

Curriculum Vitae

Prof. Cyril VOYANT, Research Director (HDR, PhD)

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[Google Scholar](#) (+100 articles · ~8000 citations)

Education

My education took place in different locations, starting in Narbonne (11) and ending in Corte (2A), passing through Paris (91 and 94), Toulouse (31) and Montpellier (34).

Year Degree

2019 Habilitation to Direct Research: Numerical simulation: from solar irradiation forecasting to life sciences (CNU 62), University of Corsica

2011 PhD: Time series and global radiation (CNU 62), University of Corsica

2003 Diploma of Qualification in Radiological and Medical Physics (DQPRM) at the National Institute of Nuclear Sciences and Technologies in Saclay

2003 Diploma of Competent Person in Radiation Protection (PCR) at IGR in Villejuif

2002 DEA Radiation and Medical Imaging at UPS in Toulouse

2001 Master's degree in Fundamental Physics at Montpellier II University

2000 Bachelor's degree in Fundamental Physics at Montpellier II University

1999 DEUG Mathematics and Computer Science (MIAS) at Montpellier II University

Scientific Baccalaureate (mathematics) at Lycée Dr Lacroix in Narbonne

Scientific Background

Trained in fundamental physics after an initial attraction to applied mathematics, I gradually oriented my path toward physical sciences and their concrete applications. An initial research internship at CEM (Montpellier) led me to work on an experimental dosimeter in a radiative environment, in connection with a linear accelerator at CRLCC Val d'Aurelle. This immersion introduced me to medical physics and led me to successively complete the DEA Radiation-Imaging in Toulouse and then the qualification diploma from INSTN-Saclay, culminating in clinical activity as a medical physicist exercised for nearly ten years. In parallel, I maintained a strong orientation toward modeling and applied mathematics. In 2009, I began a doctorate dedicated to stochastic modeling and solar radiation forecasting, combining hospital activity and research in statistical meteorology. After the defense (2011), I continued my work on energy systems while occupying several academic positions (University of Corsica, University of Réunion). Since then, my work has been structured around solar forecasting, spatio-temporal analysis and AI methods applied to energy and climate. I defended my HDR on these themes and I am

now Research Director at Mines Paris - PSL, at the O.I.E. laboratory, where I lead research activities in energy forecasting, statistical modeling, applied AI and solar instrumentation.

Distinctions & Scientific Responsibilities

With a scientific production of more than 100 articles and more than 7,000 citations, I actively contribute to the animation of research in AI applied to energy, solar forecasting and spatio-temporal modeling.

- *Scientific coordinator of the Mines Carnot ELECTRE program (since 2025), leading the AI applied to energy, forecasting and multi-source systems components.*
- *Expert reviewer for the Swiss National Science Foundation (SNSF).*
- *Ranked among the 100 most downloaded articles in oncology in Scientific Reports (Nature Portfolio) in 2024 (> 3600 downloads).*
- *Ranked in the Top 2% Scientists (Stanford / Elsevier) since 2020.*
- *Member of international scientific committees: IWCMC 2019; IWCF 2017; ENVIROSENS 2015; ICNCRE'13; Ege Energy Symposium 2016.*
- *Member of editorial boards: Turkish Journal of Forecasting (since 2017), Journal of Radiology and Oncology (since 2016).*
- *Member of the International Solar Energy Society (ISES) since 2013.*
- *City of Nice Prize (Accademia Corsa, 2012).*
- *PVSEC Award 2009 (Hamburg) - photovoltaic systems category (1583 candidates).*
- *Regular reviewer for >30 international journals (Elsevier, IEEE, Springer, Wiley...), including IEEE Trans. Ind. Electronics, Renewable & Sustainable Energy Reviews, Applied Energy, Energy Conversion and Management, Radiotherapy & Oncology, Solar Energy, European Journal of Operational Research, etc.*

Research Projects

Involved in several structuring national and European programs, I participate in the development of advanced methodologies for forecasting, optimization and integration of renewable energy systems.

