

# Curriculum Vitae

Name & first name: **Fateh Ferroudji**

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## Profile:

**DR. Fateh FERROUDJI** is currently Director of Research (Full Professor), in Mechanical Engineering at Research Unit in Renewable Energy in Saharan Medium in ADRAR (URER-MS), connected to the Renewable Energy Development Center (CDER) Algiers, Algeria. He received his B.S., M.S. and Ph.D. degrees in Mechanical Engineering (Engineering Construction) from the Mustapha Ben Boulaid University of Batna 2, Algeria, in 2004, 2008 and 2015, respectively. In 2017, he received the Habilitation Diploma degree from the Mohamed Tahri University of Bechar.

**DR. FERROUDJI** began his professional career as a Mechanical Engineer at Industrial Realization Company Seriana, BATNA (ERIS – a military character) in Sep, 2006. He served as Head department of boiler-making (ERIS) from 2008-2011. He served as project manager for numerous projects: *Installation of a Dual Axis Solar Tracker* (MS-2 TRAKER 10+; 12 Kw power rating); *High Security Retractable*; *Bright Giraffes*, and *Motorize Security of Electric Gates*.

**DR. FERROUDJI** left ERIS in 2011 to become a researcher at URER-MS since Sep, 2011. He is an elected member of Scientific Council (EPST CDER), and is also a member of Ethics and Professional Conduct Committee (EPST CDER). He is a member of Laboratory of Structural Mechanics and Materials (LaMSM - University of Batna 2) since 2009. He served as Director of Conversion Photovoltaic Division (DCPV) from 2018-2020.

**DR. FERROUDJI** has authored or co-authored more than 30 papers (SCI & Scopus journal), and more than 40 international & national conference papers. He has supervised 02 PhD (ongoing) and 06 Master students. He co-authored one textbook (with C. Khelifi) in 2016 with *Advanced Design of Wind Turbines*. He received the Summer Solstice Award (EPST CDER) for *Best Technological Achievement* in 2017 for the realization of a Wind Turbine. He is a reviewed for several Journals (Springer, Wiley, SAGE, Taylor & Francis, IEEE, MDPI, AIP, and Hindawi). He is a member Scientific Committee for 26 International Conference.

## Scientific Interests:

Structural Mechanics (stability and dynamic), Computer-Aided Analysis, Design of Wind Turbine and Solar Tracking Structures, Virtual Prototyping Technology.

## Scientific Production:

### 1. International Publications

- Fateh Ferroudji, T. Outtas, K. Monkova. « **Modal Analysis of a Two Axis Photovoltaic Solar Tracker** » In: Hatti M. (eds) Artificial Intelligence and Heuristics for Smart Energy Efficiency in Smart Cities.

