

LUCA CIOCCOLANTI

EDUCATION

POLYTECHNIC UNIVERSITY OF MARCHE Ancona, ITALY
PhD in Energetics March 2014
Thesis: *Design of an onboard auxiliary power and desalination unit powered by a Stirling engine*
Advisor: Prof. Flavio Caresana

POLYTECHNIC UNIVERSITY OF MARCHE Ancona, ITALY
Master Degree in Thermo-Mechanical Engineering March 2009
Thesis: *Analysis of energy and environmental scenarios for 2030 for the Municipality of Pesaro*
Advisor: Prof. Carlo Maria Bartolini
Graduated with Honors (110/110 cum laude)

MARCHE POLYTECHNIC UNIVERSITY Ancona, ITALY
Bachelor Degree in Mechanical Engineering October 2006
Thesis: *Inlet air cooling for micro gas turbines: study of possible technical solutions*
Advisor: Prof. Carlo Maria Bartolini
Graduated with Honors (110/110 cum laude)

AWARDS AND HONORS

Best Presentation Award, at the 18th International Stirling Engine Conference at Tainan (Taiwan) - 19-21 September 2018, for the paper “Improvement of the Control Strategy of a Pulse Tube Refrigerator for the Cell Cryopreservation” (authors: Cipri K., Cioccolanti L., Binni A., Pirro M., Bevilacqua D., Rispoli F.)

TEACHING EXPERIENCE

UNIVERSITY ECAMPUS Novedrate (CO), ITALY
Associate Professor in Energy Systems, Department of Theoretical and Applied Sciences: University eCampus, 2020–present
Lectures, tutorials, tutoring and exams in the Bachelor and Master Degree in Industrial Engineering of the following modules:

- Fluid Machinery and Energy Systems in the Bachelor Degree of Industrial Engineering (BA, 9 ECTS)
- Energy Systems Design (BA, 9 ECTS)

- Machinery Design (MA, 9 ECTS)

Lectures in the PhD course in Applied Sciences to Wellness Sustainability of the module Design of the Research (3 ECTS)

Assistant Professor in Energy Systems, Department of Theoretical and Applied Sciences: University eCampus, 2015–2020

Lectures, tutorials, tutoring and exams in the Bachelor and Master Degree in Industrial Engineering of the following modules:

- Fluid Machinery and Energy Systems in the Bachelor Degree of Industrial Engineering (BA, 9 ECTS) in the period 2017-2020
- Energy Systems Design (BA, 9 ECTS)
- Machinery Design (MA, 9 ECTS) in the period 2018-2020
- Sustainable Energy Planning (MA, 9 ECTS) in the period 2015-2018
- Machine-Environment Interactions in the period 2015-2016

Lecturer in Energy Systems, Department of Theoretical and Applied Sciences: University eCampus, 2014–2015

Lectures, tutorial, tutoring and exams in the Bachelor Degree in Industrial Engineering of the following modules:

- Energy Systems Management (BA, 9 ECTS) in the period 2017-2020
- Energy Systems Design (BA, 9 ECTS)
- Machine-Environment Interactions in the period 2015-2016

FREE UNIVERSITY OF BOZEN

Bozen (BZ), ITALY

Teaching Assistant in Fluid Mechanics: Free University of Bozen, 2011–2012

Lectures, tutorial, tutoring and exams for B.E. in Industrial, Civil, and Computer Engineering (12 ECTS); emphasis on differential and integral calculus, sequences and series, and elements of ordinary PDEs.

Repeated courses and overlapping terms have been condensed; only representative teaching activities are listed.

TEACHING INTERESTS

Energy Systems and Fluid Machinery; Renewable Energies; Combined Cooling Heating and Power; Waste Heat Recovery; Renewable Energy Technologies for the Built Environment; Energy Sustainability.

LEADERSHIP AND SERVICE

Scientific Director of the Research Center on Energy, Environment and Landscape (CREAT), University eCampus, 2019-present; <https://creat.uniecampus.it/en/about-us/>

Chair of the Horizontal Working Group on Social Sciences and Humanities at the European Technology Information Platform on Renewable Heating and Cooling, 2023-present; <https://www.rhc-platform.org/about-us/structure/board/>.

Member of the Committee of the PhD Course in Applied Sciences to Wellness and Sustainability, 2020-present.

