Giulio Allesina

Curriculum Vitae

Posizione ricoperta

Gennaio 2017– **Ricercatore universitario a tempo determinato, lettera a. RUTD-B**, *Dipartimento di Ingegneria "Enzo Ferrari"*, Università di Modena e Reggio Emilia, Via Vivarelli 10/1, 41125 Modena, Italy.

Percorso di studi

2010–2012 **Ph.D.**, *Dipartimento di Ingegneria "Enzo Ferrari"*, Ph.d. school: High Mechanics and Automotive Design and Technology, Università di Modena e Reggio Emilia, Italian Ministry of University.
Thesis title: "Experimental and analytical investigation of downdraft stratified gasifiers"

2006–2008 **Laurea magistrale in ingegneria meccanica. Voto: 110/110 magna cum laude**, *Department of Engineering "Enzo Ferrari"*, University of Modena and Reggio Emilia.
Thesis title: "Applicazione della tecnologia termoacustica: costruzione di un refrigeratore a onde stazionarie (Application of thermoacoustic: design of a standing-wave refrigerator")

2004–2006 **Laurea triennale in ingegneria meccanica. Voto: 110/110 magna cum laude**, *Department of Engineering "Enzo Ferrari"*, University of Modena and Reggio Emilia.
Thesis title: "Trattamento laser di cromia plasma sprayed: ottimizzazione dei parametri di processo, (Laser treatment of plasma-sprayed chromia: optimization of process parameters)")

Tesi di dottorato

Title *Experimental and analytical investigation of downdraft stratified gasifiers*

Supervisors Professor Paolo Tartarini & Associate Professor Alberto Muscio

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Description Research on the utilization of biomasses for energy purposes is playing a key role for the assessment and the development of new solutions for the world energy scenario. In fact, the demand and price of primary energy are constantly increasing, along with the development of new national and international strategies providing incentives and development policies for renewable technologies. This work aims at investigating the biomass gasification in downdraft stratified reactors used for energy production. First, different solutions for the production of electrical energy starting from woodsy biomasses are discussed, pointing out the major parameters involved in the pursuit of an optimal solution. Then, the technologies and principles of gasification are explained focusing on downdraft stratified reactors. Different reactors are analyzed, ranging from lab-scale to full-scale power-plant stratified gasifiers: the main thermo-chemical parameters have been acquired adopting different methods and instruments depending on the reactor scale and ultimate aim. The reactors are modeled using different approaches: from energy and mass balances to kinetic chemical modeling. During the experimental campaigns, particular attention has been paid to the development of a calorimetric approach for tar content evaluation and gas composition calculation. The scaling of the equation set used in the stratified reactors modeling highlights a distinctive feature of the modeling approach. The diameter of the gasifier seems to have no influence on the reactor performance, despite experimental data acquired during this work had provided different results. For this reason, the influence of the diameter on the behavior of the gasifiers is investigated and its correlation with thermal and rheological parameters is discussed. Results show the capability of these reactors to be used under several operating conditions, even where other gasifiers have running difficulties. Advantages and disadvantages of this technology are discussed, some new solutions for downdraft reactors are proposed, with an emphasis on micro-scale application.

Esperienza lavorativa

Settore accademico

Luglio 2018 - **Ricercatore a tempo determinato**, Tipologia B. Settore ING-IND/10, Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia.

Gennaio 2017 - Luglio 2018 **Ricercatore a tempo determinato**, Tipologia A. Settore ING-IND/10, Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia.

