



## Graduate Research Assistant Sociotechnical Sustainable Transitions

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

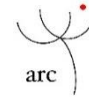
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dcsala@masdar.ac.ae



## Co-founder Workshops, Modeling

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

+40 744 772 756  
denes@arc-initiative.org



### Interests

#### System Dynamics

Agent-Based Modeling

#### Big Data Analytics

Hybrid Systems Modeling Methods

Sociotechnical & Engineering Systems

Systems Thinking and Systems Theory

#### Integrated Systems Approaches

Sustainable Energy Transitions

Engineering Solutions for Sustainable Development

#### Capacity Building & Participatory Design

Capability Enhancement

Community Development



### Education

2011 – 2013

**3.63 / 4.00**

**MSc Thesis** ➔

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

**Masdar Institute of Science and Technology**, Abu Dhabi, UAE

degree offered in collaboration with **Massachusetts Institute of Technology (MIT)**, USA

*Focus areas:* Object Oriented System Dynamics, Sustainable Aviation

2007 – 2011

**9.15 / 10.00**

**BSc Thesis** ➔

**Technical University of Cluj-Napoca**, Cluj-Napoca, Romania, *Head of Class, Best Thesis*

co-signed by **Technological Educational Institute of Western Macedonia**, Kozani, Greece

*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

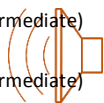
**Hungarian** (native)

**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 by offering educational workshops, we try to design **integrated solutions** to **capacity build** in communities and design a path for a transition towards a **sustainable future**. Borneo (Malaysia), Abaars (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**)



### Objective

My objective is to contribute to the **advancement of sustainability** through **science** and **community development**, both on the **modeling** as well as on the **application** front. I believe in **open research** and **action**.



### Skills



<b>Python</b>	<b>AnyLogic</b>	
<b>Vensim</b>	<b>Matlab</b>	<b>Mathcad</b>
<b>D3.js</b>	<b>Javascript</b>	<b>HTML5</b>
<b>JAVA</b>	<b>C++</b>	<b>Big Data Analytics</b>
<b>System Dynamics</b>		<b>Chaos</b>
<b>Project Management</b>		<b>Teaching</b>