

# ALEXANDROS KORKOVELOS

Geospatial data analyst, highly motivated by the great potential of remote sensing, big data & geospatial analysis in supporting innovation towards sustainable development. Interested in a role of data analyst/scientist through which I can use and further develop my technical and analytical skills to provide strategic advice and insights to complex problems.

## PERSONAL INFO

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Greek | Dec 8, 1989

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**LinkedIn:** [linkedin.com/in/alexandros-korkovelos-07931168](https://www.linkedin.com/in/alexandros-korkovelos-07931168) | **GitHub:** <https://github.com/akorkovelos>

**Address:** Residence Tower, N4 2NE, London, UK

## EDUCATION

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- 09/2015 – 06/2020 **KTH Royal Institute of Technology (Sweden)**  
PhD candidate in Energy Systems Analysis  
Research Focus: Energy modelling and systems' planning to support electrification activities in developing economies under the Sustainable Energy for All (SE4ALL) framework.  
Main Courses: Energy System Economics, Modelling and Indicators for Sustainable Energy Development, Energy Data, Balances and Projections, Energy and Geopolitics, Spatial Data Analysis.
- 09/2013 - 08/2015 **KTH Royal Institute of Technology (Sweden) & Universitat Politècnica de Catalunya (Spain)**  
Master of Science (MSc.) in Sustainable Energy Engineering  
[European Institute of Innovation & Technology \(EIT KIC InnoEnergy\) Scholarship 2013 - 2015](#)  
Master Thesis in Renetech AB, Stockholm Sweden: *Energy modelling to support subnational sustainable planning in developing countries: The case of Kakamega County in Kenya.*  
Main courses: Energy Resources, Renewable Energy Technologies, Energy & Environment, Polygeneration, Economics and Energy Markets, Innovation & Entrepreneurship in Sustainable Energy Technology, Environmental Pathways for Sustainable Energy Conversion.
- 09/2007 - 07/2013 **DUTH - Democritus University of Thrace - School of Engineering**, Xanthi Greece  
Diploma (MEng) in Industrial Engineering & Management [GPA: 8.04/10.0](#)  
[Major in Production optimization](#)  
Master Thesis: *EcoReDesign of industrial product: Case of split unit air conditioner.*  
Main courses: Computer Programming, Data analysis, Operations Resource Management, Total Quality Management, Project Management, Marketing, Industrial Economics, Industrial Informatics.

## WORK EXPERIENCE

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- 07/2020 – present **The World Bank, Washington D.C United States of America**  
Geospatial Data Analyst | Energy Access Specialist
- Research and development over the Open Source Spatial Electrification Tool (OnSSET) that is used to generate spatially explicit electrification roadmaps in Sub-Saharan Africa.
  - High level consultation and technical support on the development of policy (at national or sub-national level) associated with the implementation/actualization of the above-mentioned electrification roadmaps.
  - Support capacity building and pedagogical activities related to geospatial electrification planning and the use of the OnSSET by local authorities and third-party stakeholder (e.g. ministerial divisions and/or academia) in those countries.
- 09/2015 – 06/2020 **Division of Energy Systems Analysis (dESA) at KTH, Stockholm, Sweden**  
Research Consultant
- Coordinate the development of the Global Electrification Platform (GEP): [Client: The World Bank](#)
  - Coordinate and support the geospatial electrification analysis featuring at IEA's Energy Access Outlook 2019: [Client: IEA](#)
  - Coordinate and support the development of the Open Source Spatial Electrification Toolkit (OnSSET) [Client: UNDESA, SIDA, ABB, The World Bank](#)
  - Conduct the geospatial electrification analysis featuring at IEA's Energy Access Outlook 2017: [Client: IEA](#)
  - Conduct geospatial electrification analyses for developing countries (44 countries in Sub-Saharan Africa, 10 countries in Latin America & 6 countries in South East Asia) [Client: UNDP-UNDESA](#)
  - Develop and maintain a comprehensive geo-database of energy related data for developing countries [Client: The World Bank](#)
  - Support educational and capacity building activities in developing countries organized by [KTH dESA, UNDESA and The World Bank](#)

- Coordinate (research) proposals: [The World Bank](#), [Africa Development Bank](#), [UNDESA](#), [IEA](#), [ESA](#)

#### Project Manager

- Energy planning for boosting agricultural productivity in Mozambique [Client: The World Bank](#)
- Electrification perspectives for Madagascar [Client: The World Bank](#)
- Rural electrification and energy infrastructure planning in Afghanistan [Client: The World Bank](#)

02/2015 – 11/2015

#### **Renetech AB, Stockholm Sweden**

##### Junior Energy Consultant

- Coordinating the feasibility study for a small hydro power plant in Rucanzogera, Rwanda
- Provided GIS support to the elaboration of the geo-topological and hydrological assessment of the project
- Developed a socio-economic and environmental assessment for the project
- Reviewed the legal and institutional framework for electrification processes in Rwanda

07/2012 – 12/2012

#### **Xingyu Automotive Lighting Systems Co., Ltd, Changzhou, China**

##### Junior Engineer - Apprenticeship on production planning processes

- Support procurement regulations and inventory management using MRP systems
- Setup a database (MS Access) for more effective information exchange between the involved departments
- Involvement in the implementation of Lean manufacturing processes through data mining