Feb–Ago 2016 **Borsa di ricerca, research grant, 6 mesi:**, Metodi avanzati per l'efficienza energetica in edilizia, Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia.
Tutor: Prof. Alberto Muscio

2014–2015 **Assegno di ricerca, research grant, 24 mesi:**, 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", Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia.
Supervisor: Prof. Paolo Tartarini

2013 **Assegno di ricerca research grant, 12 months:**, 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 " - "Analysis of wood biomass gasification processes in downdraft stratified reactors, analytical-experimental study of Junkers calorimeter uses for syngas analysis", Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia.
Supervisor: Prof. Paolo Tartarini

Didattica

a.a. 2018-2019 **Docente per il corso: Fisica Tecnica**, *Università di Modena e Reggio Emilia*, *Dipartimento di ingegneria "Enzo Ferrari"*.
12 CFU, corso obbligatorio laurea triennale di ing. Meccanica

a.a. 2018-2019 **Docente per il corso: Fisica Tecnica**, *Università di Modena e Reggio Emilia*, *Dipartimento di ingegneria "Enzo Ferrari"*.
12 CFU, corso obbligatorio laurea triennale di ing. del Veicolo

a.a. 2017-2018; 2018-2019 **Docente per il corso: Sostenibilità ambientale e fonti rinnovabili**, *Università di Modena e Reggio Emilia*, *Dipartimento di ingegneria "Enzo Ferrari"*.
6 CFU, corso a scelta per le lauree magistrali di ing. Meccanica, Civile e per la sostenibilità ambientale

2010–2016 **Cultore della materia in termodinamica e trasmissione del calore, fisica tecnica ambientale, tecniche di gestione delle energie ed impianti termotecnici**, *Università di Modena e Reggio Emilia*, *Dipartimento di ingegneria "Enzo Ferrari"*.

2014 **Didattica**, *DEMOCENTER SIPE srl, Modena*, *Short master, Energia dalle biomasse*.
10 ore

2013 **Didattica**, *Change srl, Modena*, *Corso per Energy Auditors*.
4 ore

2013 **Didattica**, *CNA-ECIPAR soc. consortile a r.l., Modena*, *Progetto formativo 2012-1485/RER*.
4 ore

2013 **Didattica**, *Futura srl, San Giovanni in Persiceto, BO*, *Corso norma UNI/TS11300-4*.
8 ore

2011 **Didattica**, *Futura srl, San Giovanni in Persiceto, BO*, *Corso per Energy Auditors*.
4 ore

Attività di tutoraggio

Dipartimento di ingegneria "Enzo Ferrari", corso di dottorato "Ingegneria industriale e del territorio", *Ph.D. Student: Marco Puglia*, Tutor dottorato.

Incarichi extra accademici

2016 **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

Titoli, premi e riconoscimenti

2015 Outstanding achievement of EIT CLIMATE-KIC Pioneers into Practice Programme 2015 on Climate Innovation, EIT

2009, Sessione-II *Sostenuto con esito POSITIVO le prove dell'esame di Stato per l'abilitazione all'esercizio della professione di Ingegnere Industriale*

2007 Premio di laurea triennale, Fondazione Cassa di Risparmio di Carpi

2017 Referente Tecnico Scientifico nel Piano Formativo dal titolo "AMBIENTE e SOSTENIBILITÀ per il sistema produttivo reggiano

Brevetti

Concesso il 31/08/2017 Brevetto italiano n. 0001429682 "Reattore per impianti di gassificazione"

Concesso il 31/08/2017 Brevetto italiano n. 0001429683 "Impianto di gassificazione"

Domanda del 19/07/2017 Domanda di brevetto italiano n. 102017000082284 "Apparato e metodo per depurare un prodotto gassoso derivante dalla gassificazione di biomassa"

Progetti coordinati

2017 Progetto regionale PSR. Valorizzazione dei sottoprodotti della filiera vitivinicola. Acronimo:VALSOVITIS. Regione Emilia Romagna, CUP E47F17000030005. **PI: Dott. Giulio Allesina**

2018 FAR(Fondo di Ateneo per la Ricerca) 2018. Sistema di pulizia per gas di sintesi con scrubber acqua-alghe (Algae-based water scrubber for syngas cleaning) **PI: Dott. Giulio Allesina**