- *Fine4Cast - ANR (PEPR TASE), 2023-2028: Improvement of minute-to-day forecasting of renewable energy production and consumption at fine geographic resolution. National TASE/ANR partners.*
- *Convention Mines Paris-PSL - UCPP - CNRS (UMR SPE 6134) - 2024-2027*
- *Intermittent solar forecasting and development of energy management algorithms for smart microgrids.*
- *SAPHIR - ANR, 2021-2024; 295 k€; LAERO-UPS / Inria Paris / SPE*
- *Sensor-Augmented Weather Prediction at High Resolution: coupling sensor data-numerical models to improve high-resolution forecasts.*
- *INTELPOLY (COST Action) - European Cooperation in Science & Technology, 2021-2025*
- *Diagnosis, control and cybersecurity of polygeneration/hybrid-storage installations.*
- *HyLES - ANR, 2021-2024; 1.14 M€ (UCPP share: 192 k€)*
- *Integration of hydrogen in weakly interconnected networks. Partners: FEMTO-ST, LE2P (Réunion), UPF, UCPP-SPE.*
- *RESINTER - PEPS CNRS*
- *Implementation of predictive control for the optimization of an electrical network integrating renewable energy - application to the PAGLIA-ORBA platform.*

- *MYRTE Platform - H2 Program, ~21 M€*
- *Short/ultra-short term forecasting for hydrogen storage optimization and coupled energy management production-load.*
- *TILOS (H2020 - LCE-2014-3) - 2014-2017; 11 M€ (UdC share: 400 k€)*
- *Optimal integration of battery storage at local scale; island demonstrator.*
- *ISERBATURB - AUF - Romanian Institute of Atomic Physics (IFA)*
- *Integration of renewable energy systems in buildings and urban environment; total budget 30 k€.*
- *Franco-Polish Cooperation / French Institute of Poland*
- *French representative for H2020 exchanges in the field of renewable energy integration in island microgrids.*
- *ERASMUS Program - Technical University of Sofia*
- *Co-construction of a summer school on renewable energy for Master's students.*

Doctoral Supervision & Academic Responsibilities

My research training activity includes supervision or co-supervision of six ongoing theses, supervision of several doctoral students, post-doctoral fellows and engineers over the years, as well as regular participation in thesis and HDR juries, in France and internationally.

Ongoing Theses - 6 doctoral students

- *Kamel Abdeladim - Hybrid approach to PV forecasting and algorithmic sobriety (Mines Paris).*
- *Candice Banes - Solar radiation forecasting from satellite images (physically informed AI) (Mines Paris).*
- *Alan Julien - Forecasting / optimization of CSP plant control (Mines Paris).*
- *Mohamed Asloune - Solar forecasting with confidence intervals for electrical networks (Univ. Corsica).*
- *Marie Fusella - Mathematical modeling of Iodine-131 metabolism in thyroid oncology (Univ. Corsica).*
- *+ additional follow-up on AI/energy projects (collaborative supervision).*

Defended Theses - 4 doctoral students

- *Alexis Fouilloy - Machine Learning & solar radiation forecasting (Univ. Corsica).*
- *Lamara Benali - Statistical forecasting of air quality (Univ. Corsica / Algiers).*
- *Wani Tamas - Atmospheric pollution forecasting in Corsica (Univ. Corsica).*
- *Kahina Dahmani - Neural networks for solar potential estimation in Algeria (Univ. Corsica / USTHB).*

Supervised Post-doctorates - 3 researchers

- *Luis-Antonio Garcia-Gutierrez - Partitioning of irradiance data via AI.*
- *Jean-Laurent Duchaud - Solar forecasting & energy management (H2020 TILOS).*
- *Fabrice Motte - Solar forecasting & energy management (H2020 TILOS).*

HDR & International Thesis Juries – 5

Thesis

- *2026 - Killian PUJOL, Laboratoire d'Aérodynamique UMR 5560 Toulouse - Apport de l'intelligence artificielle pour la prévision des phénomènes météorologiques intenses en Corse - examiner*

