

# 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 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/alekordESA>

**Address:** 24 Residence Tower, N4 2NE, London, UK

## EDUCATION

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09/2015 – 11/2019 (exp.)

### **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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09/2015 - present

### **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**

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, GitHub, ReadTheDocs/Sphinx, Anaconda, Jupyter Lab

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

### **Co-author**

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|---------|---|
| 09/2017 | <b>Energy Strategy Reviews 2017, 17, 45-49,</b> Mentis D.; Sival S.; <b>Korkovelos A.;</b> Howells M.; “ <i>Estimating the spatially explicit wind generated electricity cost in Africa - A GIS based analysis</i> ”.   |
| 07/2017 | <b>Environmental Research Letters 2017, 12, 8,</b> Mentis D.; Howells M.; Rogner H.; <b>Korkovelos A.;</b> Arderne C.; Zepeda E.; Sival S.; Taliotis C.; Bazillian M.; De Roo A.; Tanvez Y.; Oudalov A.; “ <i>Lighting the World: the first application of an open source, spatial electrification tool (OnSSET) on Sub-Saharan Africa</i> ”. |
| 07/2017 | <b>Environmental Research Letters 2017,</b> 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 2016. 97. 77-88.</b> Mentis D.; Sival 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 2016, 72, 1-13,</b> Mentis D.; Andersson M.; Howells M.; Rogner H.; Sival S.; Broad O.; <b>Korkovelos A.;</b> “ <i>The benefits of geospatial planning in energy access – A case study on Ethiopia</i> ”.  |

## **WORKSHOPS – CONFERENCES - PRIZES**

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| 06/2019 | Three-week workshop at OnTIMUS 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 OnTIMUS 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.

## **HOBBIES**

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Basketball, CrossFit, Travelling