

Anna Hulda Ólafsdóttir PhD

PHD IN INDUSTRIAL ENGINEERING · SYSTEM DYNAMICS EXPERT

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“Be the change that you want to see in the world.”

Summary

In a nutshell:

Beyond my professional endeavors, I'm deeply committed to environmental stewardship, our future generations and a healthy lifestyle. I follow a vegan lifestyle, participate in CrossFit and weightlifting, and deeply value moments spent with my family, including my husband and two children. Additionally, I have a zest for thrill-seeking experiences and am passionate about simulation modeling, tackling complex projects, and embracing new learning opportunities

I'm currently the Director of the Icelandic Climate Service and Adaptation Centre at the Icelandic Met Office. In my role, I've had the privilege of spearheading efforts to equip various stakeholders with accurate and pertinent insights for climate change adaptation and services. I'm also Iceland's focal point in various international projects including the Intergovernmental Panel on Climate Change (IPCC).

My professional journey is underpinned by a dedication to merging scientific research and monitoring with practical decision-making and implementation. Holding a Ph.D. in industrial engineering, my expertise encompasses system dynamics, quality management, and sustainability. This academic background paved the way for my position as an associate professor at the University of Iceland, where I explored these domains through teaching and research. My work has been recognized internationally, notably with the IPMA Young Researcher Award in 2015 and multiple peer reviewed scientific papers.

Education

2011-2016 **PhD in Industrial Engineering**, Specialized in System dynamics and quality management

University of Iceland

2009-2011 **MSc in Industrial Engineering**, Masters thesis graded with 9.5: QMS in the construction industry

University of Iceland

2005-2008 **BSc in Industrial Engineering**,

University of Iceland

OTHER SHORTER COURSES

Oct 2021 **Leader in Sustainability and Business Development**, Copenhagen Business School Executive

Akademias

National focal point

2021-curr **National focal point for IPCC**, [LINK](#)

2023-curr **National focal point for WMO Regional Association VI (RA VI), National Climate Services Information Systems (CSIS)**, [LINK](#)

2021-curr **National focal point for DestinationEarth**, [LINK](#)

Honors & Awards

INTERNATIONAL AND NATIONAL

2015 **The international IPMA Young Researcher Award**, awarded in Africa:

International

2023 **Honorary member of the Icelandic weightlifting federation**, awarded for being a trailblazer for women and contribution to weightlifting in Iceland

Trailblazer

Public speaking

I've engaged in multiple public speaking events in the form of lectures, panel discussions or moderator and interviews across television, radio, and newspapers. Attempt to list it all up will not be made but here are some showcasing examples: At the Icelandic scientific committees press conference at Gróska, as an example of panel discussions: [LINK](#), start 1:14:08. At an event focused on the municipalities that I organized at Hótel Natura, as an example of lecture in Icelandic: [LINK](#), start 01:14. At the NOCCA23 event, as an example of a lecture in English [LINK](#), start 11:45. In a podcast interview at Jæja [LINK](#)

Project management

I have various project management experience ranging from multiple event management projects and industrial experience from HRV/Mannvit to leading scientific project groups, like managing the scientific committee appointed by the minister to do the fourth scientific assessment report on climate change in Iceland (<https://www.loftslagsbreytingar.is/>) and being a work package leader in H2020 research project called LOCOMOTION, managing a team including people from 8 Universities from all over the world. As an example of an ongoing project I lead is the creation of the Icelandic climate Atlas.

INTERNATIONAL CONFERENCES AND EVENTS ...just a few examples of events I have organised:

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|------|---|-----------------|
| 2023 | NOCCA23 , Conference manager of the 6th Nordic Conference on Climate Change Adaptation, NOCCA23 . The conference outcomes were published in a policy brief by the Nordic council of ministers. | Reykjavík |
| 2023 | ECCA23 event , Organised a side event at ECCA23 called Stronger together for a climate-resilient north | Dublin |
| 2023 | COP28 event , Organised a side event at COP28 at the Nordic pavilion called Mainstreaming adaptation at the local level . | Dubai |
| 2022 | COP27 event , Organised a side event called "A message from the Cryosphere 2022" at the Cryosphere pavilion | Sharm El Sheikh |
| 2018 | ICSDS , Organizing local Chair of the 36th International Conference of the System Dynamics Society. Also organized and thought in a summer school prior to the conference | Reykjavík |

Research

RESEARCH FIELD: System dynamics, resources, sustainability, project management, quality management, climate change, adaptation to climate change.

