

Ferrara - Italy  
November 11<sup>th</sup>, 2021  
**ONLINE WORKSHOP**  
**FREE-OF-CHARGE**  
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“A Resilient and Sustainable World: Contributions of Cleaner Production, Circular Economy, and Eco-Innovation”

## INTERNATIONAL WORKSHOP ON ADVANCES IN CLEANER PRODUCTION

### Abstracts

| First Author              | Title   |
|---------------------------|---|
| URBAN, R. C.              | A method for feasibility evaluation of food waste treatment technologies in small urban centers   |
| URBAN, R. C.              | A system dynamics approach to WTP and WWTP sludge management: case study in Campinas  |
| CRISCUOLO, V. G.          | A system dynamics-based model to evaluate best municipal solid waste management practices for medium cities: a case of Itatiba, Brazil  |
| SUDUSINGHE, J. I.         | A Theoretical Approach to Supply Chains in Circular Economy   |
| MANSO-TÁPANES, G.         | Adsorption of diclofenac, acetaminophen and naproxen in aqueous solution using organic and inorganic adsorbents   |
| ALVES, M. T.              | An analysis of the Cleaner Production Challenges and Opportunities of the Hospital Waste Management   |
| LISI GUO                  | Analyses of Energy Consumption and CO <sub>2</sub> Emission in Long-term Low-carbon Transition of Beijing   |
| CHEN, Y. A.               | Analysis of the effect of urban ecology on housing price based on difference-in-difference estimation   |
| VILLALOBOS-DELGADO, F. J. | Analysis of the extraction of lipids contained in sludge from wastewater treatment plants as alternative for obtaining biofuels   |
| ARAGÃO, L. O.             | Application of Pollution Prevention and Control Instruments and Industrial Ecology - Case Study in a Brazilian Company of the Pulp and Paper Sector                                 |
| LIMA, V. G. P.            | Applying circular economy principles in the management of green information technology: a case study in the electronics supply chain  |
| MAZHAR ALI JARWAR         | Assessing environmental implications of improving insulation products and bio-calcification in the construction sector.   |
| GOFFETTI, G.              | Assessing the environmental performance of an inertization process for materials containing asbestos  |
| CORREA, J. M. F           | Assessment of the Sustainable Resilience in Textile Industry that Migrates from Cleaner Production to Circular Economy  |
| CRIPPA, J.                | Automating BIM-LCA using visual programming for Brazilian building design   |
| ROMEL, M. A.              | Barriers and overcoming strategies for electronic waste management in emerging economies like Bangladesh  |
| GUEDES, W. P              | Basic sanitation indicators in the context of the Piracicaba-São Paulo sub-watershed - Brazil   |
| CIMPRICH, A.              | Building an evidence base for environmentally sustainable healthcare: A novel organizational life cycle assessment of an acute care hospital  |
| CHAOS-HERNÁNDEZ, D.       | Carbonaceous supports obtained from the coconut endocarp functionalized with Fe <sub>2</sub> O <sub>3</sub> for their application as catalysts in the transesterification reaction. |

