera della canapa): Dott. Giulio Allesina
- 2018-2020 P.I. del ProgettoFAR interdisciplinare ammesso al finanziamento sulla base di bando competitivo con revisione tra pari: "Sistema di pulizia per gas di sintesi con scrubber acqua-alghe (Algae-based water scrubber for syngas cleaning)" Fondo di Ateneo per la Ricerca 2017
- 2017-2019 P.I. del Progetto della Regione Emilia Romagna PSR 2014-2020 - DGR 2376/2016 "Valorizzazione dei Sottoprodotti della filiera Vitivinicola (Val.So.Vitis)" CUP E47F17000030005

## Incarichi extra-accademici

- 2022- **Consigliere d'Indirizzo**, *Fondazione Cassa Di Risparmio di Carpi*, Carpi (MO).
- 2016-20 **Regional Coach**, *EIT- CLIMATE KIC*, Emilia Romagna.  
"Pioneers Into Practice Programme" on Climate Innovation
- 2015 **Pioneer**, *EIT- CLIMATE KIC*, Emilia Romagna - Netherlands.  
"Pioneers Into Practice Programme" on Climate Innovation, International Placement: Botanical Garden Utrecht University, Netherlands
- 2014 **Teaching**, *DEMOCENTER SIPE srl*, Modena, *Short master*, *Energia dalle biomasse*.
- 2013 **Teaching**, *Change srl*, Modena, *Corso per Energy Auditors*.
- 2013 **Teaching**, *Futura srl*, *San Giovanni in Persiceto*, BO, *Corso norma UNI/TS11300-4*.

## Periodi all'estero

- 2012 CHEMICAL AND BIOLOGICAL ENGINEERING - UNIVERSITY OF BRITISH COLUMBIA
- 2015 BOTANISCHE TUINEN UTRECHT - UNIVERSITEIT UTRECHT

## Awards

- 2018 Finanziamento delle attività base di ricerca, BANDO FFABR CdA 23/02/18 E PROT. 49502 DEL 06/03/18 AD04 ATTIVITA' BASE RICERCA 2017
- 2015 Outstanding achievement of EIT CLIMATE-KIC Pioneers into Practice Programme 2015 on Climate Innovation, EIT
- 2007 Premio di laurea triennale, Fondazione Cassa di Risparmio di Carpi

## Incarichi legati all'editoria

- 2022 Curatela dell'aggiornamento della traduzione italiana dell'opera "Introduction to thermal systems engineering. Thermodynamics, fluid mechanics and heat transfer" di Michael Moran, Howard Shapiro, Bruce Munson e David DeWitt

- 2019 Guest editor "American Institute of Physics" Conference Proceedings, (SCOPUS SOURCE-ID 26916, ISSN:0094-243X-E-ISSN:1551-7616) American Institute of Physics, 1 Physics Ellipse College Park, MD 20740.
- 2019- Topic editor (poi divenuto topic advisory panel) del journal Agronomy, E-ISSN 2073-4395, Published by MDPI

## Scuole estive

- 2011 11th UIT Summer School on Thermal Fluid Dynamics of Turbulent Flows (Director Prof. Alfonso Niro)
- 2010 3rd Summer school fisica tecnica: Energetics for sustainable development, (Director Prof. M. Filippi) 5-9 July 2010
- 2010 10th UIT Summer School on Experimental Techniques in Thermal Fluid Dynamics (Director Prof. Giorgio Sotgia)

## Lista di pubblicazioni indicizzate

As reported from SCOPUS database

## Publications

Massimiliano Parenti, Filippo Ottani, Marco Puglia, Nicolò Morselli, Simone Pedrazzi, and Giulio Allesina. A preliminary study on torrefaction pretreatment of hemp stem for waste-to-energy valorization of woody biomass from flower hemp cultivation. page 1057 – 1060, 2021.

Simone Pedrazzi, Giulio Allesina, Nicolò Morselli, Marco Puglia, Carlo Alberto Rinaldini, Tommaso Savioli, Enrico Mattarelli, Loris Giorgini, and Paolo Tartarini. Modified diesel engine fueled by syngas: Modeling and experimental validation. volume 2016, page 880 – 883, 2016.