- 2026 - NICOLAS CHEA, Polytechnique LMD - Solar energy resource forecast using deep learning techniques applied on meteorological satellite images – reviewer.
- 2026 - Bassel CHOKR, univ Angers - Data-Driven Fault Detection and Diagnosis in Renewable Energy Systems: Supervised and Unsupervised Learning Approaches - reviewer.
- 2026 - Claudio F. Nicolosi, Univ. Catania - Probabilistic & Statistical Methods for Weather/Climate Impacts on Power System Adequacy - reviewer.
- 2016 - Adrian Grantham, Univ. South Australia - Maximising Solar Energy Utilisation - examiner.

HDR

- 2026 - Ghjuvan Antone Faggianelli (UMR CNRS 6134 SPE) - examiner.

Long-term Internships (Master / Engineer) - 15

- AI / forecasting / energy / PV / radiotherapy: Jheelan Yoan (MIMO-MH-ELM), Louis Froidure, Alexandre Jovanovic, Laurène Cabrera, Joris Pognant-Gros, Wan Zhao (wind capacity & AI), Auline Rodler, Florence Fideli, Daniel Julian, Prisca Randimbivololona, Ruddy Roustit, Michael Uger, Jennifer Tatje, Amel Baadj, etc.

Short-term Supervision (L3 / M1) - 8

- L3: Paul De Simone, Sébastien Simeon.
- M1: Yoan Jheelan, Martin Leiva, Sandrine Huger, Sabrina Vollmar, Florence Fideli, Daniel Julian.

Professional Experience

Academic Activity

My academic activity began in 2002 at the University of Nîmes, where, still a beginning doctoral student, I was led to independently teach a complete nuclear physics module (lectures, tutorials, examination) following the unexpected withdrawal of the titular teacher. This first experience, obtained in a demanding context, constituted a strong anchor point in my academic trajectory and confirmed my orientation toward higher education. I then maintained regular contact with students through supervision of internships in medical physics and radiotherapy, before resuming teaching activities in 2008 at the University of Corsica (UFR Sciences and Engineering, IUT, Paoli-Tech Engineering School), where I provided tutorials, tutoring and specialized modules in the fields of energy, modeling and numerical methods. Today, as Research Director at Mines Paris - PSL, my pedagogical activity is mainly inscribed in:

- doctoral and post-doctoral supervision,
- training through research (M1/M2, engineers),
- contribution to specialized modules related to energy forecasting, applied AI and statistical modeling,
- scientific support of teams and strategic projects (ELECTRE, Fine4Cast, ANR, H2020...).

The detailed list of my past teaching can be presented in appendix, but my current activity is strongly centered on research project supervision, advanced training and integration of AI/energy methods in the Mines Paris - PSL curriculum. Below, the details of my teaching:

- Since 2022 - Lectures/Tutorials, PASS 1st year - Biostatistics.
- 2020-2021 - Lectures/Tutorials, PASS 1st year - Wave-living matter interactions.
- Since 2019 - Lectures/Tutorials/Lab, DUT GB2 IAB (Corte) - Industrial engineering (Thermodynamics, freezing), industrial physics (cold production).
- 2018-2024 - Lab, PaoliTech Engineering School - Clear sky models, solar forecasting (time series, OLS).

- 2015-2018 - Lab, PaoliTech - Matlab modeling, IR thermography, heat exchangers, PID, thermal insulation.
- 2015 - Lab, CPI Univ. of Corsica - General physics.
- 2014-2015 - Lectures/Tutorials/Lab, Master SEER M1 - Wind resource.
- 2008-2012 - Continuing education for health professionals - Patient radiation protection; positioning imaging (IPC).
- 2008-2019 - Tutorials, Medicine (PCEM/PACES, Corte) - Biophysics, fluid mechanics, nuclear, optics, electromagnetism, membranes, acoustics.
- 2002 - Lectures/Tutorials, Univ. of Nîmes (DEUG Science of Matter) - Nuclear physics.