Summer schools

2011 11^o Scuola estiva di fisica tecnica UIT, titolo: Thermal Fluid Dynamics of Turbulent Flows (Direttore Prof. Alfonso Niro)

2010 3^o Scuola estiva di fisica tecnica: Energetics for sustainable development, (Director Prof. M. Filippi) 5-9 luglio 2010

2010 10^o Scuola estiva di fisica tecnica UIT, titolo: Experimental Techniques in Thermal Fluid Dynamics (Direttore Prof. Giorgio Sotgia)

Indicatori bibliometrici

Scopus

indice di Hirsch 9

Citazioni 139

Google Scholar

indice di Hirsch 9

Citazioni 181

Articoli su rivista internazionale

References

1. Allesina, G. (2014). An experimental analysis of a stand-alone standing wave thermoacoustic refrigerator. *International Journal of Energy and Environmental Engineering*, *5*(1), 1-8. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84957571378&doi=10.1007%2fs40095-014-0074-8&partnerID=40&md5=f9c201f8c60a7ff7aafed2c8c6e0066e (cited By 1) doi: 10.1007/s40095-014-0074-8
2. Allesina, G., Mussatti, E., Ferrari, F., & Muscio, A. (2018). A calibration methodology for building dynamic models based on data collected through survey and billings. *Energy and Buildings*, *158*, 406 - 416. Retrieved from http://www.sciencedirect.com/science/article/pii/S037877881732621X doi: https://doi.org/10.1016/j.enbuild.2017.09.089
3. Allesina, G., Pedrazzi, S., Allegretti, F., & Tartarini, P. (2017). Spent coffee grounds as heat source for coffee roasting plants: Experimental validation and case study. *Applied Thermal Engineering*, *126*, 730-736. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85026767592&doi=10.1016%2fj.applthermaleng.2017.07.202&partnerID=40&md5=2770025bf0b7239eb95cfdc69ee9e01c (cited By 0) doi: 10.1016/j.applthermaleng.2017.07.202
4. Allesina, G., Pedrazzi, S., Altunoz, M., Morselli, N., Puglia, M., Allegretti, F., ... Tartarini, P. (2017). Preliminary analyses on an algae-based water scrubber for syngas cleansing. *Environmental Engineering and Management Journal*, *16*(8), 1761-1768. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85034648761&partnerID=40&md5=82eb4c6db1c8db4c1de714ae3e25e49b (cited By 0)
5. Allesina, G., Pedrazzi, S., Guidetti, L., & Tartarini, P. (2015). Modeling of coupling gasification and anaerobic digestion processes for maize bioenergy conversion. *Biomass and Bioenergy*, *81*, 444-451. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84938833120&doi=10.1016%2fj.biombioe.2015.07.010&partnerID=40&md5=ba5c9ef569d5eca3fb61e0e2e004698a (cited By 6) doi: 10.1016/j.biombioe.2015.07.010
6. Allesina, G., Pedrazzi, S., Sgarbi, F., Pompeo, E., Roberti, C., Cristiano, V., & Tartarini, P. (2015). Approaching sustainable development through energy management,

the case of fongo tongo, cameroon. *International Journal of Energy and Environmental Engineering*, *6*(2), 121-127. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84928779928&doi=10.1007%2fs40095-014-0156-7&partnerID=40&md5=4e7d0a09b72a69f84d0f430ef53e4afb (cited By 9) doi: 10.1007/s40095-014-0156-7