H2020 PROJECTS

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| 2019-2021 | LOCOMOTION , Low-carbon society: an enhanced modelling tool for the transition to sustainability' (LOCOMOTION) aims to design a new set of IAMs (Integrated Assessment Models) to provide policymakers and relevant stakeholders with a reliable and practical modelling system to assess the feasibility, effectiveness, costs and ramifications of different sustainability policy options. I was a work package leader focused on the technical and biophysical system modelling. Media coverage LINK . | www.locomotion-h2020.eu |
| 2017-2018 | VALUMICS , Aims to develop approaches and tools to analyse the structure, dynamics, resilience and impact of food chains on food security, economic development and the environment. | www.valumics.eu |

OTHER RESEARCH PROJECTS

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| 2016-current | WORLD7 , Global integrated assessment model. Captures industrial ecology, environmental factors, global resources, energy, sustainability issues and social factors to name a few. Many publications done on the WORLD7 project, see detailed list below. | www.uni.hi.is/annahulda |
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Chairmanship, committees and consultant work

The national knowledge network of climate change adaptation

BOARD CHAIR:

- The board is appointed by the minister of the Environment, Energy and Climate. **LINK**

AD-hoc

2022-2023

Professional group about quality management at Stjórnvísir

BOARD CHAIR:

- Organized meetings and events regarding for members and the board

Ad-hoc

2011-2012

Ministry of the Environment, Energy and Climate

STEERING COMMITTEE FOR:

- Suggestions for execution and creation of the national adaptation plan, **LINK**. Final report, Climate resilient Iceland (*Loftslagspolið Ísland*)

AD-hoc

2023

Nordic council of ministers

STEERING COMMITTEE FOR:

- Nordic perspective on transboundary climate risk

AD-hoc

2022

- Student innovation fund
- Technical innovation fund

Work Experience

Icelandic Met Office

Full time

DIRECTOR OF THE ICELANDIC CLIMATE SERVICE AND ADAPTATION CENTRE, (ICSA)

2021-current

- ICSA was established in 2021 and operates as a distinct unit within the Icelandic Met Office (IMO). Under the auspices of the Ministry of the Environment, Energy, and Climate. ICSA plays a pivotal role in providing crucial support to the Icelandic Government's climate adaptation policies and actions.

University of Iceland

Full time

ASSOCIATE PROFESSOR / LECTURER / SPECIALIST

2012-2021

- Associate professor from 2020-2021, Lecturer from 2016-2020, Teacher from 2012-2016
- Taught various course, including, Systems Analysis and System Dynamics Modelling, Quality management, Simulation, Introduction to master's studies in Industrial Engineering. Detailed teaching portfolio is attached. Involved in two big, H2020, European research projects. Supervised 4 masters students.
- Published over **20** papers, co-authored **5** books and one book chapter and **15** abstracts/papers included in conference proceedings. Detailed publication list attached.

Reykjavík University

Part time

TEACHER

2018-current

- Thought Simulation II and involved in teaching Excellence in management – Lean management. Teaching portfolio attached. Supervised 3 masters students.

BI Norwegian Business School

Part time

TEACHER AND ORGANIZER

2020

- Organised and thought a course, *a system thinking approach to solving wicked problems* aimed to introduced system thinking and systems dynamics methodology to help leaders better understand and find strategic solutions foundation for decisions in demanding and complex situations

Norwegian Inland University

Part time

EXTERNAL SENSOR

2019-curr

- System dynamics, sustainability, project planning, system thinking, world systems and serious games I and II, the challenge.

Freiburg University

Part time

TEACHER AND ADVISOR

2019-2021*

- Assistance and consulting with the KASCoP project team. Thought an AD-hoc summer seminar in System Dynamics. Intensive training in the form of workshop

Endurmenntun

Part time

TEACHER

2016 and 2019

- Involved in teaching two courses regarding the construction industry and quality management. Detailed teaching portfolio attached

Mannvit / HRV

Full time

INDUSTRIAL ENGINEER / PROJECT MANAGER

2009

- Project management experience. Took part in developing a quality management system for HRV.

Publications

Below is a list of publications categorized by kind.

REPORTS:

Björnsson et al., [2023](#); Helgason et al., [2023](#); A. H. Olafsdottir et al., [2021](#); A. H. Olafsdottir et al., [2023](#); A. H. Olafsdottir and Sverdrup, [2020](#); Papa-
gianni et al., [2020](#)

PAPERS:

A. Olafsdottir and Sverdrup, [2021](#); A. H. Olafsdottir, Gudbrandsdottir, Sverdrup, et al., [2018](#); A. H. Olafsdottir, Gudbrandsdottir, Sverdrup, Bogason, et al., [2018](#); A. H. Olafsdottir et al., [2016](#); A. H. Olafsdottir and Ingason, [2014](#); A. H. Olafsdottir, Stefansson, and Ingason, [2017](#); A. H. Olafsdottir and Sverdrup, [2018](#); A. H. Olafsdottir et al., [2019](#); A. H. Olafsdottir and Sverdrup, [2019a](#), [2020](#); Ragnarsdottir et al., [2017](#); H. U. Sverdrup and Olafsdottir,

PROCEEDINGS:

