

# Alessandro Cascioli

ENERGY ENGINEER · PhD

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☎ (+39) 348 5637707 | ✉ alessandro.cascioli@protonmail.com | 📄 Alessandro Cascioli

## Summary

With a Ph.D. in Sustainable Energy and extensive experience in energy consulting, ESG strategy development, and sustainability analysis, I bring strong technical expertise to market analysis roles. My background spans both academic and commercial settings, where I have contributed to innovative projects such as the FRONTSH1P Horizon project and optimized ESG strategies by evaluating impacts, risks, and opportunities. I have developed a deep understanding of green fuels through my research in the Bioenergy and Biofuels lab. Additionally, as a sustainability consultant, I gained knowledge of European energy regulations, sustainability trends, and the drivers of renewable energy markets. This is complemented by robust data analysis skills and expertise in stakeholder engagement, particularly through the application of double materiality principles. Furthermore, my experience in information security management has broadened my perspective, enabling me to recognize the interconnectedness of various knowledge fields. I am seeking a role that leverages my diverse skill set and innovative thinking to accelerate the energy transition while ensuring cybersecurity and data privacy are maintained.

## Work Experience

### Syntex GreenTech

Perugia, Italy

SUSTAINABILITY CONSULTANT

Oct. 2023 - Present

- Developed an innovative ESG strategy, driving sustainability while reducing financial risks through data-backed decision-making.
- Conducted comprehensive sustainability impact assessments, identifying key risks and opportunities for business growth.
- Developed Sustainability reports following both the GRI and EFRAG frameworks.
- Developed autonomously a platform to speed up the collection of information and monitoring of KPIs.

### Free University of Bozen-Bolzano

Bozen, Italy

POSTDOCTORAL RESEARCH AND TEACHING ASSISTANT

Nov. 2022 - Present

- FRONTSH1P project - A FRONTrunner approach for the transition to a circular and resilient future: deployment of systemic solutions with the support of local clusters and the development of regional community-based innovation schemes.
- Performed techno-economic analysis to optimize process conditions and reduce costs.
- Developed simulations and models to foster the understanding of thermochemical processes.
- Applied data analysis techniques to experimental datasets, such as peak de-convolution and curve fittings.
- Developed a machine learning model to predict the biocrude oil yield.
- Teaching assistant for the course Energetics of the B.Sc. in Industrial and Mechanical Engineering, and M.Sc. in Energy Engineering.
- Support in the supervision of PhD and Master students.

### SGS

Italy

ISO 27001:2013/2022 AUDITOR TRAINEE

Aug. 2021 - Present

- ISO/IEC 27001:2013 - Information Security Management lead auditor training.
- ISO/IEC 27001:2022 - Information security, cybersecurity and privacy protection.

### SGS

Italy

CONSULTANT

Oct. 2018 - Oct. 2019

- Dealer training for stock audit on assignment from a certifying organization for a leading heavy machinery manufacturer.
- Audits held in Italy.

### Qualitas S.r.l.

Perugia, Italy

CONSULTANT AND AUDITOR

Jul. 2018 - Present

- ISO/IEC 27001 - Information Security Management internal audits for a consulting company.

### SGS

Europe

AUDITOR

Apr. 2017 - Oct. 2019

- 2nd party compound audit on assignment from a certifying organization for a leading automobile manufacturer.
- Audits held in Italy and abroad (Austria, Germany, Finland, Poland, Portugal, Sweden).

### Baruffaldi S.r.l.

Perugia, Italy

CONSULTANT

Oct. 2016 - Oct. 2019

- CE homologation processes of motorcycle helmets, goggles and gloves.
- Management of relationships with suppliers, mainly not Italian (China and Pakistan).

## Skills

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|---------------------------------------|--|
| <b>Programming</b>                    | SQL, Python, JavaScript, TypeScript, C, Bash, Dart, LaTeX, Matlab                              |
| <b>Scientific computing</b>           | NumPy, SciPy, Sympy, Pandas, LMFIT   |
| <b>Machine learning</b>               | TensorFlow, Keras, PyTorch, Scikit-learn, XGBoost  |
| <b>Data visualization</b>             | Tableau, Matplotlib, Seaborn, Plotly, Altair, Sigmaplot  |
| <b>Dashboards and app development</b> | Streamlit, Dash, Django, Flask, React, React Native, NextJS, AstroJS, Flutter, PySide, TKinter |
| <b>Database management</b>            | PostgreSQL, MySQL, SQLite, MongoDB, SuperbaseDB  |