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| BEUREN, F. H.              | Characterization of Product-Service Systems based on their life cycle: a framework  |
| NAVARRO, A. C.             | Circular Economy: Independence from Commodities, Competitive Advantages, and New Business Strategies  |
| COVIELLO, D.               | Natural based solution as hybrid adsorbent/oxidant treatment to remove antibiotics from water   |
| BERIGUETE ALCÁNTARA, F. E. | Co-creating resilient and sustainable cities. Citizen initiatives as catalysts for a new economic and energy model  |
| TAMBOVCEVA, T.             | Construction & Demolition Waste Management in the Context of a Circular Economy: Latvian Survey Results   |
| MOMTAZ, M. B.              | Contribution of Crop Protection Approaches in Carbon Foot Printing of Rice-Rice Cropping System in Bangladesh   |
| GARCIA FILHO, J. F. A.     | Contributions of Ergonomic Management to Circular Economy   |
| SANSEVERINO, E.C.          | Deforestation in the Legal Amazon in the context of climate change mitigation: the interrelationships between scientific and traditional knowledge of Amazonian people's knowledges |
| MALEKLI, M.                | Direct Air Capture and Storage: Process Optimizing and Energy Consumption   |
| FONSECA, B. M              | Distributed Generation: Evaluation of photovoltaic systems in urban areas of Rio de Janeiro city through a critical analysis of the federal program "Light for All."                |
| COSTA, G. J.               | Ecodesign and Life Cycle Assessment: How it is trending during the last decade?   |
| ROJAS MORENO, D. A.        | Economic and environmental assessment using production cost and energy analysis in sheep production system in Brazil  |
| OLIVEIRA, M.               | Ecosystem functions and benefit value of urban trees. A joint application of Energy Accounting and i-tree Tools in the Metropolitan City of Napoli                                  |
| MERODIO-MORALES, E.E.      | Effect of cellulose, hemicellulose and lignin content on arsenic adsorption capacity of lanthanum-based adsorbents  |
| CHANG LIU                  | Emergy-based Ternary Valuation Theory and Global Coastal Ecosystem Services Evaluation  |
| SIMÕES, A. F.              | Energy, Climate Change and Social Inequalities in Brazil: Reflections in the Context of the Pandemic of COVID-19  |
| RAMIREZ, N.                | Entrepreneurial resilience in times of crisis: a critical approach  |
| ESPOSITO, G.               | Environmental evaluation of an integrated multiproduct agri-food system through Emergy and LCA  |
| AGOSTINO, M.               | Environment-friendly practices: family versus non-family firms  |
| KHAIYUM, M. Z.             | Evaluation of Carbon Emissions Factors in the Cement Industry of Bangladesh   |
| SOUSA, T. B.               | Evaluation of the impact of Industry 4.0 technologies for Cleaner Production implementation in contemporary organizations   |
| MAHNAZ KHORASANI           | Exploring Decarbonization Strategies in Oil and Gas Supply Chain using Intuitionistic Fuzzy DEMATEL – A Case Study in Iran  |
| SEN, M. K.                 | Flood Resilience Quantification Using Dynamic Bayesian Network model for Housing Infrastructure   |
| ESLAMI, SANAALSADAT        | Food waste prediction in Canada using system dynamics modelling approach  |
| KOHLBECK, E.               | Framework for transitioning from traditional to PSS products: an application to bike sharing business proposals   |
| BIGGERI, M                 | Framing R&I for transformative change towards sustainable development in the European Union   |
| SERRANO, L                 | Fueling the future: Impact of hydrogen in heavy-duty vehicles as a new transport energy mix   |