Giulia Santunione, Filippo Ottani, Nicolò Morselli, Marco Puglia, Giuseppe Nigro, Matteo Mora, Giulio Allesina, and Simone Pedrazzi. Vine leaves harvesting and utilization for nutraceutical purposes - vine leaf for life project. page 193 – 197, 2023.

Giulio Allesina, Chiara Ferrari, Alberto Muscio, and Simone Pedrazzi. Easy to implement ventilated sunspace for energy retrofit of condominium buildings with balconies. *Renewable Energy*, 141:541 – 548, 2019.

Giulio Allesina, Simone Pedrazzi, Marco Puglia, Nicolò Morselli, Francesco Allegretti, and Paolo Tartarini. Gasification and wine industry: Report on the use vine pruning as fuel in small-scale gasifiers. volume 2018, page 722 – 725, 2018.

S. Pedrazzi, G. Allesina, and A. Muscio. Indirect evaporative cooling by sub-roof forced ventilation to counter extreme heat events. *Energy and Buildings*, 229, 2020.

Saverio Mirandola, Simone Pedrazzi, Giulio Allesina, and Alberto Muscio. Modeling of a hybrid externally fired gas turbine applied to a landfill and green waste management facility. *Energy Conversion and Management*, 244, 2021.

Filippo Ottani, Massimiliano Parenti, Simone Pedrazzi, Giuseppe Moscatelli, and Giulio Allesina. Impacts of gasification biochar and its particle size on the thermal behavior of organic waste co-composting process. *Science of the Total Environment*, 817, 2022.

Alberto Muscio, Michele Cossu, Nicolò Morselli, Marco Puglia, Simone Pedrazzi, and Giulio Allesina. A modified -ntu analytical model for the investigation of counter-flow maisotsenko-based cooling systems. *Applied Thermal Engineering*, 231, 2023.

Simone Pedrazzi, Enrico Morini, Marika Nasti, Simone Pizzileo, and Giulio Allesina. Green hydrogen powered forklifts in industrial transport: Case study of an Italian fruit and vegetable market. *International Journal of Heat and Technology*, 40(1):145 – 150, 2022.

Filippo Ottani, Massimiliano Parenti, Giulia Santunione, Giuseppe Moscatelli, Rocky Kahn, Simone Pedrazzi, and Giulio Allesina. Effects of different gasification biochar grain size on greenhouse gases and ammonia emissions in municipal aerated composting processes. *Journal of Environmental Management*, 331, 2023.