Editorial Board Member of Standards Journal, 2021-present; <https://www.mdpi.com/journal/standards>.

Section Board Member of Sustainability Journal, 2021-2025; <https://www.mdpi.com/journal/sustainability>.

Technical Secretariat of the Stirling International Association cooperating to the executive organisation of the 15th-20th editions of the International Stirling Engine Conference (ISEC), 2012-2024, <http://www.stirlinginternational.org/>.

Guest Editor of the following Special Issues: *Advances in Renewable Energy Technologies for Distributed Generation* in Sustainability Journal (https://www.mdpi.com/journal/sustainability/special_issues/Advances_RET_DG) and *Distributed Energy Systems for Combined Heat and Power Production* in Energies Journal (https://www.mdpi.com/journal/energies/special_issues/9Z51LB6M4Z).

Reviewer for high-IF journals in the Energy field (Applied Energy, Applied Thermal Engineering, Energy, Energy Conversion and Management, Renewable and Sustainable Energy Reviews etc) and conferences (ICAE, ORC, SolarPACES etc)

PROFESSIONAL EXPERIENCE

UNIVERSITY ECAMPUS

Novedrate (CO), ITALY

Research and Didactics projects of own responsibility

September 2016-present

Interreg NEXT MED Programme, First call, RSO2.1 Promoting energy efficiency and reducing greenhouse gas emissions: “*Green Mediterranean through Solar Driven Decarbonization of Industries*” (role in the project: project coordinator: total grant 2’446’857€ and partner coordinator at University eCampus EU+MISE grant: 418’513€). Expected starting date July 2025;

PRIN 2022, Italian Research Project of National Relevance: “*Organic Rankine Cycle as REversible Energy Recovery systems for industrial applications*” partially funded by Italian Ministry of University and Research (role in the project: project coordinator: total grant 184’195€ and partner coordinator at University eCampus MUR grant: 66’698€). November 2023-present;

EU Call Erasmus + Programme; KA2: Capacity Building in the field of higher education: “*Fostering Renewable energy technologies and energy Efficiency knowledge towards near Zero Energy Buildings of engineers and professionals in Western Balkan Countries (reZEB)*” partially funded by EU (role in the project: partner coordinator at University eCampus EU grant: 108’230€). November 2023-present;

EU Call Erasmus + Programme; KA2: Cooperation for innovation and the exchange of good practices Capacity Building in the field of higher education: “*Enhancement of engineering skills of students of all levels for application of evidence based sustainable renewable energy solutions in the built environment*” partially funded by EU (role in the project: project coordinator: total grant 1’000’000€ and partner coordinator at University eCampus EU grant: 119’865€). November 2019-November 2023;

EU Call Horizon2020, Research and Innovation Action EE-04-2016-2017: New heating and cooling solutions using low grade sources of thermal energy: “*Innovative Micro Solar Heat and Power System for Domestic and Small Business Residential Buildings*” completely funded by EU (role in the project: partner coordinator at University eCampus; budget of University eCampus: 337’250€ - EU grant: 337’250€). September 2016-April 2022;

Scientific co-responsibility for the consultancy contract between SOGEPU spa and University eCampus aimed at evaluating the current energy-environmental impact of the composting facility plant and at improving its performance through integration of multiple energy systems (role in the project: co-responsible at University eCampus; total budget of the consultancy: 340’000€).

Total budget managed at University eCampus > 1M€

Other academic responsibilities

at present

Member of the Quality Assurance Committee of the Bachelor and Master Degree Courses in Industrial Engineering

Member of the Interdepartmental Research Committee, University eCampus

Member of the Knowledge Center on Organic Rankine Cycle Technology (<https://www.korc.org>)

Reference person for the evaluation of the correspondence of the study plans of the students within the Erasmus + mobility for the Industrial Engineering Degree Course.

POLYTECHNIC UNIVERSITY OF MARCHE

Ancona, ITALY

External Cooperation

December 2016-August 2020

Temporary worker at the Department of Industrial Engineering and Mathematical Sciences of Polytechnic University of Marche under the EU Erasmus + project “The Crux” from November 2018 to August 2020

Temporary worker at the Department of Industrial Engineering and Mathematical Sciences of Polytechnic University of Marche under the EU Erasmus + project “Asiaxis” from December 2016 to October 2018

S.TRA.TE.G.I.E. srl

Ancona, ITALY

Stakeholder of Polytechnic University of Marche Spin-off “S.TRA.TE.G.I.E. srl, 2011-present.