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| MARCHI, M            | GHG spatial visualization and identification of climatic action zones for emission reduction: the case of a municipality in Central Italy                |
| BARROS, M. V.        | Going circular: Process circularity in a vehicle assembly industry   |
| SARKER, S.           | Guidelines for cleaner production: A case study of Plastic Recycling Industries in Bangladesh  |
| PERIN, R. V.         | Historical relationship between Institution-Based View and bioethanol fuel in the world  |
| AMANTE, B            | How affect the SESS support on the EV charging stations business. Battery ageing and economic study in Barcelona   |
| PATEL, M.            | Identification of Critical Criteria of Wastewater Treatment Technology for Small Canadian Communities  |
| RUEDA-BAYONA, J. G.  | Identification of optimal offshore areas for sustainable wind energy projects considering engineering and environmental features                         |
| MATTOS, C. A.        | Impact Investment Assessment: Analysis for a Circular Business Model from electronic segment   |
| RUTITIS, D.          | Impact of Covid-19 on Sustainable biocomposite value chain: Industrial Consumption perspective   |
| ELVIR-PADILLA, L. G. | Impact of pyrolysis conditions on adsorption properties of three pharmaceutical drugs by using bone char   |
| ETEMAD N             | Implementing of Cleaner Production Practices for Circular Economy in Iran Petroleum Industry   |
| SANTOS, L.C.T.       | Indicadores de Economia Circular para avaliação de sustentabilidade no Asean, Mercosul e União Europeia  |
| ZANOLETTI, A.        | Innovative and sustainable porous materials derived from industrial by-products to reduce airborne particulate matter                                    |
| HAYASHI, K.          | Integrated Landscape and Soundscape Management for Agricultural Sustainability: Rethinking Food Production and Forest Conservation                       |
| PICOLO, L. G         | Interdependence among Countries from the Discovery of Large Volumes of Natural Resources: The Situation Between Roraima and Oil in Guiana                |
| GOKMEN, M. S.        | Investigation of the Effect of N-Propanol / Gasoline Blends on Exhaust Emission Values and Exhaust Gas Temperature in a Direct Injection Gasoline Engine |
| MENDONÇA, R. X. L.   | Kinetic Study of Alcoholic Fermentation of Inverted Honey and Inverted and Clarified Honey   |
| BOUHANNANA, F.       | Leanness, Greenness and Agility Assessment methods: A Systematic Literature Review   |
| AMANTE, B.           | Literature review of the SESS models and electric vehicle charging stations.   |
| De SOUSA, G. C.      | Macro-environmental factors that influence the development of the electric and hybrid vehicles industry in Brazil  |
| BRANDÃO, M. S.       | Managing multiple internal supply chains toward sustainability: A conceptual model   |
| KHAN, E. A.          | Measuring Circularity Index of Single Use Plastic Products   |
| BIGGERI, M           | Measuring the needs and compliance of production processes of ethnic enterprises in Prato industrial district  |
| Gaspar, M. C         | Micromobility as a New Megatrend: Why Are Car Companies Currently Selling E-Scooters and E-Bikes?  |
| KOHLBECK, E.         | Minimizing barriers in the implementation of Product-Service Systems through the Circular Economy  |
| SARAIVA, A.          | Multiyear impact analysis and its contribution for wine sustainable production   |
| NAVARRO, A. C.       | Native Peoples: circular knowledge and sustainable practices   |
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| ANNIBALDI, V.      | Political decision to support the feasibility of renewables   |
| BEUREN, F. H.      | Product-Service Systems characterization: case study in leasing, renting and sharing proposals  |
| D'ADAMO, I.        | Profitability analysis of metal recovery from spent PCBs by the Goldrec 1 process   |
| FERREIRA, D. H. L. | Recycling cooperatives: an application of an information system   |
| BORGAS, G. P.      | Renewable energies in Brazil in the context of the energy transition and the mitigation of climate change   |
| SOTAMINGA, M. J.   | Rescission: Safety in second-way applications and Environmental Management of Battery Recycling   |
| AMPESE, L. C.      | Research gaps and updates on anaerobic digestion: a bibliometric analysis   |
| VARELLA, W. A.     | Resilience and Circularity in the context of Energy, Water and Food: a case study in agriculture  |
| PERONARD, J. P.    | Rethinking Plastic Waste Management: A Service Ecosystem Perspective  |
| MANYABE, E. D.     | Role of Entrepreneurship Ecosystem (EE) in Building Resilient Entrepreneurs in Sub-Saharan Africa: an exploratory study in DRC  |
| CAMATA, S. D. S.   | State of the Art of Sustainable Interior Design   |
| BRUCIERI, A.       | Strategic analysis of macro-environmental conditions for the development of hydrogen energy use in Brazil   |
| DE-JESUS, G. A.    | Study of adsorption process of three different pesticides on SWCNT applying Monte Carlo simulation  |
| GENGYUAN LIU       | Study on Ecological Value Accounting and Capital Transformation Mechanisms for Water Metabolism Targets in River Basin  |
| SGANZERLA, W. G.   | Subcritical water pretreatment enhanced the methane-rich biogas production from anaerobic digestion of brewer's spent grains  |
| EL KORCHI, A.      | Survivability, Resilience and Sustainability of Supply Chains: COVID-19 Pandemic  |
| NAKADA, L. Y. K.   | Sustainability of solar-based water treatment technologies: a systematic review   |
| MELLO, F. B.       | Sustainable Eleva, a path to socio-environmental education in a Brazilian school  |
| DANGELICO, R. M.   | Sustainable fashion and consumer behavior: a study of Italian consumers   |
| ZANCHETTA, T. C.   | Sustainable practices in Water Treatment Plants   |
| SANTOS, M. I. S.   | Termogravimetric analysis (TGA) of torrefied Sugarcane Bagasse and its valorization as biofuel for energy production  |
| GASTALDI, M.       | The efficiency of waste sector in Italy: an application by SFA  |
| TADDEO, R.         | The evolution of Local Economic Systems towards Circular Economy: the ALYCE project   |
| SANSEVERINO, E.C.  | The human psyche in the context of climate change   |
| KORAT, L.          | The influence of additives on the hydration of calcium sulfate hemihydrate from flue gas desulfurization gypsum process within the first 24h – usability in binder jetting technology |
| TUCCI, H. N. P.    | The influences of economic agents for the adoption of environmental practices in the textile sector   |
| RICCIO, A.         | Toward sustainable aviation industry: assessing the impact of emissions from aircraft trajectories  |
| MUNIZ, A. S.       | Trace metals contamination in vegetables: conventional vs. organic agriculture  |