In parallel with these teaching activities, my role and status within the university has continuously changed and evolved, from intern, contract teacher, visiting researcher, associate and part-time professor as shown in the list below:

- Since 2024 - Research Director (DR2), Mines Paris - PSL, O.I.E. laboratory.
- 2020 - CNU Qualification for Professor functions (section 62).
- 2024 - Associate Professor, University of Corsica (SPE / UMR 6134).
- 2019-2024 - Part-time Professor, University of Corsica (SPE / UMR CNRS 6134).
- 2018-2019 - Associate Researcher, University of Réunion (PIMENT Lab. - Physics & Mathematical Engineering for Energy).
- 2015-2018 - Part-time Professor, University of Corsica (SPE / UMR 6134).
- 2013-2015 - Visiting Researcher, University of Corsica (SPE / UMR 6134).
- 2012 - CNU Qualification for Associate Professor functions (section 62).
- Since 2008 - Expert Member, French Society of Medical Physics (SFPM).
- Since 2008 - Member of the Medicine & Synchrotron Radiation group (Polytechnique College).
- 2002 - Fixed-term contract at CEM2: development of an OSL dosimeter (radiation & neutrons).
- 2002 - Internship at CEM2: dosimetry of atmospheric neutrons.
- 2001 - Internship at the Montpellier Electronics Center (CEM2): Neutrons detection with OSL detectors.

Hospital Activities

Since the end of my medical physics studies (2003), I have exercised continuous clinical activity in external radiotherapy, radiation protection, CT and nuclear medicine, in parallel with my research activities. Main area: external radiotherapy and accelerator physics, with associated expertise in imaging and NM.

- 2020-2024 - Head of the Medical Physics & Radiation Protection unit (UF01795), oncology-radiotherapy pole, CHD Castelluccio (Ajaccio). Supervision: 7 people / 5.6 FTE.
- Since 2006 - Medical physicist (PSRPM / PCR), CHD Castelluccio - external radiotherapy, quality control, radiation protection, dedicated CT scanner.
- 2003-2006 - Medical physicist (PSRPM / PCR), Polyclinique Saint-Roch (Montpellier) - external radiotherapy & brachytherapy; ASN files, equipment purchases, QC, implementation of prostate brachytherapy.
- 2008-2015 - Quality Control Manager in nuclear medicine - GIP MN Ajaccio (gamma cameras, dose calibrator).

- 2008-2011 - CT Quality Control Manager - Polyclinique Maymard (Bastia).
- Elekta technical training: Secondline Physicist LINAC & MLC (Boxmeer, 2017); Firstline LINAC (2016).
- 2004 - Electrical certification (General Electric premises, Suresnes).

My clinical activity also includes extensive technical and organizational responsibilities, quality assurance of treatment devices, management of critical equipment and commissioning of new radiotherapy platforms:

- Participation in ~10,000 external radiotherapy treatments.
- Quality assurance supervision: LINACs, treatment planning systems, CBCT, 4D CT, brachytherapy, detectors and measurement systems.
- Complete commissioning of the new technical platform (2012-2015): 2 Elekta Agility LINACs, CBCT, large bore 4D CT scanner; contributions to tenders, work monitoring, pre-clinical validations.
- Additional activities: CT quality control, protocol optimizations, patient dosimetric evaluations, operational radiation protection.
- Initial experience: radiotherapy, brachytherapy, QC, radiation protection, ASN work (Montpellier).

Number of Publications per Year

Below is the number of publications proposed in international journals (more than 90% of cases) or national journals related to section 62 or other sections, or at conferences (with or without proceedings).