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- Simone Pedrazzi, Giulio Allesina, Tobia Belló, Carlo Alberto Rinaldini, and Paolo Tartarini. Digestate as bio-fuel in domestic furnaces. *Fuel Processing Technology*, 130(C):172 – 178, 2015.
- Giulio Allesina, Filippo Ottani, Massimiliano Parenti, Simone Pedrazzi, and Paolo Tartarini. Implementation of engine exhaust gas recirculation in a fixed bed gasification reactor. page 390 – 395, 2020.
- Marco Puglia, Nicolò Morselli, Filippo Ottani, Simone Pedrazzi, Paolo Tartarini, and Giulio Allesina. A preliminary evaluation of different residual biomass potential for energy conversion in a micro-scale downdraft gasifier. *Sustainable Energy Technologies and Assessments*, 57, 2023.
- S. Pedrazzi, C. Ferrari, G. Allesina, and A. Muscio. Smart use of mechanical ventilation for energy retrofit of residential dwellings. volume 609, 2019.
- Filippo Ottani, Simone Pedrazzi, Roberta Paris, Massimo Montanari, and Giulio Allesina. Hemp residues valorization through a co-composting biochar process: A pilot case study. page 161 – 169, 2022.
- Giulio Allesina, Simone Pedrazzi, Emma La Cava, Michele Orlandi, Miriam Hanuskova, Claudio Fontanesi, and Paolo Tartarini. Energy-based assessment of optimal operating parameters for coupled biochar and syngas production in stratified downdraft gasifiers. 2014.
- Marco Puglia, Simone Pedrazzi, Giulio Allesina, Nicolò Morselli, and Paolo Tartarini. Vine prunings biomass as fuel in wood stoves for thermal power production. *International Journal of Heat and Technology*, 35(Special Issue 1):S96 – S101, 2017.
- Nicolò Morselli, Marco Puglia, Gerardo Capozzolo, Giulio Allesina, Alberto Muscio, Paolo Tartarini, and Simone Pedrazzi. A technical-economic analysis of integrating vine prunings energy conversion systems for chp production in local wineries. *Energy Efficiency*, 17(4), 2024.
- Federica Amenta, Giovanni Bolelli, Simone Pedrazzi, Giulio Allesina, Francesco Santeramo, Alessandro Bertarini, Paolo Sassatelli, and Luca Lusvarghi. Sliding wear behaviour of fibre-reinforced ptfe composites against coated and uncoated steel. *Wear*, 486-487, 2021.
- Nicolò Morselli, Marco Puglia, Simone Pedrazzi, Paolo Tartarini, and Giulio Allesina. Domestic heating: Can hemp-hurd derived pellet be an alternative? *International Journal of Design and Nature and Ecodynamics*, 16(1):1 – 8, 2021.
- Giulio Allesina, Simone Pedrazzi, Filippo Ottani, and Paolo Tartarini. Fouling effect in a shell-and-tube heat exchanger with twisted tape inserts applied to a small-scale biomass gasification power plant. volume 2509, 2023.
- Nicolò Morselli, Simone Boccaletti, Stefano Meglioraldi, Marco Puglia, Simone Pedrazzi, and Giulio Allesina. Biomass-powered thermal weeding in wine farms: An environmental and economic assessment. *Journal of Cleaner Production*, 385, 2023.
- G. Allesina, M. Puglia, N. Morselli, S. Pedrazzi, M. Parenti, F. Ottani, and P. Tartarini. Numerical and experimental evaluation of flue gas recirculation for syngas combustion. volume 1868, 2021.
- Filippo Ottani, Massimiliano Parenti, Giulia Santunione, Simone Pedrazzi, and Giulio Allesina. Co-composted biochar (combi) production and its effects on ocimum basilicum plants growth. page 237 – 241, 2021.
- Domenico Ronga, Federica Caradonia, Mario Parisi, Guido Bezzi, Bruno Parisi, Giulio Allesina, Simone Pedrazzi, and Enrico Francia. Using digestate and biochar as fertilizers to improve processing tomato production sustainability. *Agronomy*, 10(1), 2020.
- Simone Pedrazzi, Giulio Allesina, Nicolò Morselli, Marco Puglia, Luisa Barbieri, Isabella Lancellotti, Enrico Ceotto, Giovanni Alessandro Cappelli, Fabrizio Ginaldi, Loris Giorgini, Alessio Malcevski, Chiara Pederzini, and Paolo Tartarini. The energetic recover of biomass from river maintenance: The rebaf project. volume 2017, page 52 – 57, 2017.
- Aaron Schirra, Annas Bin Ali, Franz Renz, Ralf Sindelar, Simone Pedrazzi, and Giulio Allesina. Preliminary investigation of possible biochar use as carbon source in polyacrylonitrile electrospun fiber production. *Applied Sciences (Switzerland)*, 12(9), 2022.
- A.F. Ruy, M. Puglia, N. Morselli, S. Pedrazzi, and G. Allesina. An explicit finite-differences heat conduction model for slow pyrolysis time calculation. page 577 – 580, 2020.

Fernanda Andreola, Alessandro Borghi, Simone Pedrazzi, Giulio Allesina, Paolo Tartarini, Isabella Lancellotti, and Luisa Barbieri. Spent coffee grounds in the production of lightweight clay ceramic aggregates in view of urban and agricultural sustainable development. *Materials*, 12(21), 2019.

Giulio Allesina, Simone Pedrazzi, Laura Arru, Meltem Altunöz Hatipoğlu, Marco Puglia, and Paolo Tartarini. Uses of a water-algae-photo-bio-scrubber for syngas upgrading and purification. volume 2016, page 944 – 947, 2016.

Carlo Alberto Rinaldini, Giulio Allesina, Simone Pedrazzi, Enrico Mattarelli, and Paolo Tartarini. Modeling and optimization of industrial internal combustion engines running on diesel/syngas blends. *Energy Conversion and Management*, 182:89 – 94, 2019.

Mattia Martire, Ahmet Fatih Kaya, Nicolò Morselli, Marco Puglia, Giulio Allesina, and Simone Pedrazzi. Analysis and optimization of a hybrid system for the production and use of green hydrogen as fuel for a commercial boiler. *International Journal of Hydrogen Energy*, 56:769 – 779, 2024.