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8. Allesina, G., Pedrazzi, S., Tebianian, S., & Tartarini, P. (2014). Biodiesel and electrical power production through vegetable oil extraction and byproducts gasification: Modeling of the system. *Bioresource Technology*, *170*, 278-285. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84906272146&doi=10.1016%2fj.biortech.2014.08.012&partnerID=40&md5=76a731b04e18ef8d9c6edf44c370e980 (cited By 10) doi: 10.1016/j.biortech.2014.08.012
9. Altunoz, M., Pirrotta, O., Forti, L., Allesina, G., Pedrazzi, S., Obali, O., ... Arru, L. (2017). Combined effects of led lights and chicken manure on neochloris oleoabundans growth. *Bioresource Technology*, *244*, 1261-1268. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85018761135&doi=10.1016%2fj.biortech.2017.04.094&partnerID=40&md5=4465ba502083c97587c173b32fda0810 (cited By 2) doi: 10.1016/j.biortech.2017.04.094
10. Amadei, C., Allesina, G., Tartarini, P., & Yuting, W. (2013). Simulation of gemasolar-based solar tower plants for the chinese energy market: Influence of plant downsizing and location change. *Renewable Energy*, *55*, 366-373. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84873249515&doi=10.1016%2fj.renene.2012.12.022&partnerID=40&md5=e4438a7d0439af9e82c651f852a83a0f (cited By 16) doi: 10.1016/j.renene.2012.12.022
11. Malaguti, V., Lodi, C., Sassatelli, M., Pedrazzi, S., Allesina, G., & Tartarini, P. (2017). Dynamic behavior investigation of a micro biomass chp system for residential use. *International Journal of Heat and Technology*, *35*(Special Issue 1), S172-S178. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85030258285&doi=10.18280%2fijht.35Sp0124&partnerID=40&md5=ef2b64ec7e28e6c13e04a1923887ebf9 (cited By 0) doi: 10.18280/ijht.35Sp0124
12. Pedrazzi, S., Allesina, G., Belló, T., Rinaldini, C., & Tartarini, P. (2015). Digestate as bio-fuel in domestic furnaces. *Fuel Processing Technology*, *130*(C), 172-178. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84926153503&doi=10.1016%2fj.fuproc.2014.10.006&partnerID=40&md5=bf6908bce5f29296851ef021485c368e (cited By 11) doi: 10.1016/j.fuproc.2014.10.006
13. Pedrazzi, S., Allesina, G., Puglia, M., Morselli, N., & Tartarini, P. (2015). 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. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85028714046&partnerID=40&md5=6a9caf2785fbcb9211497c0f18ce3bb0 (cited By 0)
14. Pedrazzi, S., Allesina, G., & Tartarini, P. (2016). Effects of upgrading systems on energy

conversion efficiency of a gasifier - fuel cell - gas turbine power plant. *Energy Conversion and Management*, *126*, 686-696. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-84983650365&doi=10.1016%2fj.enconman.2016.08.048&partnerID=40&md5=8ba7aa6ffe97ffb67afcd5b234c33a23 (cited By 2) doi: 10.1016/j.enconman.2016.08.048

15. Puglia, M., Pedrazzi, S., Allesina, G., Morselli, N., & Tartarini, P. (2017). Vine prunings biomass as fuel in wood stoves for thermal power production. *International Journal of Heat and Technology*, *35*(Special Issue 1), S96-S101. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85030263569&doi=10.18280%2fijht.35Sp0113&partnerID=40&md5=c1901b90df92961eb750d0ab740fbc58 (cited By 0) doi: 10.18280/ijht.35Sp0113
16. Quinlan, B., Kaufmann, B., Allesina, G., Pedrazzi, S., Hasty, J., Puglia, M., ... Tartarini, P. (2017). 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. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85030251821&doi=10.18280%2fijht.35Sp0120&partnerID=40&md5=3ef414a7727f231b43c0870fe3e0f564 (cited By 1) doi: 10.18280/ijht.35Sp0120
17. Quinlan, B., Kaufmann, B., Allesina, G., Pedrazzi, S., & Whipple, S. (2017). Application of oltt in gasification power systems. *International Journal of Heat and Technology*, *35*(4), 773-778. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85039785877&doi=10.18280%2fijht.350411&partnerID=40&md5=fbca46d4446d69d0abe7a5c7b65749b8 (cited By 0) doi: 10.18280/ijht.350411
18. Rinaldini, C., Allesina, G., Pedrazzi, S., Mattarelli, E., Savioli, T., Morselli, N., ... Tartarini, P. (2017). Experimental investigation on a common rail diesel engine partially fuelled by syngas. *Energy Conversion and Management*, *138*, 526-537. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85013277488&doi=10.1016%2fj.enconman.2017.02.034&partnerID=40&md5=734d7227083eb35b27366bff6a6c6224 (cited By 10) doi: 10.1016/j.enconman.2017.02.034
19. Santangelo, P., Allesina, G., Bolelli, G., Lusvarghi, L., Matikainen, V., & Vuoristo, P. (2017). Infrared thermography as a non-destructive testing solution for thermal spray metal coatings. *Journal of Thermal Spray Technology*, *26*(8), 1982-1993. Retrieved from https://www.scopus.com/inward/record.uri?eid=2-s2.0-85029487592&doi=10.1007%2fs11666-017-0642-6&partnerID=40&md5=2f4c01c767089e7ca65d84af38e15e83 (cited By 0) doi: 10.1007/s11666-017-0642-6