## LANGUAGES

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**Native:** Greek, **Fluent:** English, **Basic:** Swedish, Spanish

## SOFTWARE SERVICES & PROGRAMMING

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**Competent:** OnSSET, ArcGIS, MS Office, LEAP

**Good:** Python, QGIS, Git, ReadTheDocs/Sphinx, Anaconda, Jupyter Lab

**Basic:** AWS, GEE, SNAP, OSM, Osmosis, HTML, Jekyll, Grass GIS, PostgreSQL-PostGIS, GeoServer, PVSyst, RETscreen, HOMER, MATLAB, AutoCad, LaTeX, Linux OS

## PUBLICATIONS

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### First Author

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|------|---|
| 2018 | <b>Energies - Korkovelos A.</b> ; Mentis D.; Siyal S.; Arderne C.; Rogner H.; Bazillian M.; Howells M.; Beck H.; De Roo A.; “A geospatial assessment of small-scale hydropower potential in Sub-Saharan Africa”.                                  |
| 2019 | <b>Energies - Korkovelos A.</b> ; Howells M.; Sahlberg A.; Khavari B.; “The role of Open Source data and tools in geospatial electrification planning and the achievement of SDG 7”.  |
| 2020 | <b>Technological Forecasting &amp; Social Change - Korkovelos A.</b> ; Howells M.; Nerini F.; Bazillian M.; Zerriffi H.; Rogner H.; “A retrospective analysis of electrification with a focus on isolated and mini-grids”.                        |
| 2020 | <b>Energy Strategy Reviews - Korkovelos A.</b> ; Mentis D.; Siyal S.; Bazillian M.; Angelou N.; Howells M.; “Energy planning in fragile environment. Incorporating conflict related stresses in geospatial least-cost electrification modelling”. |

### Co-author

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|---------|--|
| 05/2020 | <b>Applied Energy (2020), Volume 264</b> , Menghwani V. Zerriffi H.; <b>Korkovelos A.</b> ; Khavari B.; Sahlberg A.; Howells M.; Mentis D.; “Planning with justice. Using spatial modelling to incorporate justice in electricity pricing – The case of Tanzania”.   |
| 09/2017 | <b>Energy Strategy Reviews 2017, 17, 45-49</b> , Mentis D.; Siyal S.; <b>Korkovelos A.</b> ; Howells M.; “Estimating the spatially explicit wind generated electricity cost in Africa - A GIS based analysis”.   |
| 07/2017 | <b>Environmental Research Letters 2017, 12, 8</b> , Mentis D.; Howells M.; Rogner H.; <b>Korkovelos A.</b> ; Arderne C.; Zepeda E.; Siyal S.; Taliotis C.; Bazillian M.; De Roo A.; Tanvez Y.; Oudalov A.; “Lighting the World: the first application of an open source, spatial electrification tool (OnSSET) on Sub-Saharan Africa”. |

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07/2017	<b>Environmental Research Letters</b> 2017, Moksnes N.; <b>Korkovelos A.</b> ; Mentis D.; Howells M.; <i>“Electrification pathways for Kenya – linking spatial electrification analysis and medium to long term energy planning”</i> .
11/2016	<b>Renewable Energy</b> 2016, 97, 77-88, Mentis D.; Siyal S.; <b>Korkovelos A.</b> ; Howells M.; <i>“A geospatial assessment of the techno-economic wind power potential in India using geographical restrictions”</i> .
04/2016	<b>Applied Geography</b> 2016, 72, 1-13, Mentis D.; Andersson M.; Howells M.; Rogner H.; Siyal S.; Broad O.; <b>Korkovelos A.</b> ; <i>“The benefits of geospatial planning in energy access – A case study on Ethiopia”</i> .

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## WORKSHOPS – CONFERENCES - PRIZES

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06/2019	Three-week workshop at OpTIMUS Summer School - <b>Capacity building</b> with the World Bank, DFID, UNDP, UNDESA and representatives of 11 countries, Trieste Italy.
06/2018	Four-week workshop at OpTIMUS Summer School - <b>Capacity building</b> with the World Bank and representatives of 15 countries, Trieste Italy.
02/2018	Training Workshop on OnSSET tool at Energy Modelling Platform for Africa (EMPA) - <b>Capacity building</b> with UNECA and representatives of 6 African countries, Addis Ababa Ethiopia.
07/2017	Training Workshop on OnSSET tool - <b>Capacity building</b> with the World Bank and representatives of the Government of Afghanistan, Dubai UAE.
05/2017	World Hydropower Congress – Invitation to participate as panelist to the dialogue on the role of small (off-grid) hydropower in rural electrification & Awarded the prize of <b>IHA Young Researcher</b> for 2017, Addis Ababa Ethiopia.
04/2017	European Geosciences Union General Assembly – Nominated for the <b>Outstanding Student Poster and Pico Award</b> for 2017, Vienna Austria.
02/2017	Training Workshop on energy modelling - <b>Capacity building</b> with the World Bank and representatives of four South East Asian Countries, New Delhi India.
08/2016	Training Workshop – <b>Capacity building</b> of 30 officials from various African countries on Modelling tools and integrated approaches for sustainable development policies in partnership with UNDESA/DPAD and UNDP, Addis Ababa Ethiopia.
11/2015	International Workshop on Environment & Alternative Energy organized by NASA and ESA, ESAC Madrid Spain.