Project manager at S.TRA.TE.G.I.E. srl, in the period January 2013- April 2015, with respect to the following two R&I Regional and National funded projects:

- “Development and industrialization of an innovative system for electrical energy and fresh water production onboard pleasure boats, with reference to the hybrid propulsion also” (WEB), funded by Marche Region

- “POWERING CALDAIE” (for the patent no. AN2009A000023 development) funded by Italian Call Brevetti + Action 2 – Incentives for Patent Exploitation

Engineer at S.TRA.TE.G.I.E. srl, in the period June 2009-December 2012, with the following R&I projects:

- Innovative high-efficiency natural gas compression system for transport applications (funded by Marche Region);

- Use of m-CHP Stirling engines for off-grid applications (funded by Marche Region);

- Development of a peripheral channel turbine for organic Rankine cycle applications.

TECHNICAL SKILLS

Mathematical modeling of energy systems; experimental analysis of energy systems (basic knowledge); scientific writing (papers and proposals); project management. **Languages:** Italian (native), English, Spanish (understanding).

PUBLICATIONS

Journal papers

- Biancini G., Cioccolanti L., Chen H., Konstantinos K., Dahlquist E., Moglie M., Integration of multiple energy systems for the valorisation of the residual municipal solid waste: a modelling study. ENERGY, ISSN: 03605442, doi: 10.1016/j.energy.2025.134813.
- Lombardi G., Cioccolanti L., Del Zotto L., Tomassetti S., Campana P.E The role of electric vehicles in hybrid solar-based small energy communities. ENERGY CONVERSION AND MANAGEMENT, vol. 269, ISSN: 0196-8904, doi: 10.1016/j.enconman.2024.119074.

- Moglie M., Biancini G., *Cioccolanti L.*, Environmental and economic analysis of an olive mill wastewater treatment system integrated with microalgae production. THE INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT, ISSN: 0948-3349, doi: 10.1007/s11367-024-02296-9.
- Biancini G., *Cioccolanti L.*, Moradi R., Moglie M., Comparative study of steam, organic Rankine cycle and supercritical CO₂ power plants integrated with residual municipal solid waste gasification for district heating and cooling. APPLIED THERMAL ENGINEERING, vol. 241, ISSN: 1359-4311, doi: 10.1016/j.applthermaleng.2024.122437.
- Moradi R., *Cioccolanti L.*, Modelling approaches of micro and small-scale organic Rankine cycle systems: A critical review. APPLIED THERMAL ENGINEERING, vol. 236, ISSN: 1359-4311, doi: 10.1016/j.applthermaleng.2023.121505.
- Moglie M., Biancini G., Norici A., Mugnini A., *Cioccolanti L.*, Valorization of olive mill wastewater for *Arthrospira platensis* production. CELL REPORTS SUSTAINABILITY, ISSN: 2949-7906, doi: 10.1016/j.crsus.2024.100017.
- Naseri A., Moradi R., *Cioccolanti L.*, Subiantoro A., Impact of the Lubricant on a Modified Revolving Vane Expander (M-RVE) in an Organic Rankine Cycle System. ENERGIES, vol. 16, ISSN: 1996-1073, doi: 10.3390/en16145340.
- Moradi R., *Cioccolanti L.*, Del Zotto L., Renzi M., Comparative sensitivity analysis of micro-scale gas turbine and supercritical CO₂ systems with bottoming organic Rankine cycles fed by the biomass gasification for decentralized trigeneration. ENERGY, vol. 266, ISSN: 0360-5442, doi: 10.1016/j.energy.2022.126491.
- La Picirelli de Souza L., Eduardo Silva Lora E., Rajabi Hamedani S., Escobar Palacio J.C., *Cioccolanti L.*, Villarini M., Comodi G., Colantoni A., Life cycle assessment of prospective scenarios maximizing renewable resources in the Brazilian electricity matrix. RENEWABLE ENERGY FOCUS, vol. 44, p. 1-18, ISSN: 1755-0084, doi: 10.1016/j.ref.2022.11.002.
- Biancini G., Marchetti B., *Cioccolanti L.*, Moglie M., Comprehensive Life Cycle Assessment Analysis of an Italian Composting Facility concerning Environmental Footprint Minimization and Renewable Energy Integration. SUSTAINABILITY, vol. 14, ISSN: 2071-1050, doi: 10.3390/su142214961.
- Spedaletti S., Rossi M., Comodi G., *Cioccolanti L.*, Salvi D., Lorenzetti M., Improvement of the energy efficiency in water systems through water losses reduction using the district metered area (DMA) approach. SUSTAINABLE CITIES AND SOCIETY, vol. 77, ISSN: 2210-6707, doi: 10.1016/j.scs.2021.103525.
- *Cioccolanti L.*, Tascioni R., Moradi R., Jurasz J., Investigating the hybridisation of microscale concentrated solar trigeneration systems and wind turbines for residential applications using a dynamic model. ENERGY CONVERSION AND MANAGEMENT, vol. 269, ISSN: 0196-8904, doi: 10.1016/j.enconman.2022.116159.