Filippo Ottani, Simone Pedrazzi, Marco Puglia, Nicolò Morselli, Veronica Venturelli, and Giulio Allesina. Preliminary study of a gravimetric approach to the "solid phase absorption" methodology for tars sampling in biomass gasification processes. page 690 – 695, 2023.

Simone Pedrazzi, Giulio Allesina, Marco Puglia, Nicolò Morselli, and Paolo Tartarini. Which thermochemical conversion process for agricultural waste? physical and chemical analyses to guide the choice. *Procedia Environmental Science, Engineering and Management*, 2(4):277 – 283, 2015.

Filippo Ottani, Luca Lusvarghi, Giovanni Bolelli, Federica Amenta, Simone Pedrazzi, Nicolò Morselli, Marco Puglia, and Giulio Allesina. Using infrared imaging to measure the friction coefficient during pin-on-disk sliding wear tests. *Measurement: Journal of the International Measurement Confederation*, 225, 2024.

Simone Pedrazzi, Giulia Santunione, Andrea Minarelli, and Giulio Allesina. Energy and biochar co-production from municipal green waste gasification: A model applied to a landfill in the north of Italy. *Energy Conversion and Management*, 187:274 – 282, 2019.

Giulio Allesina, Simone Pedrazzi, Marco Puglia, Nicolò Morselli, Jim Mason, and Paolo Tartarini. Multi-phase fluid dynamic of syngas flow across a throttle body in a gasifier-engine system. volume 2017, page 738 – 742, 2017.

Giulio Allesina, Simone Pedrazzi, Fabrizio Ginaldi, Giovanni A. Cappelli, Marco Puglia, Nicolò Morselli, and Paolo Tartarini. Energy production and carbon sequestration in wet areas of emilia romagna region, the role of arundo donax. *Advances in Modelling and Analysis A*, 55(3):108 – 113, 2018.

Simone Pedrazzi, Giulio Allesina, Lorenzo Sebastianelli, Marco Puglia, Nicolò Morselli, and Paolo Tartarini. Chemically enhanced char for syngas filtering purposes. volume 2018, page 694 – 698, 2018.

Federica Amenta, Giovanni Bolelli, Francesco D'Errico, Filippo Ottani, Simone Pedrazzi, Giulio Allesina, Alessandro Bertarini, Pietro Puddu, and Luca Lusvarghi. Tribological behaviour of ptfе composites: Interplay between reinforcement type and counterface material. *Wear*, 510-511, 2022.

Nicolò Patelli, Giulia Santunione, Filippo Ottani, Massimiliano Parenti, Simone Pedrazzi, and Giulio Allesina. Biochar water retention capacity in greenhouse cultivation of cannabis sativa L. page 111 – 115, 2022.

Simone Pedrazzi, Giulio Allesina, and Alberto Muscio. Are nano-composite coatings the key for photovoltaic panel self-maintenance: An experimental evaluation. *Energies*, 11(12), 2018.

Simone Pedrazzi, Filippo Ottani, Massimiliano Parenti, Davide Parmeggiani, Aurora De Luca, Martina Grasso Silvestro, Anna Spartà, Francesco Tavani, Pietro Fontana, Niccolò Martini, Mattia Martire, Manuel Bertoni, Luisa Cannas, Martina Benacci, Leonardo Beltrami, Alessandro Francini, Margherita Zanichelli, Gaetano Rossi, Emiliano N. Guberman Villafane, Islam H. El Nabbi, and Giulio Allesina. A student-driven multilevel approach for increasing energy sustainability of remote areas in the emilia romagna apennines. volume 1106, 2022.

Marco Puglia, Massimiliano Parenti, Paolo Tartarini, Filippo Ottani, Giulio Allesina, Simone Pedrazzi, and Jacopo Tioli. Emission analysis of syngas combustion and flammability limit assessment. page 511 – 514, 2021.