Articoli su rivista italiana

Allesina G, Pedrazzi S, Cattini S, Tartarini P. Sperimentazione di metodi non invasivi per il monitoraggio di un impianto di gassificazione a biomasse legnose. La Termotecnica, marzo 2012.

Articoli e memorie di conferenze internazionali

Il nome in grassetto corrisponde al co-autore che ha presentato la memoria. Le presentazioni orali sono state indicate.

Memorie presentate da Giulio Allesina:

1. **Allesina, G.**, Pedrazzi, S., Puglia, M., Morselli, N., Mason, J., Tartarini, P. Multi-Phase Fluid Dynamic of Syngas Flow Across a Throttle Body in a Gasifier-Engine System (2017) European

Biomass Conference and Exhibition Proceedings, 2017 (25thEUBCE), pp. 738-742. DOI: 10.5071/25thEUBCE2017-2CV.3.8

2. **Allesina, G**., Pedrazzi, S., Rinaldini, C.A., Savioli, T., Morselli, N., Mattarelli, E., Tartarini, P. Experimental-analytical evaluation of sustainable syngas-biodiesel CHP systems based on oleaginous crop rotation (2015) ICOPE 2015 - International Conference on Power Engineering. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84962734056& partnerID=40& md5=95ccf4d26c72e67cdc91dffef098de5eDOI: 10.1299/jsmeicope.2015.12._$ICOPE-15-$_1 **Presentazione orale**

3. **Allesina, G**., Pedrazzi, S., Puglia, M., Tartarini, P. A psychrometric approach to fixed bed biomass gasifier design (2015) European Biomass Conference and Exhibition Proceedings, 2015 (23thEUBCE). DOI: 10.5071/23rdEUBCE2015-1BO.5.4

4. **Allesina, G.**, Pedrazzi, S., Tebianian, S., Muscio, A., Tartarini, P. Energy and economical comparison of possible cultures for a total-integrated on-field biodiesel production (2014) Journal of Physics: Conference Series, 501 (1), art. no. 012034. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84901639744& doi=10.1088% 2f1742-6596% 2f501% 2f1% 2f012034& partnerID=40& md5=46e6154a8f424ec9ef6d6046416016c5 DOI: 10.1088/1742-6596/501/1/012034

5. **Allesina, G.,** Pedrazzi, S., La Cava, E., Orlandi, M., Hanuskova, M., Fontanesi, C., Tartarini, P. Energy-based assessment of optimal operating parameters for coupled biochar and syngas production in stratified downdraft gasifiers (2014) Proceedings of the 15th International Heat Transfer Conference, IHTC 2014. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84964556366& partnerID=40& md5=92c55dd1d180fda784cd9f41cca92df2 DOI: 10.1615/IHTC15.ees.008280 **Presentazione orale, chariman**