- Tascioni R., *Cioccolanti L.*, Pili P., Habib E., Preliminary estimation of the receiver tube wall temperature and the performance of CSP plants in off design-conditions by means of a simplified dynamic model. *ENERGY CONVERSION AND MANAGEMENT*, vol. 257, ISSN: 0196-8904, doi: 10.1016/j.enconman.2022.115379.
- *Cioccolanti L.*, Tascioni R., Moradi R., Pirro M., Bartoli C.M., Mahkamov K., Mahkamova I., Cabeza L. F., De Gracia A., Pili P., Mintsas A. C., Mullen D., Development of of a smart control unit for small-scale concentrated solar combined heat and power systems for residential applications, *E-PRIME - ADVANCES IN ELECTRICAL ENGINEERING, ELECTRONICS AND ENERGY*, vol. 2, doi: 10.1016/j.prime.2022.100040.
- Moradi R., Habib E., Villarini M., *Cioccolanti L.*, Assumption-free modeling of a micro-scale organic Rankine cycle system based on a mass-sensitive method. *ENERGY CONVERSION AND MANAGEMENT*, vol. 245, ISSN: 0196-8904, doi: 10.1016/j.enconman.2021.114554.
- Moradi R., Habib E., Bocci E., *Cioccolanti L.*, Component-Oriented Modeling of a Micro-Scale Organic Rankine Cycle System for Waste Heat Recovery Applications. *APPLIED SCIENCES*, vol. 11, ISSN: 2076-3417, doi: 10.3390/app11051984.
- *Cioccolanti L.*, De Grandis S., Tascioni R., Pirro M., Freddi A., Development of a fuzzy logic controller for small-scale solar organic rankine cycle cogeneration plants. *APPLIED SCIENCES*, vol. 11, ISSN: 2076-3417, doi: 10.3390/app11125491.
- *Cioccolanti L.*, Renzi M., Comodi G., Rossi M., District heating potential in the case of low-grade waste heat recovery from energy intensive industries. *APPLIED THERMAL ENGINEERING*, vol. 191, ISSN: 1359-4311, doi: 10.1016/j.applthermaleng.2021.116851.
- Moradi R., Villarini M., *Cioccolanti L.*, Experimental modeling of a lubricated, open drive scroll expander for micro-scale organic Rankine cycle systems. *APPLIED THERMAL ENGINEERING*, vol. 190, ISSN: 1359-4311, doi: 10.1016/j.applthermaleng.2021.116784.
- Moradi R., Villarini M., Habib E., Bocci E., Colantoni A., *Cioccolanti L.*, Impact of the expander lubricant oil on the performance of the plate heat exchangers and the scroll expander in a micro-scale organic Rankine cycle system. *APPLIED THERMAL ENGINEERING*, vol. 189, ISSN: 1359-4311, doi: 10.1016/j.applthermaleng.2021.116714.
- Campana P. E., *Cioccolanti L.*, Francois B., Jurasz J., Zhang Y., Varini M., Stridh B., Yan J., Li-ion batteries for peak shaving, price arbitrage, and photovoltaic self-consumption in commercial buildings: A Monte Carlo Analysis. *ENERGY CONVERSION AND MANAGEMENT*, vol. 234, ISSN: 0196-8904, doi: 10.1016/j.enconman.2021.113889.
- *Cioccolanti L.*, Tascioni R., Pirro M., Arteconi A., Development of a hardware-in-the-loop simulator for small-scale concentrated solar combined heat and power system.