Year	Journals (including Renewable)	National Pub- Com	Book Chapters	Conference Proceedings
< 2019	40(32)	10	2	41
2020	5(5)	0	0	1
2021	4(4)	0	0	2
2022	6(6)	0	0	2
2023	1(0)	0	0	0
2024	1(1)	0	1	3
2025	9(6)	0	0	5
2026	8(7)	0	0	0
TOTAL	74 (61)	10	3	54

Number of Citations and Bibliometric Indices

Below, the number of citations as well as the h and i10 indices relative to the Google Scholar database:
<https://scholar.google.com/citations?hl=en&user=aUIP6agAAAAJ>

The different metrics proposed here were calculated after analysis of the publications detailed below. My production is mainly concentrated in six key journals in the field: **Renewable Energy** (13 articles), **Solar Energy** (9), **Energy** (8), then **Applied Energy** (4), **Renewable & Sustainable Energy Reviews** and (4), **Energies** (3).

Articles in Journals Related to renewable energy

2026

Designing energy sharing in energy communities: Review of coordination mechanisms and internal tariff structures. Adrien Chatel, Gilles Notton, Ghjuvan Antone Faggianelli, Cyril Voyant. **Renewable and Sustainable Energy Reviews**, 239, 117139, 2026

Stochastic Coefficient of Variation: Assessing the Variability and Forecastability of Solar Irradiance. Cyril Voyant, Alan Julien, Milan Despotovic, Gilles Notton, Luis Antonio Garcia-Gutierrez, Claudio Francesco Nicolosi, Philippe Blanc, Jamie Bright. **Renewable Energy** 256, 123913, 2026.

Measurement and forecasting of the diffuse fraction of solar irradiance using a hybrid stacking model in Saudi Arabia. Haifa Harrouch, Nadjem Bailek, Bilel Zerouali, Ilyes Abidi, Hanene Guesmi, Cyril Voyant, Jihad A. Younis, Maher Jebali & Rabab Triki. **Scientific Report**

Quality Control of Tilted Solar Irradiance: A Systematic and Generalizable Procedure. Mohammed Asloune, Gilles Notton, Cyril Voyant. **Renewable Energy**, 2026.

Symmetry-Constrained Forecasting of Periodically Correlated Energy Processes. Cyril Voyant, Candice Banes, Luis Garcia-Gutierrez, Gilles Notton, Milan Despotovic, Zaher Mundher Yaseen. **Applied Mathematical Modelling**, 2026.

A Tolerance-Based Framework for Spatio-Temporal Forecast Validation Using the gamma-Index. Cyril Voyant. **International Journal of Forecasting**, 2026

Short-Term Forecasting of Energy Production and Consumption Using Extreme Learning Machine: A Comprehensive MIMO based ELM Approach. Cyril Voyant, Milan Despotovic, Luis Garcia-Gutierrez, Mohammed Asloune, Yves-Marie Saint-Drenan, Jean-Laurent Duchaud, Ghjuvan Antone Faggianelli, Elena Magliaro. **Applied Energy**, 2026

2025

From Trends to Insights: A Text Mining Analysis of Solar Energy Forecasting (2017--2023). M Asloune, G Notton, C Voyant. **Energies** 18 (19), 5231, 2025

Comparative Study of Feature Selection Techniques for Machine Learning-Based Solar Irradiation Forecasting to Facilitate the Sustainable Development of Photovoltaics: Application to Algerian Climatic Conditions. Said Benkacali, Gilles Notton, Cyril Voyant. **Sustainability**, 17, 6400, 2025

On the Importance of Clearsky Model in Short-Term Solar Radiation Forecasting. Cyril Voyant, Milan Despotovic, Gilles Notton, Yves-Marie Saint-Drenan, Mohammed Asloune, Luis Garcia-Gutierrez. **Solar Energy**, 294, 113490, 2025

A Simple Method for Quickly Estimating Solar Irradiance Forecast Errors. P Lauret, M David, J Le Gal La Salle, E Lorenz, R Perez, C Voyant. **Solar Energy** 301, 113821, 2025

Transfer Learning for Wind Speed Forecasting: A Scalable Approach for Data-Scarce Environments. M Despotovic, G Notton, C Voyant. **International Journal of Green Energy**, 1-16, 2025