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| DONGFANG WANG | Uncovering inter-sectoral energy-water-land flows of Chinese metropolises in multiscale economies |
| TRENTO, L. R. | Unleashing the new plastics economy and total circular economy                                    |
| MENDES, J. P. | Water security and water reuse  |

## Academic Papers

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| MARCHI, D. L.             | A Comparative Review of Alternatives for Electricity Supply in Isolated Regions  |
| KAVIANI, A                | A New Approach for Energy Optimization in Dairy Industry-Pinch Analysis  |
| FERREIRA, F.              | A Sustainable Improvement Plan Proposal for the Reverse Logistics in a Brazilian Hospital: A case study on the glycemetic test piercing residues                   |
| ROSA, S. C. F.            | Aluminum Recycling, Innovations And Future Perspectives: A Systematic Literature Review  |
| SCAVARDA, A.              | An analysis of the industry 4.0, cleaner production, circular economy, and eco innovation contributions to the sustainable development of strategies and practices |
| VILLAZON MONTALVAN, R. A. | An SDG approach to developing Sustainable Circular Design  |
| BANHOS, L. B. S.          | Analysis of PET Bottle Closed Loop Recycling Techniques Applicable in Brazil   |
| RÊGO, K. F., F. A.        | Analysis of the benefits and hardships of the certification of environmental management systems in companies in the state of Pernambuco – Brazil                   |
| JOÃO, S.                  | Aspects of Circular Economy for Packaging Development: A Review  |
| VIEGAS, C.V.              | Beyond circularity: the reverse flows of medicines in Brazilian solidary pharmacies as collaborative consumption   |
| BERNI, M.D.               | Biomethane from MSW Landfills to Fuel Urban Transport Buses: A Case Study for Campinas and Jundiai Cities of the State of São Paulo, Brazil                        |
| PRABHU, S. D.             | Brownfield Technological Interventions in Dye Intermediate Industry: Case Study of H-Acid  |
| SANTANA, S. J.            | CCS: Mapping the Risks Associated with Storage   |
| PETRY, M. P.              | Challenges and opportunities to change the energy matrix of heavy-duty trucks in Brazil: the HVO case  |
| MAGALHÃES, M. C.          | Characterization of domestic flow of e-waste in Ilhéus, Brazil   |
| GUIMARÃES, A. R.          | Circular Economy and Eco-efficiency: a graphic model to assess the impact of circular businesses on the economy and the environment                                |
| GONÇALVES, B. S. M.       | Circular Economy and Financial Performance: A Bibliometric Analysis  |
| FERASSO, M.               | Circular Economy and SMEs: an exploratory network analysis and state of the art  |
| FONSECA, A.               | Circular Economy and United Nations Sustainable Development Goals: Challenges, Opportunities and Trends  |