6. **Allesina, G.,** Muscio, A., Tebianian, S., Pedrazzi, S., Tartarini, P. Biodiesel production through synergy of on-field PVO extraction and protein cake gasification (2013) III International Conference of Microgeneration and Related Technologies, Naples, Italy. ISBN: 9788890848902 **Presentazione orale**

7. **Allesina, G.,** Pedrazzi, S., Puglia, M., Fontanesi, C.. Upgrading or substituting the gasification process for electrical energy production: an energy-based comparison (2012) XXX UIT Conference, Bologna, Italy. ISBN: 9788874885091 **Presentazione orale**

8. **Allesina, G.,** Pedrazzi, S., Tartarini, P. Influence of biomass loading frequency on performances of a stratified gasifier (2012) European Biomass Conference and Exhibition Proceedings, 2012 (20thEUBCE). DOI: 10.5071/20thEUBCE2012-2BV.2.5

9. **Allesina, G.,** Pedrazzi, S., Tartarini, P. A parametric analysis of a gasifier – IC engine system (2011) XXIX UIT Conference, Torino, Italy. ISBN: 9788846730725 **Presentazione orale**

10. **Allesina, G.,**, Tartarini P. A stand-alone standig-wave thermoacustic refrigerator. XXVIII UIT Conference, Brescia, Italy, 2010. **Presentazione orale**

Memorie in cui Giulio Allesina è co-autore:

11. **Pedrazzi, S.,** Allesina, G., Morselli, N., Puglia, M., Barbieri, L., Lancellotti, L., Ceotto, E., Giorgini, L., Malcevschi, A., Pederzini, C., Tartarini, P. The energetic recover of biomass from river maintenance: the REBAF project (2017) European Biomass Conference and Exhibition Proceedings, 2017 (25thEUBCE), pp. 52-57. DOI: 10.5071/25thEUBCE2017-1AO.7.3

12. Allesina, G., **Pedrazzi, S**., Arru, L., Altunöz Hatipoglu, M., Puglia, M., Tartarini, P. Uses of a water-algae-photo-bio-scrubber for syngas upgrading and purification (2016) European Biomass Conference and

Exhibition Proceedings, 2016 (24thEUBCE), pp. 944-947.
www.scopus.com/inward/record.uri?eid=2-s2.0-85019657706& partnerID=40& md5=746d07edb2f92eb6eacecfb0731c573d
DOI: 10.5071/24thEUBCE2016-2CV.3.62

13. Pedrazzi, S., Allesina, G., **Morselli, N.,** Puglia, M., Rinaldini, C.A., Savioli, T., Mattarelli, E., Giorgini, L., Tartarini, P. Modified diesel engine fueled by syngas: Modeling and experimental validation (2016) European Biomass Conference and Exhibition Proceedings, 2016 (24thEUBCE), pp. 880-883. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85019758029& partnerID=40& md5=6242af7269aa5a34b256b53730c01499 DOI: 10.5071/24thEUBCE2016-2CV.3.25

14. Pedrazzi, S., Allesina, G., **Puglia, M**., Guidetti, L., Tartarini, P. Increased maize power production through an integrated biogas-gasification-SOFC power system (2015) ICOPE 2015 - International Conference on Power Engineering. www.scopus.com/inward/record.uri?eid=2-s2.0-84962643635& partnerID=40& md5=efccc34a3047c42f8707ce397005b687 DOI: 10.1299/jsmeicope.2015.12._$ICOPE-15-_2$

15. Allesina, G., **Pedrazzi, S**., Lovato, F., Allegretti, F., Tartarini, P., Siligardi, C. Discussion of possible coffee grounds disposal chains for energy production (2015) European Biomass Conference and Exhibition Proceedings, 2015 (23thEUBCE). DOI: 10.5071/23rdEUBCE2015-1BO.5.4