NICE^k Metrics: Unified and Multidimensional Framework for Evaluating Deterministic Solar Forecasting Accuracy. C Voyant, M Despotovic, L Garcia-Gutierrez, R Amaro e Silva, P Lauret. **Sustainable Energy Technologies and Assessments** 83 (104588), 2025

2024

Solar irradiance time series forecasting using auto-regressive and extreme learning methods: Influence of transfer learning and clustering. Milan Despotovic, Cyril Voyant, Luis Garcia-Gutierrez, Javier Almorox, Gilles Notton. **Applied Energy**, 365, 123215, 2024

Profitability and performance improvement of smart photovoltaic/energy storage microgrid by integration of solar production forecasting tool. G Notton, S Ouédraogo, GA Faggianelli, C Voyant, JL Duchaud. **Intelligent Learning Approaches for Renewable and Sustainable Energy**, 73-102, 2024

2022

Evaluation and Comparison of Spatial Clustering for Solar Irradiance Time Series. L Garcia-Gutierrez, C Voyant, G Notton, J Almorox. **Applied Sciences** 12 (17), 8529, 2022

Impact of electricity tariffs and energy management strategies on PV/Battery microgrid performances. S Ouédraogo, GA Faggianelli, G Notton, JL Duchaud, C Voyant. **Renewable Energy** 199, 816-825, 2022

Complex-Valued Time Series Based Solar Irradiance Forecast. C Voyant, P Lauret, G Notton, and JL Duchaud. **Journal of Renewable and Sustainable Energy**, 2022.

Benchmarks for Solar Radiation Time Series Forecasting. C Voyant, G Notton, JL Duchaud, LAG Gutiérrez, JM Bright, D Yang. **Renewable Energy**, 2022

Effect of the meta parameters on a model predictive algorithm for renewable micro-grid optimal control. JL Duchaud, GA Faggianelli, C Voyant, G Notton. **Sustainable Energy Technologies and Assessments** 54, 102886, 2022

Contribution of ordinal variables to short-term global solar irradiation forecasting for sites with low variabilities. K Gairaa, C Voyant, G Notton, S Benkacali, M Guermoui. **Renewable Energy**, 2022

2021

Total solar irradiance's effect on the performance of empirical models for estimating global solar radiation: An empirical-based review. J Almorox, C Voyant, N Bailek, A Kuriqi, JA Arnaldo, 2021. **Energy** 236, 121486, 2021

Value of deterministic day-ahead forecasts of PV generation in PV + Storage operation for the Australian electricity market. M David, J Boland, L Cirocco, P Lauret, C Voyant. **Solar Energy** 224, 672-684, 2021

A Monte Carlo based solar radiation forecastability estimation. C Voyant, P Lauret, G Notton, JL Duchaud, A Fouilloy, M David. **Journal of Renewable and Sustainable Energy** 13 (2), 026501, 2021

Solar irradiation prediction intervals based on Box--Cox transformation and univariate representation of periodic autoregressive model. C Voyant, G Notton, JL Duchaud, J Almorox, ZM Yaseen. **Renewable Energy Focus** 33, 43-53, 2021

2020

Verification of deterministic solar forecasts. D Yang, S Alessandrini, J Antonanzas, F Antonanzas-Torres, V Badescu, HG Beyer, R Blaga, J Boland, JM Bright, CFM Coimbra, M David, A Frimane, CA Gueymard, T Hong, MJ Kay, S Killinger, J Kleissl, P Lauret, E Lorenz, D van der Meer, M Paulescu, R Perez, O Perpiñán-Lamigueiro, IM Peters, G Reikard, D Renné, YM Saint-Drenan, Y Shuai, R Urraca, H Verbois, F Vignola, C Voyant, J Zhang. **Solar Energy**, 2020

A Newly Developed Integrative Bio-Inspired Artificial Intelligence Model for Wind Speed Prediction. H Tao, SQ Salih, MK Saggi, E Dodangeh, C Voyant, N Al-Ansari, ZM Yaseen, S Shahid. **IEEE Access** 8, 83347-83358, 2020