ENERGY CONVERSION AND MANAGEMENT. X, vol. 8, ISSN: 2590-1745, doi: 10.1016/j.ecmx.2020.100056.

- Cipri K., *Cioccolanti L.*, Naldi R., Experimental analysis of a pulse tube based new prototype for cells cryopreservation, INTERNATIONAL JOURNAL OF ENERGY RESEARCH, ISSN: 0363-907X, doi: 10.1002/er.5367.
- Tascioni R., Arteconi A., Del Zotto L., *Cioccolanti L.*, Fuzzy Logic Energy Management Strategy of a Multiple Latent Heat Thermal Storage in a Small-Scale Concentrated Solar Power Plant. ENERGIES, vol. 13, ISSN: 1996-1073, doi: 10.3390/en13112733.
- Moradi R., Marcantonio V., *Cioccolanti L.*, Bocci, E., Integrating biomass gasification with a steam-injected micro gas turbine and an Organic Rankine Cycle unit for combined heat and power production, ENERGY CONVERSION AND MANAGEMENT – February 2020, Art. number: 112464. DOI: 10.1016/j.enconman.2019.112464.
- Moradi R., Habib E., Bocci E., *Cioccolanti L.*, Investigation on the use of a novel regenerative flow turbine in a micro-scale Organic Rankine Cycle unit. ENERGY, vol. 210, ISSN: 0360-5442, doi: 10.1016/j.energy.2020.118519.
- Tascioni R., *Cioccolanti L.*, Del Zotto L., Habib E., Numerical investigation of pipelines modeling in small-scale concentrated solar combined heat and power plants. ENERGIES, vol. 13, ISSN: 1996-1073, doi: 10.3390/en13020429.
- Campana C., *Cioccolanti L.*, Renzi M., Caresana F., Experimental analysis of a small-scale scroll expander for low-temperature waste heat recovery in Organic Rankine Cycle, ENERGY – November 2019, Vol. (187), Art. number: 115929, DOI: 10.1016/j.energy.2019.115929.
- *Cioccolanti L.*, Rajabi Hamedani S., Villarini M., Environmental and energy assessment of a small-scale solar Organic Rankine Cycle trigeneration system based on Compound Parabolic Collectors, ENERGY CONVERSION AND MANAGEMENT – October 2019, Vol. (198), Art. number: 111829. DOI: 10.1016/j.enconman.2019.111829.
- Arteconi A., Del Zotto L., Tascioni R., *Cioccolanti L.*, Modelling system integration of a micro solar Organic Rankine Cycle plant into a residential building, APPLIED ENERGY – October 2019, Vol (251), Art. number: 113408. DOI: 10.1016/j.apenergy.2019.113408.
- Moradi R., *Cioccolanti L.*, Bocci, E., Villarini M., Renzi M., Numerical Investigation on the Performance of a Regenerative Flow Turbine for Small-Scale Organic Rankine Cycle Systems, JOURNAL OF ENGINEERING FOR GAS TURBINES AND POWER, September 2019, Vol. (141), Art. number: 091014. DOI: 10.1115/1.4044062.
- Villarini M., Tascioni R., Arteconi A., *Cioccolanti L.*, Influence of the incident radiation on the energy performance of two small-scale solar Organic Rankine Cycle