- IC-AIRES 2021. Lecture Notes in Networks and Systems, vol 361. Springer, Cham, 2022, [https://link.springer.com/chapter/10.1007/978-3-030-92038-8\\_23](https://link.springer.com/chapter/10.1007/978-3-030-92038-8_23).
- Fateh Ferroudji, S. Benbouta, T. Outtas. « **Numerical Investigation on Static and Buckling Behaviours of a Mast Support for H-rotor Darrieus Turbine under External Loading** » UPB Scientific Bulletin, Series D: Mechanical Engineering, Vol. 83(2): pp. 273–284, 2021, [https://www.scientificbulletin.upb.ro/rev\\_docs\\_arhiva/fullbb5\\_313137.pdf](https://www.scientificbulletin.upb.ro/rev_docs_arhiva/fullbb5_313137.pdf).
  - Fateh Ferroudji. « **Dynamical Response Numerical Analysis of a 850 KW Wind Turbine Steel Tower** » International Review of Applied Sciences and Engineering, Vol. 12: pp 10-18, 2021, <https://akjournals.com/view/journals/1848/12/1/article-p10.xml>.
  - Fateh Ferroudji, Ch. Khelifi. « **Structural Strength Analysis and Fabrication of a Straight Blade for a H-Darrieus** » Journal of Applied and Computational Mechanics, Vol. 7(3): pp. 1276-1282, 2021.
  - Fateh Ferroudji, L. Saihi, K. Roummani. « **Numerical Simulations on Static and Dynamic Response of Full-Scale Mast Structures for H-Darrieus Wind Turbine** » Wind Engineering, Vol. 45(4) pp. 822–837, 2021, <https://journals.sagepub.com/doi/10.1177/0309524X20917318>.
  - Fateh Ferroudji. « **Static Strength Analysis of a Full-scale 850 kW Wind Turbine Steel Tower** » International Journal of Engineering and Advanced Technology Vol. 8(3): pp. 403-406, 2019, <https://www.ijeat.org/wp-content/uploads/papers/v8i3S/C10840283S19.pdf>.
  - Fateh Ferroudji, Ch. Khelifi & T. Outtas. « **Structural Dynamics Analysis of Three-Dimensional Bi-axial Sun-Tracking System Structure Determined by Numerical Modal Analysis** » Journal of Solar Energy Engineering, Transactions of the ASME, Vol. 140(3):031004-11, 2018, <https://asmedigitalcollection.asme.org/solarenergyengineering/issue/140/3>.
  - Fateh Ferroudji, Ch. Khelifi, F. Meguellati & K. Koussa. « **Design and Static Structural Analysis of a 2.5 kW Combined Darrieus-Savonius Wind Turbine** » International Journal of Engineering Research in Africa (JERA), Vol. 30 pp. 94-99, 2017, <https://www.scientific.net/JERA.30.94>.
  - Fateh Ferroudji, Ch. Khelifi & F. Meguellati. « **Modal Analysis of a Small H-Darrieus Wind Turbine Based on 3D CAD, FEA** » International Journal of Renewable Energy Research (IJRER), Vol. 6 (2) pp. 637-643, 2016, <https://www.ijrer.org/ijrer/index.php/ijrer/article/view/3477>.
  - Fateh Ferroudji, T. Outtas. Ch. Khelifi & R. Mansouri. « **Large-scale Dual Axis Sun Tracking System Modeling and Static Analysis by FEM** » International Journal of Mechanical & Mechatronics Engineering (IJMME), Vol. 14 (04) pp. 92-97, 2014, <https://www.ijens.org/IJMMEVol14Issue04.html>.
  - Fateh Ferroudji, T. Outtas & Ch. Khelifi. « **Design, Modeling and Element Static Analysis of a New Two Axis Solar Tracker Using SolidWorks/COSMOSWorks** » Applied Mechanic and Materials (AMM), Vols. 446-447 pp. 738-743, 2014, <https://www.scientific.net/AMM.446-447.738>.

## 2. Conference Proceedings

- Fateh Ferroudji, T. Outtas, K. Monkova. « **Modal Analysis of a Two Axis Photovoltaic Solar Tracker** » In: Hatti M. (eds) Artificial Intelligence and Heuristics for Smart Energy Efficiency in Smart Cities. IC-AIRES 2021. Lecture Notes in Networks and Systems, vol 361. Springer, Cham, 2022, [https://link.springer.com/chapter/10.1007/978-3-030-92038-8\\_23](https://link.springer.com/chapter/10.1007/978-3-030-92038-8_23).
- Fateh Ferroudji, L. Saihi, K. Roummani. « **Finite Element Modelling and Analysis for Modal Investigation of a Blade H-Type Darrieus Rotor** » In: Hatti M. (eds) Artificial Intelligence and Renewables Towards an Energy Transition. ICAIRES 2020. Lecture Notes in Networks and Systems, vol 174. Springer, Cham, 2021, [https://link.springer.com/chapter/10.1007/978-3-030-63846-7\\_39](https://link.springer.com/chapter/10.1007/978-3-030-63846-7_39).
- Fateh Ferroudji, L. Saihi, K. Roummani. « **Static Behavior of a PV/Wind Hybrid System Structure** » In: Hatti M. (eds) Smart Energy Empowerment in Smart and Resilient Cities. ICAIRES 2019. Lecture Notes in Networks and Systems, vol. 102. Springer, Cham (2020), [https://link.springer.com/chapter/10.1007/978-3-030-37207-1\\_43](https://link.springer.com/chapter/10.1007/978-3-030-37207-1_43).

- Fateh Ferroudji, C. Khelifi, K. Koussa, F. Meguellati. « **Straight blade of H-Darrieus wind turbine: Modelling, stress analysis and fabrication** » ECOS 2019 - Proceedings of the 32nd International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems, pp. 3645–3652, 2019.