Performance study of broadband models for clear sky conditions: case of southern Algeria. S Benkacali, G Notton, C Voyant, K Gairaa. **Journal of Renewable Energies** 23, 236-258, 2020

Global solar radiation prediction over North Dakota using air temperature: Development of novel hybrid intelligence model. Hai Tao, Ahmed A Ewees, Ali Omran Al-Sulttani, Ufuk Beyaztas, Mohammed Majeed Hameed, Sinan Q Salih, Asaad M Armanuos, Nadhir Al-Ansari, Cyril Voyant, Shamsuddin Shahid, Zaher Mundher Yaseen. **Energy Reports** 7, 136-157, 2020

Trade-Off between Precision and Resolution of a Solar Power Forecasting Algorithm for Micro-Grid Optimal Control. JL Duchaud, C Voyant, A Fouilloy, G Notton, ML Nivet. **Energies** 13 (14), 3565, 2020

2019

Hybrid renewable power plant sizing -- Graphical decision tool, sensitivity analysis and applications in Ajaccio and Tilos. JL Duchaud, G Notton, A Fouilloy, C Voyant. **Applied Energy** 254, 113601, 2019

The electrical energy situation of French islands and focus on the Corsican situation. G Notton, JL Duchaud, ML Nivet, C Voyant, K Chalvatzis, A Fouilloy. **Renewable Energy** 135, 1157-1165, 2019

Designing a New Data Intelligence Model for Global Solar Radiation Prediction: Application of Multivariate Modeling Scheme. H Tao, I. Ebtehaj, H Bonakdari, S Heddami, C Voyant, N Al-Ansari, R Deo, ZM Yaseen. **Energies** 7, 1365, 2019

Solar Radiation Forecasting using Artificial Neural Network and Random Forest Methods: Application to Normal Beam, Horizontal Diffuse and Global Components. L Benali, G Notton, A Fouilloy, C Voyant, R Dizene. **Renewable Energy** 132, 871-884, 2019

Some Applications of ANN to Solar Radiation Estimation and Forecasting for Energy Applications. G Notton, C Voyant, A Fouilloy, JL Duchaud. **Applied Sciences** 9 (209), 2019

Multi-Objective Particle Swarm Optimal Sizing of a Renewable Hybrid Power Plant with Storage. JL Duchaud, G Notton, C Darras, C Voyant. **Renewable Energy** 131, 1156-1167, 2019

2018

Periodic Autoregressive Forecasting of Global Solar Irradiation Without Knowledge-based Model Implementation. C Voyant, J De Gooijer, G Notton. **Solar Energy** 174, 121-129, 2018

Prediction intervals for global solar irradiation forecasting using regression trees methods. C Voyant, F Motte, G Notton, A Fouilloy, ML Nivet, JL Duchaud. **Renewable Energy** 126, 332-340, 2018

Prediction bands for solar energy: New short-term time series forecasting techniques. M Fliess, C Join, C Voyant. **Solar Energy** 166, 519-528, 2018

Intermittent and stochastic character of renewable energy sources: consequences, cost of intermittence and benefit of forecasting. G Notton, ML Nivet, C Voyant, C Darras, F Motte, C Paoli. **Renewable & Sustainable Energy Reviews** 87, 96-105, 2018

Solar irradiation nowcasting by stochastic persistence: a new parsimonious, simple and efficient forecasting tool. C Voyant, G Notton. **Renewable & Sustainable Energy Reviews**, 2018

Power ramp-rate control algorithm with optimal State of Charge reference via Dynamic Programming. JL Duchaud, G Notton, C Darras, C Voyant. **Energy** 149, 709-717, 2018

Solar irradiation forecasting with machine learning and computational methods for 3 weather variabilities. A Fouilloy, C Voyant, F Motte, G Notton, C Paoli, ML Nivet, E Guillot. **Renewable Energy**, 2018