- trigenerative systems: A simulation analysis, *APPLIED ENERGY* – May 2019, Vol (242): 1176-1188. DOI: 10.1016/j.apenergy.2019.03.066.
- Maldonado J., Manca R., Mintsa A., Bartolini C.M., Gimbernat T., Botargues T., Halimic E., *Cioccolanti L.*, Multi-Country Analysis on Energy Savings in Buildings by Means of a Micro-Solar Organic Rankine Cycle System: A Simulation Study, *ENVIRONMENTS*, November 2018, 5, 119. DOI:10.3390/environments5110119.
 - *Cioccolanti L.*, Renzi M., Coupling a small-scale concentrated solar power plant with a single effect thermal desalination system: Analysis of the performance, *APPLIED THERMAL ENGINEERING* – October 2018, Vol. (143): 1046-1056. DOI: 10.1016/j.applthermaleng.2018.08.033.
 - *Cioccolanti L.*, Tascioni R., Arteconi A., Mathematical modelling of operation modes and performance evaluation of an innovative small-scale concentrated solar organic Rankine cycle plant, *APPLIED ENERGY* – July 2018, Vol (221): 464-476. DOI: 10.1016/j.apenergy.2018.03.189.
 - *Cioccolanti L.*, Tascioni R., Bocci E., Villarini M., Parametric analysis of a solar Organic Rankine Cycle trigeneration system for residential applications, *ENERGY CONVERSION AND MANAGEMENT* – May 2018, Vol. (163): 407-419. DOI: 10.1016/j.enconman.2018.02.043.
 - Renzi M., *Cioccolanti L.*, Egidi L., Comodi G., Experimental investigation and numerical model validation of a 2.5 kWt Concentrated Solar Thermal Plant, *APPLIED THERMAL ENGINEERING* – March 2018, Vol. (133): 622-632. DOI: 10.1016/j.applthermaleng.2018.01.095.
 - Renzi M., *Cioccolanti L.*, Barazza G., Egidi L., Comodi, Design and experimental test of refractive secondary optics on the electrical performance of a 3-junction cell used in CPV systems, *APPLIED ENERGY* – January 2017, Vol. (185): 233-243. DOI: 10.1016/j.apenergy.2016.10.064.
 - *Cioccolanti L.*, Savoretti A., Renzi M., Caresana F., Comodi G., Comparison of different operation modes of a single effect thermal desalination plant using waste heat from m-CHP units, *APPLIED THERMAL ENGINEERING* – May 2016, Vol (100): 646-657. DOI: doi.org/10.1016/j.applthermaleng.2016.02.082.
 - Comodi G., Renzi M., *Cioccolanti L.*, Caresana F., Pelagalli L., Hybrid system with micro gas turbine and PV plant: guidelines for sizing and management strategies, *ENERGY* – September 2015, Vol. (89): 226-235. DOI: 10.1016/j.energy.2015.07.072.
 - *Cioccolanti L.*, Savoretti A., Renzi M., Caresana F., Comodi G., Design and test of a single effect thermal desalination plant using waste heat from m- CHP units, *APPLIED THERMAL ENGINEERING* – May 2015, Vol (82): 18-29. DOI: 10.1016/j.applthermaleng.2015.02.047.
 - Comodi G., *Cioccolanti L.*, Renzi M., Modelling the household sector at the municipal scale: micro-CHP, renewables and energy efficiency, *ENERGY* – April 2014, Vol. (68): 92-103. DOI: 10.1016/j.energy.2014.02.055.

- Comodi G., *Cioccolanti L.*, Renzi M., Vagni S., Pelagalli L., Caresana F., A survey of cogeneration in the Italian pulp and paper sector, *APPLIED THERMAL ENGINEERING* – February 2013, Vol. (54): 336-344. DOI: 10.1016/j.applthermaleng.2013.01.038.
- Comodi G., *Cioccolanti L.*, Polonara F., Brandoni C., Local authorities in the context of energy and climate policy, *ENERGY POLICY* – December 2012, Vol. (51): 737-748. DOI: 10.1016/j.enpol.2012.09.019.
- Comodi G., *Cioccolanti L.*, Gargiulo M., Municipal scale scenario: Analysis of an Italian seaside town with MarkAL-TIMES, *ENERGY POLICY* – February 2012, Vol. (41): 303-315. DOI: 10.1016/j.enpol.2011.10.049.
- Comodi G., *Cioccolanti L.*, Palpacelli S., Tazioli A., Nanni T., Distributed generation and water production: a study for a Region in central Italy, *DESALINATION AND WATER TREATMENT* – July 2011, Vol. (31): 218-225. DOI:10.5004/dwt.2011.2375.

Book chapters

- *Cioccolanti L.*, Jurasz J., Tascioni R., Complementary concentrated solar power-wind hybrid system with thermal storage and ORC. In: *Complementarity of Variable Renewable Energy Sources*. p. 377-412, Elsevier, ISBN: 9780323855273, doi: 10.1016/B978-0-323-85527-3.00005-4.
- Acuña G.J., Berger M., Campana P.E., Campos R.A., Canales F.A., Cantor D., Ciapala B., *Cioccolanti L.*, De Felice M., Rosa C., Đurin B., Gorjian S., Guezgouz M., Hoicka C.E., Jadwiszczak P., Javed M.S., Kapica J., Kasiulis E., Lawford R., Kuriqi A., Ma T., McPherson M., Mesa O., Ming B., Ochoa A., Peña Gallardo R., Radu D., Santos-Alamillos F.J., Yan J., Pozo-Vázquez D., Beluco A., Kies A., Liu P., Guo Y., Jurasz J., Teaching about complementarity – proposal of classes for university students – including exercises. In: *Complementarity of Variable Renewable Energy Sources*. p. 687-713, Elsevier, ISBN: 9780323855273, doi: 10.1016/B978-0-323-85527-3.00012-1.

