Dénes Csala

Try something new. Everyday.

Graduate Research Assistant
Sociotechnical Sustainable Transitions

Masdar Institute of Science and Technology
Institute Center for Smart and Sustainable Systems
Engineering Systems & Management

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Co-founder
Systems Modeling Expert

ARC-initiative.org
Integrated Sustainable Systems Solutions
for Human Capability Enhancement

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Interests

System Dynamics | Sociotechnical & Engineering Systems | Engineering Solutions for Sustainable Development
Agent-Based Modeling | Systems Thinking and Systems Theory | **Capacity Building & Participatory Design**
Applied Engineering Algorithmics | **Integrated Systems Approaches** | Capability Enhancement
Hybrid Systems Modeling Methods | Sustainable Energy Transitions | Integrated Community Development

Education

MSc Engineering Systems & Management **BSc** (honors) Electrical Engineering

2011 – 2013 — **Masdar Institute of Science and Technology**, Abu Dhabi, UAE
3.63 / 4.00 — degree offered in collaboration with **Massachusetts Institute of Technology (MIT)**, USA
MSc Thesis ➲ — *Focus areas*: Object Oriented System Dynamics, Sustainable Aviation

2007 – 2011 — **Technical University of Cluj-Napoca**, Cluj-Napoca, Romania, *Head of Class*, *Best Thesis*
9.15 / 10.00 — co-signed by **Technological Educational Institute of Western Macedonia**, Kozani, Greece
BSc Thesis ➲ — *Specialization*: Electrical Systems, *Focus areas*: Numerical Methods, Electromagnetism

2003 – 2007 — **Márton Áron High School** – Miercurea Ciuc, Romania, ***98.4 / 100***, *Head of Class, Promotion*

Languages

Hungarian (native)
Romanian (advanced)
English (advanced)
French (intermediate)
German (intermediate)

Experience & Research

5 years experience as **Research Assistant**
3 years experience as **Teaching Assistant**
} link ➲

6 months as **Visiting Researcher**

1 year involvement with **ARC initiative** - link ➲

1 journal, 9 working papers
3 conference presentations
1 book, 1 book chapter
} link ➲

Involvement

I co-founded a **non-profit organization** that focuses on an **integrated systems approach** towards **community development** and **capability enhancement**. Using a participatory systems thinking approach and possibly systems modeling techniques, we try to design **integrated solutions** to capacity build in communities and design a path for a transition towards a **sustainable future**. Borneo (**Malaysia**), Abaarso (**Somaliland**), Leh (**India**)

Activities

Climbing ➲
Stok Kangri
6153m

4 DAN Shotokan Karate **3 DAN** Kendo
2 World & 4 European Championships
with Romanian National Kendo Team

Traveling ➲ (visited **40+** countries, lived in **4**)

Aim

contribute to the advancement of sociotechnical sustainable transitions and community development

- ***Theory realm***: **create interactive systems tools** (and theories) to aid policy-makers in designing **integrated sustainable energy transitions** and **community development frameworks.** Combines object oriented system dynamics and agent-based modeling into a **hybrid systems modeling method** to model abstract-level policy decisions, as well as adaptive entity-level user logic.
- ***Involvement realm***: through numerous **field-trips**, design and test a portable and adaptive community development framework, using systems thinking and complex systems theory to yield an **integrated sustainable solutions for human capability enhancement model**.

Skills

Microsoft Office
AnyLogic **Vensim**
Mathcad Matlab
JAVA C++ HTML5
System Dynamics
Project Management