2017

Machine learning methods for solar radiation forecasting: A review. C Voyant, G Notton, S Kalogirou, ML Nivet, C Paoli, F Motte, A Fouilloy. **Renewable Energy** 105, 569-582, 2017

Uncertainties in global radiation time series forecasting using machine learning: The multilayer perceptron case. C Voyant, G Notton, C Paoli, A Fouilloy, F Motte, C Darras. **Energy** 125, 248-257, 2017

Forecasting method for global radiation time series without training phase: comparison with other well-known prediction methodologies. C Voyant, F Motte, A Fouilloy, G Notton, C Paoli, ML Nivet. **Energy** 120, 199-208, 2017

Multi-layer Perceptron and Pruning. C Voyant, C Paoli, G Notton, ML Nivet, A Fouilloy, F Motte. **Turkish Journal of Forecasting** 1 (1), 1-6, 2017

2016

Multilayer Perceptron approach for estimating 5-min and hourly horizontal global irradiation from exogenous meteorological data in locations without solar measurements. K Dahmani, G Notton, C Voyant, R Dizene, ML Nivet, C Paoli, W Tamas. **Renewable Energy** 90, 267-282, 2016

2015

Statistical parameters as a means to a priori assess the accuracy of solar forecasting models. C Voyant, T Soubdhan, P Lauret, M David, M Muselli. **Energy** 90, 671-679, 2015

A benchmarking of machine learning techniques for solar radiation forecasting in an insular context. P Lauret, C Voyant, T Soubdhan, M David, P Poggi. **Solar Energy**, 2015

2014

Twenty four hours ahead global irradiation forecasting using multi-layer perceptron. C Voyant, P Randimbivololona, ML Nivet, C Paoli, M Muselli. **Meteorological Applications** 21 (3), 644-655, 2014

Estimation of 5-min time-step data of tilted solar global irradiation using ANN (Artificial Neural Network) model. K Dahmani, R Dizene, G Notton, C Paoli, C Voyant, ML Nivet. **Energy** 70, 374-381, 2014

Time series modeling and large scale global solar radiation forecasting from geostationary satellites data. C Voyant, P Haurant, M Muselli, C Paoli, ML Nivet. **Solar Energy** 102, 131-142, 2014

Heterogeneous transfer functions MultiLayer Perceptron (MLP) for meteorological time series forecasting. C Voyant, ML Nivet, C Paoli, M Muselli, G Notton. **International Journal of Modeling, Simulation, and Scientific Computing**, 2014

Numerical weather prediction or stochastic modeling: an objective criterion of choice for the global radiation forecasting. C Voyant, G Notton, C Paoli, ML Nivet, M Muselli, K Dahmani. **International Journal of Energy Technology and Policy**, 2014

Bayesian rules and stochastic models for high accuracy prediction of solar radiation. C Voyant, C Darras, M Muselli, C Paoli, ML Nivet, P Poggi. **Applied Energy**, 2014

2013

Multi-horizon solar radiation forecasting for Mediterranean locations using time series models. C Voyant, C Paoli, M Muselli, ML Nivet. **Renewable and Sustainable Energy Reviews** 28, 44-52, 2013

Hybrid methodology for hourly global radiation forecasting in Mediterranean area. C Voyant, M Muselli, C Paoli, ML Nivet. **Renewable Energy** 53, 1-11, 2013

2012

PV output power fluctuations smoothing: The MYRTE platform experience. C Darras, M Muselli, P Poggi, C Voyant, JC Hoguet, F Montignac. **International Journal of hydrogen energy** 37 (19), 14015-14025, 2012

Numerical weather prediction (NWP) and hybrid ARMA/ANN model to predict global radiation. C Voyant, M Muselli, C Paoli, ML Nivet. **Energy** 39 (1), 341-355, 2012

2011

Optimization of an artificial neural network dedicated to the multivariate forecasting of daily global radiation. C Voyant, M Muselli, C Paoli, ML Nivet. **Energy** 36 (1), 348-359, 2011

2010

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