- Marco Puglia, Filippo Ottani, Nicolò Morselli, Simone Pedrazzi, Giulio Allesina, Alberto Muscio, Andrea Cossarizza, and Paolo Tartarini. Airborne pathogens diffusion: A comparison between tracer gas and pigmented aerosols for indoor environment analysis. *Heliyon*, 10(4), 2024.
- Giulio Allesina, Simone Pedrazzi, Meltem Altunoz, Nicolò Morselli, Marco Puglia, Francesco Allegretti, Chiara Leonardi, Loris Giorgini, Laura Arru, and Paolo Tartarini. Preliminary analyses on an algae-based water scrubber for syngas cleansing. *Environmental Engineering and Management Journal*, 16(8):1761 – 1768, 2017.
- Giulio Allesina, Simone Pedrazzi, Francesco Allegretti, and Paolo Tartarini. Spent coffee grounds as heat source for coffee roasting plants: Experimental validation and case study. *Applied Thermal Engineering*, 126:730 – 736, 2017.
- Jim Mason, Bear Kauffman, David Hertz, Laura Doss, Tartan Smith, and Giulio Allesina. Biomass-based systems for atmospheric water generation, a 1.75 mideaaccountofthex – prizeaward.page793°796, 2019.
- Giulio Allesina, Pietro Cingi, Gabriele Gessani, and Diego Angeli. Exploratory modeling and experimental investigation of a vibrating-stripe wind energy converter. *International Journal of Heat and Technology*, 36(3):1031 – 1036, 2018.
- Nicolò Morselli, Francesco Barbolini, Filippo Ottani, Massimiliano Parenti, Simone Pedrazzi, Giulio Allesina, and Paolo Tartarini. Modelling of tar and water vapors condensation in a commercial micro-scale gasification power plant. page 480 – 483, 2021.
- Simone Pedrazzi, Giulio Allesina, and Paolo Tartarini. Effects of upgrading systems on energy conversion efficiency of a gasifier - fuel cell - gas turbine power plant. *Energy Conversion and Management*, 126:686 – 696, 2016.
- Giulio Allesina. An experimental analysis of a stand-alone standing wave thermoacoustic refrigerator. *International Journal of Energy and Environmental Engineering*, 5(1):1 – 8, 2014.
- Brendan Quinlan, Bear Kaufmann, Giulio Allesina, Simone Pedrazzi, Julia Hasty, Marco Puglia, Nicolò Morselli, and Paolo Tartarini. The use of on-line colorimetry for tar content evaluation in gasification systems. *International Journal of Heat and Technology*, 35(Special Issue 1):S145 – S151, 2017.
- Paride Coppelli, Simone Pedrazzi, Marco Puglia, Nicolò Morselli, Giulio Allesina, Fernanda Andreola, Isabella Lancellotti, and Luisa Barbieri. Pyrolysis process for the recycling of cork dust waste from the processing of cork agglomerate caps in lightweight materials. *Applied Sciences (Switzerland)*, 12(11), 2022.
- Marco Puglia, Giulio Allesina, Simone Pedrazzi, and Filippo Raguzzoni. Energy cost and parmesan cheese. an overview in the different energy fluxes needed to produce a parmesan wheel. volume 1106, 2022.
- Meltem Altunoz, Giulio Allesina, Simone Pedrazzi, and Emilio Guidetti. Integration of biological waste conversion and wastewater treatment plants by microalgae cultivation. *Process Biochemistry*, 91:158 – 164, 2020.
- S. Pedrazzi, G. Allesina, M. Puglia, N. Morselli, F. Ottani, M. Parenti, and P. Tartarini. Experimental heat transfer evaluation in a porous media. volume 1868, 2021.
- Domenico Ronga, Enrico Francia, Giulio Allesina, Simone Pedrazzi, Massimo Zaccardelli, Catello Pane, Aldo Tava, and Cristina Bignami. Valorization of vineyard by-products to obtain composted digestate and biochar suitable for nursery grapevine (vitis vinifera l.) production. *Agronomy*, 9(8), 2019.
- Marco Puglia, Filippo Ottani, Donato Cantisani, Nicolò Morselli, Filippo Raguzzoni, Simone Pedrazzi, Giulio Allesina, Alberto Muscio, and Paolo Tartarini. Energy generation potential through cattle manure solid phase gasification. *International Journal of Sustainable Development and Planning*, 18(9):2629 – 2634, 2023.
- Filippo Ottani, Simone Pedrazzi, Arianna Pignagnoli, Giuseppe Moscatelli, and Giulio Allesina. Utilization of gasification biochar for the reduction of greenhouse gases and ammonia emissions in swine slurry storages. page 696 – 705, 2023.
- Giulio Allesina, Simone Pedrazzi, Luca Guidetti, and Paolo Tartarini. Modeling of coupling gasification and anaerobic digestion processes for maize bioenergy conversion. *Biomass and Bioenergy*, 81:444 – 451, 2015.
- Carlo Alberto Rinaldini, Giulio Allesina, Simone Pedrazzi, Enrico Mattarelli, Tommaso Savioli, Nicolò Morselli, Marco Puglia, and Paolo Tartarini. Experimental investigation on a common rail diesel engine partially fuelled by syngas. *Energy Conversion and Management*, 138:526 – 537, 2017.
- Giulio Allesina, Simone Pedrazzi, Federico Sgarbi, Elisa Pompeo, Camilla Roberti, Vincenzo Cristiano, and Paolo Tartarini. Approaching sustainable development through energy management, the case of fongo tongo, cameroon. *International Journal of Energy and Environmental Engineering*, 6(2):121 – 127, 2015.

