



Energy & Sustainability

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, AI 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 Engineering* from *Masdar Institute*, in 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 **dataactivism** blog *Try something new. Everyday.* is followed by 1200, exploring topics in **development** through visualization and **story-telling with data**.

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DESCO Analytics

Energy Efficiency Recommendation Engine
Energy Analytics through Big Data and AI

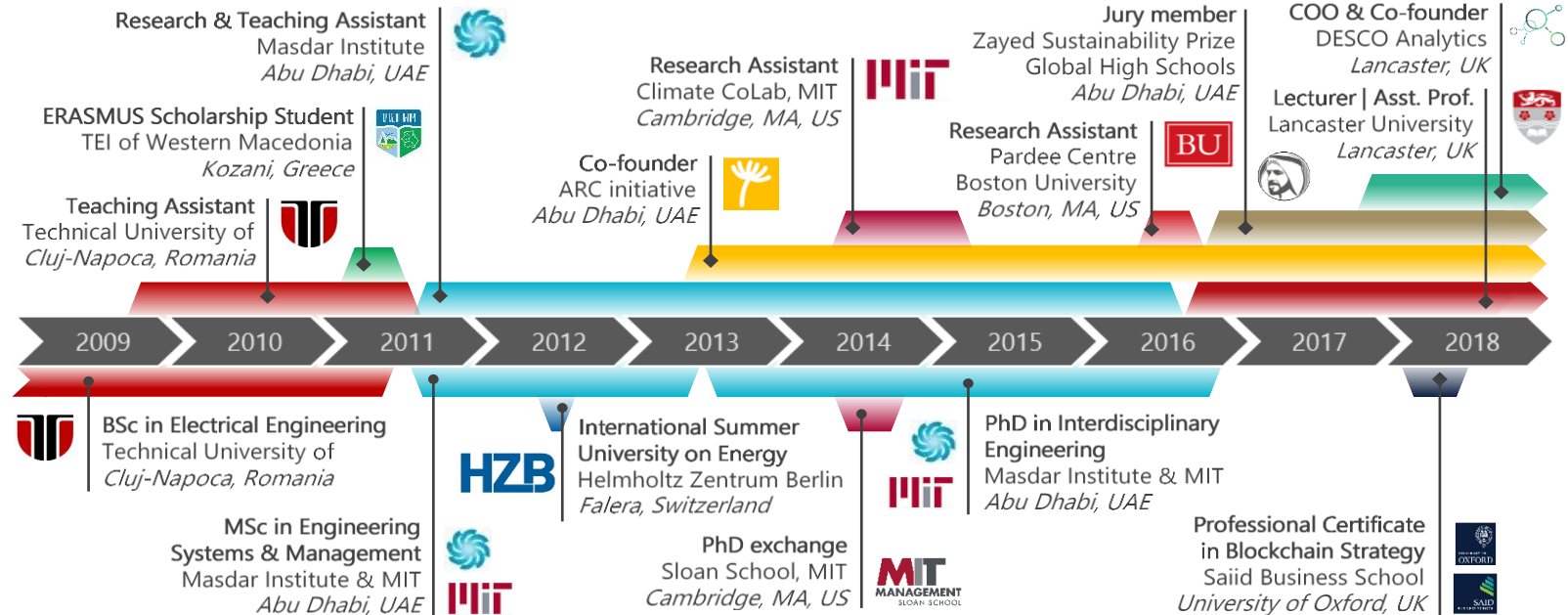
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ARC initiative

Engineering System Design through
Participation · Collaboration · Sustainability



| Professional | Personal | Research | Projects | Visualizations | Models | Presentations |
|--|--|---|---|--|---|--|
| 2y years Ast Prof 7y Research Ast 4y Teaching Ast 4y Development 3y Data Science PhD thesis ⇨ MSc thesis ⇨ BSc thesis ⇨ | 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 RG: 15.3 h-index: 3 PI on 5 research grants , Co-I on 3 Research featured in Times , Quartz, with over 120,000 reads | Educational workshops on sustainability and renewable energy in Malaysia, Indonesia, Tanzania, India, Somaliland. 1200 blog followers Live workshops on dataviz , dataactivism | My data analyses have been featured by UNDP , UNHCR , the GDELT project and Kantar Info Beautiful Awards Pro in D3 , D3plus , Seaborn , Bokeh , PowerBI , superset , HTML + CSS + JS | My agent-based & system dynamics simulation models top 3 of the 10 categories on runthemodel.com Ecosystem& Social Dynamics AnyLogic Pro in Python , keras , TF , sk-learn | Languages As native: EN, HU, RO Medium: FR, DE 30+ presentations around the world Pro in impress.js , slides.com , live |
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