16. Allesina, G., Pedrazzi, S., Rinaldini, C.A., Di Paola, G., **Morselli, N**., Savioli, T., Vidoni, A., Mattarelli, E., Tartarini, P. Effect of Syngas-CNG co-combustion on automotive engines for micro CHP applications (2015) ASME-ATI-UIT Conference, 2015 Napoli, Italy, 17-20 May. ISBN: 8898273177

17. **Pedrazzi, S.,** Allesina, G., Pompeo, E., Luddeni, G., Rizzoli, M., Tartarini, P. Modeling of fixed bed gasification with engine exhaust gas recirculation: the uroboro model (2015) ASME-ATI-UIT Conference, 2015 Napoli, Italy, 17-20 May. ISBN: 8898273177

18. Allesina, G., **Pedrazzi, S.,** Montermini, L., Giorgini, L., Bortolani, G., Tartarini, P. Porous filtering media comparison through wet and dry sampling of fixed bed gasification products (2014) Journal of Physics: Conference Series, 547 (1), art. no. 012003.
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effectiveness in a gasification power plant (2011) International Journal of Heat and Technology, 29 (2), pp. 151-156. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84856393779& partnerID=40& md5=01f2a0cdfac33858db25c4ace6138f02 DOI: 10.18280/ijht.2902120
Presentazione orale

24. **Grinzi G**, Guidetti L, Allesina G, Libbra A, Martini P, Muscio A. Increase of net power generation of biogas plants by reduction of heat loss. 20th European Biomass Conference and Exhibition, Milano, Italy, 2012

25. **Pedrazzi, S.,** Allesina, G., Tartarini, P. A kinetic model for a stratified downdraft gasifier (2012) European Biomass Conference and Exhibition Proceedings, 2012 (20thEUBCE). DOI: 10.5071/20thEUBCE2012-2BV.2.13

Articoli e memorie di conferenze nazionali

Il nome in grassetto corrisponde al co-autore che ha presentato la memoria. Le presentazioni orali sono state indicate.

Memorie presentate da Giulio Allesina:

1. **Allesina G**, Pedrazzi S, Sgarbi F, Pompeo E, Roberti C, Vincenzo C, Tartarini P. Approaching sustainable development through energy management, the case of Fongo Tongo, Cameroon, VIII Aige Conference , Reggio Emila, Italy, 2013. **Presentazione orale**
2. **Allesina G**, Pedrazzi S, Tartarini P. Analisi dell'influenza del tempo di caricamento sulle prestazioni energetiche di un gassificatore downdraft stratified, VI AIGE Conference, Ferrara, Italy, 2012. **Presentazione orale**

Memorie in cui Giulio Allesina è co-autore:

3. **Pedrazzi S**, Allesina G, Bellò T, Tartarini P. Experimental assessment of biogas digestate pellets behaviour for commercial air furnace fueling. VIII Aige Conference , Reggio Emila, Italy, 2013.
4. **Pedrazzi S**, Allesina G, Muscio A, Tartarini P. Modeling and simulation of a DG-SOFC-MGT hybrid system. VII Aige Conference, Cosenza, Italy, 2013.
5. **Pedrazzi S**, Allesina G, Tartarini P. Modellizzazione cinetica di un gassificatore controcorrente stratificato, VI AIGE Conference, Ferrara, Italy, 2012.
6. **Pedrazzi S**, Allesina G, Tartarini P. Modello matematico di un sistema gassificatore-motore a combusione interna, confronto con dati sperimentali. V AIGE Conference, Modena, Italy, 2011.

Competenze in campo informatico

Basic	MATLAB
Intermediate	PYTHON, FORTRAN, LaTeX, OpenOffice, OSX

Competenze linguistiche

Italian	**Mothertongue**
English	**Intermediate, Conversationally fluent**

Periodi di lavoro all'estero

2012	CHEMICAL AND BIOLOGICAL ENGINEERING - UNIVERSITY OF BRITISH COLUMBIA, DURATA 3 MESI
2015	BOTANISCHE TUINEN UTRECHT - UNIVERSITEIT UTRECHT, DURATA 1 MESE