















Energy Storage Systems Dynamics

Lancaster Market University

Lecturer | Assistant Professor

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Lancaster University

Department of Engineering Energy Lancaster

Chief Operating Officer

Energy Data Analytics | Co-founder



O Analytics denes@descoanalytics.com

DESCO Analytics

Energy Efficiency Recommendation Engine Energy Analytics through Big Data and Al

Co-founder

Sustainable Energy & Development



+40 744 772756

denes@arc-initiative.org

ARC initiative

Engineering System Design through Participation · Collaboration · Sustainability

Jury member COO & Co-founder Research & Teaching Assistant **DESCO** Analytics Zayed Sustainability Prize Masdar Institute Research Assistant Global High Schools Lancaster, UK Abu Dhabi, UAE Climate CoLab, MIT Abu Dhabi, UAE Lecturer | Asst. Prof. ERASMUS Scholarship Student | WWW Cambridge, MA, US Lancaster University Research Assistant | TEI of Western Macedonia BU Lancaster, UK Pardee Centre Co-founder Kozani, Greece (3) **Boston University** ARC initiative Teaching Assistant | Boston, MA, US Abu Dhabi, UAE Technical University of Clui-Napoca, Romania 2012 2018 PhD in Interdisciplinary BSc in Electrical Engineering International Summer Engineering Technical University of University on Energy **HZB** Masdar Institute & MIT Cluj-Napoca, Romania Helmholtz Zentrum Berlin Abu Dhabi, UAE Falera, Switzerland Professional Certificate MSc in Engineering PhD exchange Systems & Management in Blockchain Strategy Sloan School, MIT Saiid Business School Masdar Institute & MIT Cambridge, MA, US University of Oxford, UK Abu Dhabi, UAE









Personal

4 DAN black belt in Shotokan Karate 3 DAN in Kendo

2 World & 4 Euro Championships

Climbed Mont Blanc Stok Kangri 6153m

Visited 50 countries Lived in 5 on 3 cont



10+ peer-reviewed

articles in journals

including **Nature**

PI on 5 research

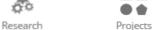
grants, Co-I on 3

Research featured in

Times, Quartz, with

over 120,000 reads

RG: 15.3 h-index: 3



Educational workshops on sustainability and renewable energy in Malaysia, Indonesia, Tanzania,

India. Somaliland. 1200 blog followers

Live workshops on dataviz, datactivism



Visualizations My data analyses

have been featured by

UNDP, UNHCR, the

GDELT project and

Beautiful Awards

Pro in D3, D3plus,

PowerBI, superset,

HTML + CSS + JS

Seaborn, Bokeh,

Kantar Info

My agent-based & system dynamics simulation models top 3 of the 10 categories on runthemodel.com Ecosystem& Social Dynamics AnyLogic

Models

Pro in Python, keras, TF,, sk-learn



Presentations

Languages

As native: EN, HU, RO

Medium: FR, DE

30+ presentations around the world

Pro in impress.is. slides.com, live





























Biophysical Economics & Net Energy Analysis **Sustainable Energy Transitions**

Simulation Modelling

Agent-based modelling & Complex systems Systems Thinking & System Dynamics

Data Science

Machine Learning & Data Mining **Data Visualization & Infographics**

Dénes is an assistant professor in *Energy Storage* Systems Dynamics with Energy Lancaster and an independent consultant in data science and energy. His research interests include system dynamics, energy transitions, energy storage, data visualization, data mining, machine learning, Al and agent-based and time-series modelling.

He is a well-known researcher in the field of sustainable energy transitions and biophysical economics. With a PhD in Interdisciplinary from Masdar Institute. Engineering collaboration with MIT, his research has been published in *Nature* and it has been featured in The Times. He currently leads an energy data analytics project at Lancaster University.

When not in front of the computer, Dénes roams the mountains of the Himalaya and the jungles of Africa to hold workshops on sustainability and renewable energy. His datactivism blog Try something new. Everyday. Is followed by 1200, exploring topics in development through visualization and story-telling with data.



2y years Ast Prof 7y Research Ast

4y Teaching Ast

4y Development

3v Data Science

PhD thesis ⊃

MSc thesis ⊃

BSc thesis **⊃**





