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| ELABRAS-VEIGA, L.B.   | Cleaner Production: good practices in Bom Jardim dairy industry  |
| ALMEIDA, E. S.        | Colossoma macropomun: Potential For The Socioeconomic Development Of Amazonas  |
| DI PIETRO, P. M.      | Comparative assessment on maritime alternative bio-fuels according to logistics aspects  |
| LACERDA, M. T.        | Comparative Life Cycle Assessment of Single-Use Plastic Bags Produced from Renewable and Non-Renewable Bases                         |
| FRARE, A.             | Comparative study of the economic-environmental performance of activated alkali cement and Portland cement using LCA and LCC         |
| SILVA, D. M.          | Comparison between soy-drying systems: a study in Brazilian agroindustry   |
| JBARA, S.             | Comprehensive Review on the Application of Fuzzy Logic Methods in Resolving Environmental Issues by Using Statistical Methods        |
| NETTO, A. O. M.       | Compressed Air Energy Storage and Applications in Urban Mobility   |
| COSTA L. F.           | Decommissioning of Petroleum Production: Analysis of the Methods and CO <sub>2</sub> Capture   |
| TEIXEIRA, A. L.       | Development of blends of high-density polyethylene with post-industrial polyurethane foam aiming at circular economy                 |
| DUTRA, F. J.          | DfE Matrix application for a spread coating synthetic laminate used on footwear industry - An exploratory case study                 |
| ALMEIDA, S. R. G      | Diagnosis of lean manufacturing and sustainable management in cosmetic industries in Goiás - Brazil                                  |
| MACHADO, F. V.        | Education for Sustainable Development in universities as a strategy for a resilient and sustainable world                            |
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| LEÃO MARTINS, C.R.C   | Emergy Assessment of Soy´s Trade Produced in Brazil  |
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| MATTOS, C. A.         | Environmental Life Cycle Costing (ELCC) as a decision-making tool for materials selection  |
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| SOUZA, P. N.          | Evaluating cleaner production strategies used by red ceramic industries in Brazil: a systematic literature review                    |
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| TURIM, C. A.          | Food Acquisition in Brazil: emergy as a tool for environmental accounting  |
| CÂMARA, G. A. B.      | Geological Reservoir Use: New Trends – A Legal Aspect Analysis   |
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| SANTOS, C. J.     | Impacts of telehealth on waste generation at an HIV e AIDS research clinic during the COVID-19 pandemic  |
| DELGADO, F. C. M. | Industry 4.0 Tools Applied to the Transport Sector: Mitigating Barriers towards Sustainability   |
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| AGUIAR, M. F.     | Maturity models for sustainability: a review of ongoing research streams   |
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| RÓTOLO, G. C.     | Perception of circular economy approach in Agricultural Cooperatives of Argentina  |
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| CHAVES, J. S.     | Polyurethane membranes with citrus peel extract  |
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| REIS, P. N. C.    | Sustainable operations through circular economy for a resilient and sustainable world  |
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| ASLANI,A          | Technology Assessment of current status and future of Photovoltaic Technologies  |
| SILVA, M. H. P.   | The 13 advantages of using Industry 4.0 technologies in a Circular Supply Chain: a systematic literature review  |
| SILVA, I. C.      | The contribution of Florence Nightingale's Environmental Theory for a resilient and sustainable world  |
| SPORCHIA, F.      | The impact on water scarcity linked to coffee consumption in the European Union  |
| RAMPASSO, I. S.   | The relevance of gender equality for a more sustainable future: factors for career decisions of women in engineering   |
| DIAS, A.          | The resilient and sustainable practices on cleaner production, circular economy, and eco innovation in the long-term care institutions in the COVID-19 World |
| PEREIRA, B. A     | Thermic and electric energy potential from biotechnological lab process using food and yard wastes: start-up and biogas production stability                 |
| SILVA, D. V.      | Trends and Perspectives between Life Cycle Assessment and Ecosystem Services: A systematic review connecting the Bioeconomy                                  |
| MAGALHÃES, L. S.  | Uberization and Resilience of Recyclable Material Collectors   |
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| VEFAGO, Y. B.          | University beyond walls: from teaching to entrepreneurship and innovation     |
| TRIERWEILLER, A. C.    | University's Third Mission: An Exploratory Vision                             |