For the full list of indexed publications, please see

<https://www.scopus.com/authid/detail.uri?authorId=49862838700>

PRESENTATIONS

Invited speaker

- *Cioccolanti L.*, Social Sciences and Humanities: Fostering Social Acceptance and Awareness – Webinar on Let’s make the south of Europe heat the best! – 10th December 2024.
- *Cioccolanti L.*, Small-scale Organic Rankine Cycle for low temperature applications - International Conference 'Advances in Renewable and Clean energy Technologies' (ARCT), Itajuba (online speech due to covid 19 restrictions);
- *Cioccolanti L.*, Small-scale Concentrated Solar Power Systems: lessons learned from demo prototypes and perspectives’ - Summer School on Renewable Energy, Cairo - Egypt, 6th -11th July 2019.

Conference presentations

- *Cioccolanti L.*, Lombardi G., Mugnini A., Del Zotto L., Mathematical modelling of hybrid micro-scale concentrated solar and biomass-fuelled trigeneration system for residential applications, 8th International Conference on Contemporary Problems of Thermal Engineering – 23rd-26th September 2024.
- *Cioccolanti L.*, Moglie M., Hernandez J.J., Catalan A.P., Anastasi N.R., Keci H., Petro J., Krasniqi F., Xhexhi K., Biba D., Berisha A., Spahiu M., Djokic J., Marjanovic J., Analysis of labour market needs for engineers and professionals with enhanced knowledge in renewable energy solutions and energy efficiency in the built environment in some Balkan Countries, 8th International Conference on Contemporary Problems of Thermal Engineering – 23rd-26th September 2024.
- *Cioccolanti L.*, Mancini E., Moradi R., Farotti E., Sasso M., Structural analysis of a regenerative flow turbine for low-temperature organic Rankine cycle systems, 6th International Seminar on ORC Power Systems – 10th-13th October 2021.
- *Cioccolanti L.*, Moglie M., Mahkamov K., Paksoy H., Chen C., Lin J., Li C., Guan Y., Zhou W., Abdullah E., Mohd Radzi M.A., Shafie S., Alimuddin Z., Yusof Idroas M., Yew Heng T., Azmier Ahmad M., Azman Miskam M., Kraitong K., Wongsapai W., Chaichana C., Damronsak D., Analysis of labour market needs for engineers with enhanced knowledge in sustainable renewable energy solutions in the built environment in some Asian countries, Applied Energy Symposium (ICAE) 100RES 2020, Pisa. E3S WEB OF CONFERENCES, vol. 238, ISSN: 2267-1242, doi: 10.1051/e3sconf/202123807004.
- Tascioni R., Pirro M., Arteconi A., Del Zotto L., Bartolini C. M., Mahkamov K., Mahkamova I., Cabeza L. F., De Gracia A., Pili P., Mintsas A. C., Gimbernat T., Botargues T., Mullen D., *Cioccolanti L.*, Prediction of the time constant of small-scale concentrated solar CHP plants. Applied Energy Symposium (ICAE) 100RES 2020, Pisa. E3S WEB OF CONFERENCES, vol. 238, EDP Sciences, ISSN: 2267-1242, Pisa, 2020, doi: 10.1051/e3sconf/202123801001.