Vittorio Vezzali, Fernanda Andreola, Luisa Barbieri, Isabella Lancellotti, Paolo Pozzi, Giulio Allesina, Simone Pedrazzi, and Paolo Tartarini. Gasification of biomass from river maintenance and char application in building materials production. *Environmental Engineering and Management Journal*, 17(10):2485 – 2496, 2018.

Nicolò Morselli, Marco Puglia, Christian Balboni, Filippo Ottani, Massimiliano Parenti, Giulia Santunione, Simone Pedrazzi, Giulio Allesina, and Paolo Tartarini. A low impact alternative to common weed control systems: the case of syngas-powered flame weeding. page 233 – 236, 2021.

Mattia Capotorto, Lorenzo Dallai, Matteo Maffezzoli, Lorenzo Romoli, Giulio Allesina, and Simone Pedrazzi. Forest maintenance residues as fuel to provide energy for a middle school in tuscany. page 222 – 230, 2021.

Giulio Allesina, Simone Pedrazzi, Steven Rogak, John R. Grace, and Paolo Tartarini. Use of light scattering for online detection of tar and particulate matter from biomass gasification. volume 2191, 2019.

Giulio Allesina, Simone Pedrazzi, Carlo Alberto Rinaldini, Tommaso Savioli, Nicolò Morselli, Enrico Mattarelli, and Paolo Tartarini. Experimental-analytical evaluation of sustainable syngasbiodiesel chp systems based on oleaginous crop rotation. 2015.

Simone Pedrazzi, Filippo Ottani, Massimiliano Parenti, and Giulio Allesina. Evaluation of methanol production from hemp biowaste gasification. page 880 – 884, 2022.

Filippo Ottani, Massimiliano Parenti, Giuseppe Moscatelli, Arianna Pignagnoli, Laura Valli, Nicolo Morselli, Simone Pedrazzi, and Giulio Allesina. Preliminary study on gasification biochar for the reduction of swine slurry nitrogen related greenhouse gases emissions. page 383 – 389, 2022.

Marco Puglia, Nicolò Morselli, Simone Pedrazzi, Paolo Tartarini, Giulio Allesina, and Alberto Muscio. Specific and cumulative exhaust gas emissions in micro-scale generators fueled by syngas from biomass gasification. *Sustainability (Switzerland)*, 13(6), 2021.

G. Allesina, E. Mussatti, F. Ferrari, and A. Muscio. A calibration methodology for building dynamic models based on data collected through survey and billings. *Energy and Buildings*, 158:406 – 416, 2018.

Marco Giuliani, Sara Martini, Pietro Cosimo Damiano Tortora, Stephanie Vega Parra, Simone Pedrazzi, and Giulio Allesina. Increased chestnut processing sustainability using byproducts gasification as energy aid. page 515 – 521, 2021.

Matilde Fondriest, Giovani MacChitelli, Simone Stancari, Davide Montanari, Cosimo Fiorini, Giovanni Anceschi, Simone Pedrazzi, and Giulio Allesina. Predictive algorithms for energy performance evaluation of banking institutions. volume 2191, 2019.

D. Ronga, F. Caradonia, L. Setti, D. Hagassou, C.V. Giarretta Azevedo, J. Milc, S. Pedrazzi, G. Allesina, L. Arru, and E. Francia. Effects of innovative biofertilizers on yield of processing tomato cultivated in organic cropping systems in northern italy. *Acta Horticulturae*, 1233:129 – 135, 2019.

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