

Jonathan Coignard

*Applied Mathematics &
Electrical Engineering*

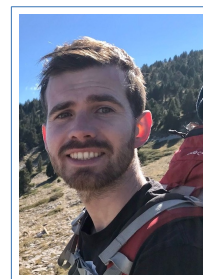
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Finishing a thesis on the topic of local energy communities, I aspire to work on the relationship between society and energy through the prism of collective self-consumption.

Education

- 2019 – 2022 **PhD**, *Université Grenoble Alpes, G2Elab, France*
Local Energy Communities: Sharing Resources on the Distribution Grid.
- 2010 – 2015 **Engineering degree - Master equivalent**, *Compiègne University of Technology, France*
Urban systems engineering, specializing in electric power system - Research minor
- Spring 2012 **Semester of studies abroad**, *Riga Technical University, Latvia*
Electrical engineering

Relevant Experience

- May 2019 to nowadays **Industrial PhD (CIFRE)**, *LANCEY Energy Storage, Grenoble, France*
Implementing a neighborhood-wide battery coordination strategy. Publications:
→ [Evaluating Forecasting Methods in the Context of Local Energy Communities](#), Jonathan Coignard, Maxime Janvier, Vincent Debusschere, Gilles Moreau, Stéphanie Chollet, and Raphaël Caire, *International Journal of Electrical Power and Energy Systems*, 2021.
→ [Distributed Resource Coordination in the Context of European Energy Communities](#), Jonathan Coignard, Vincent Debusschere, Gilles Moreau, Stéphanie Chollet, and Raphaël Caire, *PES GM 2020*.
- September 2019 to April 2022 **Professorship**, *Engineering school ENSE3, Grenoble, France*
Total hourly volume of 144 hTD with 76 hTD of lecture course:
→ [Electrical Energy](#): Introduction to the operation of the electrical network, circuit resolution, AC power, transformers, DC machine.
→ [Modelling and Dispatch of Power](#): Modeling of the electrical network, energy mix, European electricity markets.
- February 2015 to April 2019 **Scientific Engineering Associate**, *Lawrence Berkeley National Laboratory*
Simulation tools for vehicle to grid interactions and grid reliability assessment. Publications:
→ [Will Electric Vehicles Drive Distribution Grid Upgrades? The Case of California](#), Jonathan Coignard, Pamela MacDougall, Franz Stadtmueller, and Evangelos Vrettos, *IEEE Electrification magazine* June 2019.
→ [Clean Vehicles as an Enabler for a Clean Electricity Grid](#), Jonathan Coignard, Samveg Saxena, Jeffery Greenblatt, Dai Wang, *Environmental Research Letters*, 2017
- September 2013 to march 2014 **Research engineer (internship)**, *CEREMA, Brest*
Near shore quantification of incident wave energy in Audierne's bay
- Summers of 2011 to 2014 **Volunteering**, *Archelon, The Sea Turtle Protection Society Of Greece*
Conservation of the endangered species *Caretta caretta* (loggerhead sea turtle) at influential nesting beaches in the Mediterranean.

For more information, <http://jonathancoignard.com>

Publications

Book

Alvarez-Hérault M, Gouin V, Chardin-Segui T, Malot A, **Coignard J**, Raison B, Coulet J, [Planification des réseaux électriques de distribution](#), ISTE editions, Collection Énergie, ISBN 9781784058241.

Journal

Coignard J, Hodencq S, Rigo-Mariani R, et al. (2022) [Are more solar panels always better?](#). TATuP - Journal for Technology Assessment in Theory and Practice (in press).

Hodencq S, **Coignard J**, Twum-Duah N, et al. (2022) [Including Greenhouse Gas Emissions and Behavioural Responses for PV Self-Sufficient Optimal Design](#). COMPEL - The international journal for computation and mathematics in electrical and electronic engineering.

Coignard J, Janvier M, Debusschere V, et al. (2021) [Evaluating forecasting methods in the context of local energy communities](#). International Journal of Electrical Power & Energy Systems 131: 106956.

Nouidui TS, **Coignard J**, Gehbauer C, et al. (2019) [CyDER—an FMI-based co-simulation platform for distributed energy resources](#). Journal of Building Performance Simulation 12: 566–579.

Coignard J, MacDougall P, Stadtmueller F, et al. (2019) [Will electric vehicles drive distribution grid upgrades?: The case of California](#). IEEE Electrification Magazine 7: 46–56.

Coignard J, Saxena S, Greenblatt J, et al. (2018) [Clean vehicles as an enabler for a clean electricity grid](#). Environmental Research Letters 13: 054031.

Wang D, **Coignard J**, Zeng T, et al. (2016) [Quantifying electric vehicle battery degradation from driving vs. vehicle-to-grid services](#). Journal of Power Sources 332: 193–203.

Conference

Coignard J, Debusschere V, Moreau G, et al. (2020) [Distributed resource coordination in the context of european energy communities](#), 2020 IEEE power & energy society general meeting (PESGM), 1–5.

Han J, Kim H, Eom H, **Coignard J**, et al. (2019) [Enabling SQL-query processing for ethereum-based blockchain systems](#), Proceedings of the 9th international conference on web intelligence, mining and semantics, 1–7.

Coignard J, Nouidui T, Gehbauer C, et al. (2018) [CyDER-a co-simulation platform for grid analysis and planning for high penetration of distributed energy resources](#), 2018 IEEE power & energy society general meeting (PESGM), 1–5.

Coignard J, Munsing E, MacDonald J, et al. (2018) [Co-simulation framework for blockchain based market designs and grid simulations](#), 2018 IEEE power & energy society general meeting (PESGM), 1–5.

Michard B, Cosquer E, Mallegol A, **Coignard J**, et al. (2016) [Projet EMACOP: caractérisation des vagues et du potentiel houlomoteur des sites d'Esquibien et de Saint-Guérolé par simulation numérique](#), XIVèmes journées nationales génie Côtier–Génie civil, 29 juin-1er juillet 2016, toulon.

Michard B, Cosquer E, Mallécol A, **Coignard J**, et al. (2015) [EMACOP project: characterising the wave energy resources of hot spots in Brittany for on-shore WEC](#), Proceedings of the 11th european wave and tidal energy conference.

Coignard J, Michard B, Filipot J-F, et al. (2014) [Projet EMACOP: modélisation numérique des vagues à l'approche de la digue d'Esquibien par le code SWASH](#), XIIIèmes journées nationales génie Côtier–Génie civil, dunkerque, 2-4 juillet 2014.