Gudbrandsdottir et al., 2018; A. H. Olafsdottir, 2012, 2013; A. H. Olafsdottir, Gudbrandsdottir, Sverdrup, Olafsdottir, et al., 2018; A. H. Olafsdottir and Stefansson, 2014; A. H. Olafsdottir and Sverdrup, 2019b; Schlyter et al., 2017; H. U. Sverdrup and Olafsdottir, 2019a, 2019c; H. U. Sverdrup, Olafsdottir, and Koca, 2020; H. U. Sverdrup et al., 2018b; H. U. Sverdrup, Olafsdottir, et al., 2017

BOOKS AND BOOK CHAPTERS:

A. H. Olafsdottir and Oddson, 2020; A. H. Olafsdottir, Sverdrup, and Ragnarsdottir, 2017; H. Sverdrup et al., 2021; H. U. Sverdrup et al., 2021; H. U. Sverdrup, Lorenz, et al., 2020; H. U. Sverdrup, Olafsdottir, Ragnarsdottir, Koca, and Lorenz, 2019; H. U. Sverdrup, Olafsdottir, and Schlyter, 2019; Sverdrup H. (Ed.) et al., 2018; van Allen et al., 2022

THESIS:

A. H. Olafsdottir, 2011, 2016

Teaching

UNIVERSITY OF ICELAND

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| 6 ECTS | IDN402G - Simulation , Discrete event simulation, statistical modelling, and simulation modelling design, experimental design, model testing and interpretation of simulation results | ST: 2016, 2018, 2019, 2020, 2021, 2022 |
| 6 ECTS | IDN101M - Quality Management , Organization and management systems. The systems approach. Quality management, quality concepts. | ST: 2019, 2020, 2021 |
| 15 ECTS | IDN122F - Introduction to master's studies in Industrial Engineering , Overview of the research field of industrial engineering and preparation for graduate studies within the field. | T: 2017, 2018, ST: 2019, 2020, 2021 |
| 6 ECTS | IDN124F - Systems Analysis and System Dynamics Modelling - reading course , Students will be able to understand and apply the basic tools of System Dynamics Modelling from a practical perspective. In this respect, the course will focus on technical and economical topics. | ST: 2019, 2020, 2021 |
| 7,5 ECTS | IDN115F - Systems Analysis and System Dynamics Modelling Part A , From mission statement, system conceptualisation and the process of creating simulation models from the conceptualization using the most modern, userfriendly software available. It makes modelling fun. | T: 2017, 2018, ST: 2019, 2020, 2021 |
| 7,5 ECTS | IDN124F - Systems Analysis and System Dynamics Modelling - part B , The course will focus on technical, ecological and economical topics and how they are linked. However, it will also cite examples of a greater variety, such as epidemical studies, interpersonal communications and group dynamics. The course focuses on the fundamental concepts of system dynamics modelling such as positive and negative feedback structures as well as causal loop diagrams. | T: 2017, 2018, ST: 2019, 2020, 2021 |
| 7,5 ECTS | IDN115F - Systems Dynamics Modelling , Systems analysis for complex systems and system dynamics simulation models. | T: 2012, 2013, 2014, 2015, 2016 |
| 6 ECTS | IDN102G - Introduction to Engineering , Prepares students for studies and professional career in engineering by training them in engineering problem solving, group work and technical communication. | T: 2016, 2017 |
| 6 ECTS | UAU102F - Introduction to Environment and Natural Resources , A basic understanding of the driving forces behind in addition to the physical and ecological principles of environmental and resource change. | T: 2016, 2017 |
| 6 ECTS | EVF101G - Introduction to Chemical Engineering , Engineering problem solving, group work and technical communication | T: 2016 |

REYKJAVÍK UNIVERSITY

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| 6 ECTS | T-806-SIMU Simulation II , From mission statement, system conceptualization to the process of creating simulation models from the conceptualization. | ST: 2018, 2019, 2020, 2021, 2022, 2023, 2024 |
| 6 ECTS | T-856-EXLE Excellence in management - Lean management , An overview is given of popular contemporary management methods. Special attention is on looking at an organisation as a system, and for this purpose, well known management models are studied, models that are the basis for international awards for excellence in the operation of organisations. Attention is drawn to the fact that these systems are dynamic. Students will be thought the basics in system thinking to help them get insight into how they can influence the systems in a meaningful way. | T: 2019, 2020, 2021 |

- 6 ECTS **Construction industry processes/ Framkvæmdaferli mannvirkjagerðar**, Quality management in the construction industry. ST: 2019
- 6 ECTS **Hiring contractors and project execution / Ráðning verktaka og framkvæmd verks**, Quality management in the construction industry. T: 2016

FREIBURG UNIVERSITY

- 3 ECTS **System analyses and system dynamics**, Intensive AD modelling course T: 2019

SYSTEM DYNAMICS SOCIETY

- 3 ECTS **IDN125F - Multi-scale, Multi-method Modelling and Simulation**, Modelling projects. Mostly SD modelling. ST: 2018

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