

Alessandro Cascioli

ENERGY ENGINEER · PHD

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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 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 27001:2013/2022 - Information Security Management internal audits for a consulting company.
- Provided strategic recommendations to improve data protection protocols and ensure regulatory compliance.

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

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

Certificates

2023	Specific course for ESG-SDGs Auditor/Lead Auditor and Consultant related to the ESG-SDGs Rating:2022©	<i>CERTIFICATION S.r.l.</i>
2023	ISO/IEC 27001:2022 Transition Course	<i>SGS</i>
2023	DeepLearning.AI TensorFlow Developer Specialization , DeepLearning.AI	<i>Coursera</i>
2023	Google Project Management: Specialization	<i>Coursera</i>
2020	State examination for the qualification to practice as an Energy and Nuclear Engineer	<i>University of Trento</i>
2019	ISO/IEC 27001:2013 - Information Security Management Systems Auditor/Lead Auditor Training Course	<i>SGS</i>

Education

Free University of Bozen-Bolzano

Bozen, Italy

PHD IN SUSTAINABLE ENERGY AND TECHNOLOGIES

Oct. 2019 - Oct. 2022

- Thesis: Hydrothermal liquefaction of biomass and biocrude upgrading: fundamentals, experimental analysis and modelling.
- Spent 5 months as a visiting PhD in the Advanced Biofuels Lab of Aalborg University, Denmark.
- Developed and commissioned a pilot plant for the production of biocrude oil to be upgraded to SAF (Sustainable Aviation Fuels).
- Process modelling through optimization algorithms to find thermodynamic equilibrium.
- Performed techno-economic analysis to optimize process conditions and reduce costs.
- Support in the supervision of master students.
- Preparation of technical reports, visualizations, and presentations.

Free University of Bozen-Bolzano

Bozen, Italy

M.Sc. IN ENERGY ENGINEERING

Sep. 2017 - Oct. 2019

- Thesis: Valorization of residues from parapharmaceutical and herbal medicine production: a case study.

University of Perugia

Perugia, Italy

B.E. IN MECHANICAL ENGINEERING

Sep. 2013 - Apr. 2017

- Erasmus + of 6 months at the FAU Erlangen-Nürnberg, Germany.

Publications

Bioresource Technology

V. BENEDETTI, **A. CASCIOLI**, M. PECCHI, M. BARATIERI

2023

- Fast screening of catalyst performances in hydrothermal processes for biofuel production using differential scanning calorimetry
- DOI: <http://dx.doi.org/10.2139/ssrn.4747557>

Fuel Processing Technology

M. PECCHI, **A. CASCIOLI**, A. R. MAAG, J. L. GOLDFARB, M. BARATIERI

2022

- Uncovering the transition between hydrothermal carbonization and liquefaction using differential scanning calorimetry
- DOI: <https://doi.org/10.1016/j.fuproc.2022.107349>

Fuel

A. CASCIOLI, M. BARATIERI

2021

- Enhanced thermodynamic modelling for hydrothermal liquefaction
- DOI: <https://doi.org/10.1016/j.fuproc.2022.107349>

Honors & Awards

INTERNATIONAL AWARDS

2022 **Springer Nature's Best Oral Flash Award**, WasteEng2022 Conference

*Copenhagen,
Denmark*

Languages

Italian Native or bilingual proficiency, C2
English Professional working proficiency, C1
German 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.