## Certificates

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| 2023 | <b>Specific course for ESG-SDGs Auditor/Lead Auditor and Consultant related to the ESG-SDGs Rating:2022©</b> | <a href="#">CERTIFICATION Srl</a>    |
| 2023 | <b>ISO/IEC 27001:2022 Transition Course</b>  | <a href="#">SGS</a>                  |
| 2023 | <b>DeepLearning.AI TensorFlow Developer Specialization</b>   | <a href="#">Coursera</a>             |
| 2020 | <b>State examination for the qualification to practice as an Energy and Nuclear Engineer</b>                 | <a href="#">University of Trento</a> |
| 2019 | <b>ISO/IEC 27001:2013 - Information Security Management Systems Auditor/Lead Auditor Training Course</b>     | <a href="#">SGS</a>                  |

## Education

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| <b>Free University of Bozen-Bolzano</b>  | <a href="#">Bozen, Italy</a>   |
| PHD IN SUSTAINABLE ENERGY AND TECHNOLOGY   | <i>Oct. 2019 - Oct. 2022</i>   |
| <ul style="list-style-type: none"> <li>Thesis: Hydrothermal liquefaction of biomass and biocrude upgrading: fundamentals, experimental analysis and modelling.</li> <li>Spent 5 months as a visiting PhD in the Advanced Biofuels Lab of Aalborg University, Denmark.</li> <li>Developed and commissioned a pilot plant for the production of biocrude oil to be upgraded to SAF (Sustainable Aviation Fuels).</li> <li>Process modelling through optimization algorithms to find thermodynamic equilibrium.</li> <li>Performed techno-economic analysis to optimize process conditions and reduce costs.</li> <li>Support in the supervision of master students.</li> <li>Preparation of technical reports, visualizations, and presentations.</li> </ul> |                                |
| <b>Free University of Bozen-Bolzano</b>  | <a href="#">Bozen, Italy</a>   |
| M.SC. IN ENERGY ENGINEERING  | <i>Sep. 2017 - Oct. 2019</i>   |
| <ul style="list-style-type: none"> <li>Thesis: Valorization of residues from parapharmaceutical and herbal medicine production: a case study.</li> </ul>   |                                |
| <b>University of Perugia</b>   | <a href="#">Perugia, Italy</a> |
| B.E. IN MECHANICAL ENGINEERING   | <i>Sep. 2013 - Apr. 2017</i>   |
| <ul style="list-style-type: none"> <li>Erasmus + of 6 months at the FAU Erlangen-Nürnberg, Germany.</li> </ul>   |                                |

## Publications

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| <b>78th national congress ATI (2023)</b>   |      |
| V. BENEDETTI, <b>A. CASCIOLI</b> , S. FASOLI, A. AREF, F. PATUZZI, M. BARATIERI  | 2023 |
| <ul style="list-style-type: none"> <li>Continuous Hydrothermal Liquefaction of microalgae for biocrude oil production</li> </ul>   |      |
| <b>Bioresource Technology</b>  |      |
| V. BENEDETTI, <b>A. CASCIOLI</b> , M. PECCHI, M. BARATIERI   | 2024 |
| <ul style="list-style-type: none"> <li>Fast screening of catalyst performances in hydrothermal processes for biofuel production using differential scanning calorimetry</li> <li>DOI: <a href="https://doi.org/10.1016/j.biortech.2024.130934">https://doi.org/10.1016/j.biortech.2024.130934</a></li> </ul> |      |
| <b>Fuel Processing Technology</b>  |      |
| M. PECCHI, <b>A. CASCIOLI</b> , A. R. MAAG, J. L. GOLDFARB, M. BARATIERI   | 2022 |
| <ul style="list-style-type: none"> <li>Uncovering the transition between hydrothermal carbonization and liquefaction using differential scanning calorimetry</li> <li>DOI: <a href="https://doi.org/10.1016/j.fuproc.2022.107349">https://doi.org/10.1016/j.fuproc.2022.107349</a></li> </ul>                |      |
| <b>Fuel</b>  |      |
| <b>A. CASCIOLI</b> , M. BARATIERI  | 2021 |
| <ul style="list-style-type: none"> <li>Enhanced thermodynamic modelling for hydrothermal liquefaction</li> <li>DOI: <a href="https://doi.org/10.1016/j.fuel.2021.120796">https://doi.org/10.1016/j.fuel.2021.120796</a></li> </ul>   |      |

## Honors & Awards

### INTERNATIONAL AWARDS

## Skills

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|----------------|--------------------------------------|
| <b>Italian</b> | Native or bilingual proficiency, C2  |
| <b>English</b> | Professional working proficiency, C1 |
| <b>German</b>  | Independent user, B2                 |

I authorize the processing of my personal data in the CV pursuant to Legislative Decree no. 196 of 30 June 2003 "Personal Data Protection Code" and the GDPR - EU Regulation 2016/679.