- *Cioccolanti L.*, Tascioni R., Pirro M., Bartolini C.M., Arteconi A., Development of a smart simulator for small-scale solar CHP system in the built environment, Proceedings of the 11th International Conference on Applied Energy 2019, ICAE2019 – August 2019.
- *Cioccolanti L.*, Santolini M., Bartolini C.M., Use of Stirling cryocoolers in small-scale LNG plants: opportunities and critical issues, Proceedings of the 18th International Stirling Engine Conference, 18th ISEC – September 2018.
- Cipri K., *Cioccolanti L.*, Binni A., Pirro M., Bevilacqua D., Rispoli F., Improvement of the control strategy of a Pulse Tube refrigerator for the cells cryopreservation, Proceedings of the 18th International Stirling Engine Conference, 18th ISEC – September 2018.
- Arteconi A., Del Zotto L., Tascioni R., Mahkamov K., Underwood C., Cabeza L.F, De Gracia A., Pili P., Mints A.C., Bartolini C.M., Gimbernat T., Botargues T., Halimic E., *Cioccolanti L.*, Simulation analysis of an innovative micro-solar 2kWe Organic Rankine Cycle plant coupled with a multi-apartments building for domestic hot water supply, The 10th International Conference on Applied Energy, ICAE2018, Energy Procedia – February 2019, Vol. (158): 2225-2230. DOI: 10.1016/j.egypro.2019.01.168.
- Comodi G., *Cioccolanti L.*, Mahkamov K., Penlington R., Lapuerta M., Hernandez J.J., Silva Lora E.E., Venturini O., Melian Cobas V.R., Escobar Palacio J.C., Mendonça Freires F.G., Andrade Torres E., Mendes da Silva J.A., Kafarov V., Chacon Velasco J.L., Solano Martinez J.E., Lizarazo Salcedo G.Y., Serna Suárez I.D., Lesme Jaen R., Imbert Gonzalez J., Fernandez M., Garcia Faure L.J., Oliva-Merencio D., Pereda Reyes I., Morales Salas J., Cisneros Ramirez C., Analysis of labour market needs for engineers with enhanced knowledge in renewable energy in some European and Latin-American Countries, The 10th International Conference on Applied Energy, ICAE2018, Energy Procedia – February 2019, Vol. (158): 1135-1140. DOI: 10.1016/j.egypro.2019.01.279. *Cioccolanti L.*, Villarini M., Tascioni R., Bocci E., Performance assessment of a solar trigeneration system for residential applications by means of a modelling study, Energy Procedia – 72nd Conference of the Italian Thermal Machines Engineering Association, ATI 2017, Vol. (126): 445-452, 2017. DOI: 10.1016/j.egypro.2017.08.211.
- *Cioccolanti L.*, Tascioni R., Arteconi A., Simulation analysis of an innovative micro-solar 2kWe Organic Rankine Cycle plant for residential applications, Energy Procedia – 9th International Conference on Applied Energy, ICAE 2017, Energy Procedia – December 2017, Vol. (142): 1629-1634. DOI: 10.1016/j.egypro.2017.12.541
- *Cioccolanti L.*, Fonti A., Comodi G., Dynamic modeling of thermal and electrical microgrid of multiapartment in different European locations, Proceedings of the 17th International Stirling Engine Conference, 17th ISEC – August 2016, ISSN: 2409-0387.

- Bartolini C.M., *Cioccolanti L.*, Comodi G., Distributed Stirling Engines for Pipeline Corrosion Protection, Proceedings of the 15th International Stirling Engine Conference, 15th ISEC – September 2012, ISSN: 2409-0387.
- Bartolini C.M., *Cioccolanti L.*, Comodi G., Caresana F., Onboard Hybrid Propulsion and Sewage Treatment System Powered by a Stirling Engine Unit, Proceedings of the 15th International Stirling Engine Conference, 15th ISEC – September 2012, ISSN: 2409-0387.

POSTERS

- *Cioccolanti L.*, Lombardi G., Del Zotto L., P.E. Campana, Simulation of a Hybrid Concentrated Solar and Biomass-Fuelled Trigeneration System for Residential Applications, solarPACES Conference – 30th Edition, Rome, 8-11 October 2024.
- Bartolini C.M., *Cioccolanti L.*, Comodi G., Vagni S., Onboard auxiliary power and desalination unit with a free piston Stirling engine, Proceedings of the 14th International Stirling Engine Conference, 14th ISEC – November 2009, ISSN: 2409-0387.

REFERENCES

For more details about my technical and soft skills, please feel free to contact international colleagues I worked with. Some of them are:

Full Professor Khamid Mahkamov, Northumbria University (UK)

Full Professor Electo Eduardo Lora Silva, University of Itajuba (Brasil)

Full Professor Halime Paksoy, Cukurova University (Turkey)

Full Professor Juan Jose Hernandez Adrover, University of Castilla-La Mancha (Spain)

Associate Professor Ermira Abdullah Binti, University of Putra Malaysia (Malaysia)