

The Sustainability Institute & Forum

Annual Report: January 2024

Academic Seasons: 2022-2023

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Forum

A young green plant with water droplets on its leaves and stem, growing out of dark soil. The plant is the central focus, with its stem and leaves covered in clear water droplets. The background is a soft, out-of-focus green. The soil at the base is dark and rich, with some small green sprouts and organic matter visible.

Mission Statement

The objective of SIF is to foster research and education in sustainable development focusing on the 17 UN Sustainable Development Goals (SDGs). To this purpose, SIF will be inclusive and open to external ideas in order to account for the interdisciplinary nature of the SDGs.

Lecture Series

Visiting Lecturer Professor Michal Moore, Cornell University - Ideas in the Emerging World of Decarbonization

On October 13th, Professor Moore discussed Ideas in the emerging world of decarbonization. Navigating the challenges and opportunities of a rapidly changing environment and the push toward decarbonization has become more crucial than ever. Professor Moore offered attendees a unique perspective rooted in the intricacies of regulation. The talk shed light on innovative ideas and the evolving regulatory landscape in decarbonization.

Many of the students who attended were heavily engaged and had an incredibly thought-filled discussion with Professor Moore on the topic.

Visiting Lecturer Professor Dr. Kathleen Araújo, Biomechanical Engineering - Half a Century since the 1970s Energy Crisis: What Have We Learned from Energy Transitions, Geopolitics and Critical Minerals?

On October 23rd, Dr. Araújo presented and discussed a half-century since the 1970s energy crisis. In this talk, Dr. Araújo delved into historical, country-level approaches to energy transitions, examining their readiness, decision-making processes, and pivotal moments. She illuminated the intricate landscape of energy transformation and discussed the importance of regional revitalization in adapting to evolving energy paradigms. This presentation was informative and thought-provoking with a specific focus on the role of critical minerals and their contributions to energy system repurposing.



Meetings

Institute Meeting

The Institute meeting held in November 2023 covered the restatement of SIF's objectives and awarded the new batch of Ph.D. Research and Fellows Grants as well as Project Grants.

The meeting of the Sustainability Institute & Forum saw a review of the year's activities and a review of the group's membership. SIF currently has 36 members and 6 PhD fellows, with a large gathering of members in attendance at the meeting.

The following 2023 grants and awards were given:
PhD Research and Fellow's Grant, Project Grant, and the Student Award in Sustainability.



Grants

PhD Research and Fellows Grants

The 2023 SIF PhD Grant call had seven applicants, and three were selected for funding. Recipients are funded for one year and required to apply to RANNIS for the following year. The application form followed the RANNIS Research Fund format, and all applications were reviewed by an external evaluation committee.

Project Name	Applicant(s)	PhD Student	Award
From Consumers to Producers: Electric Vehicle Owners as Flexibility Provider	Ewa Carlson	Randall Morgan Greene	6.000.000
Data Science for a Greener Future: Leveraging Machine Learning to Improve Sustainable Purchasing Behaviour and Reduce Over-Production	Anna Islind and María Óskarsdóttir	Camila Carpinelli	6.000.000
Temperature Characteristics and Lagrangian Dispersion in Mixed Convective Turbulence	Ármann Gylfason	Bahadir Turkyilmaz	6.000.000

Project Grants 2023

Project grants are smaller grants awarded to new projects in the area of sustainability, with the aim of supporting different types of projects in the range from student thesis projects to initial exploration of high-level research.

Project Name	Applicant(s)	Status
High speed and high-resolution measurement systems for a multi-purpose wind tunnel facility	Ármann Gylfason	2023
Collection, melting, and filtering of snow samples for identifying micro-scale pollution	Hlynur Stefansson	2023
Sustainalytics Database Access	Eyjólfur Ingi Ásgeirsson	2023
Verification of an Innovative Drone Technique to Analyze Water Pollution	Joseph Foley	2023

Student Award in Sustainability

Criteria

The SIF Student Award in Sustainability is an award that recognizes outstanding sustainability projects and initiatives at Reykjavik University. Students from all levels of study are eligible for nomination by a faculty member who supports their work. This year, seven nominations were received, both for individual students and groups.

The projects are evaluated based on three main criteria:

- the novelty of the research
- the potential impact of the project
- the environmental impact of the project

Additionally, the projects must be connected to enhancing the United Nations' Sustainable Development Goals.

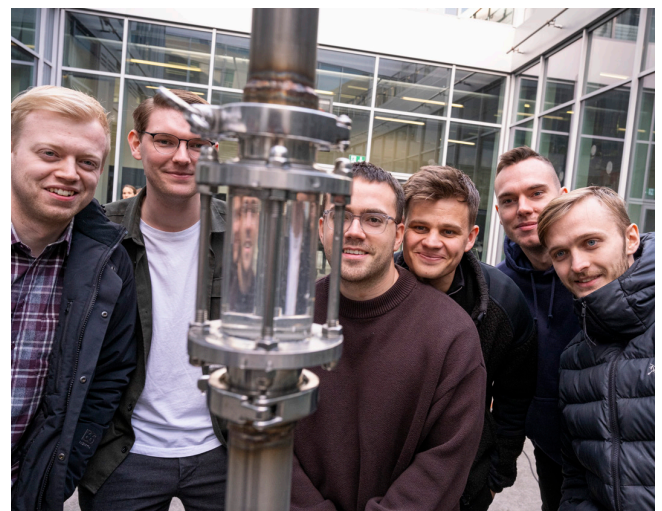
The review committee is composed of SIF members who are not tied to any of the nominations and represent various departments within the university. This ensures a fair and impartial evaluation of the projects.

Geysir Project

Reykjavik University's third-year Applied Energy/Mechanical Engineering students took on an exciting project this semester in the Practical Project course, building a model of the famous Geysir under the guidance of **Associate Professor Michael S. Moorhead**. The students presented their project, showcasing the plume created by the model outside of the university.

The students praised the practical aspect of the project and how it has helped them improve their group work and project-based learning skills. "We feel that we learn the most from these practical projects," said **Bjarni Sævar Sveinsson** and his classmates.

The Geysir project was initiated by **the Iceland School of Energy Director, Juliet Newson**, who applied for funding through SIF to use the geyser in teaching and research. The project was then provided to **Professor**



Moorhead as a possible project for his students to build. The Geysir model project was a success and a testament to the impact of practical projects on student learning and development.

Members

Hlynur Stefánsson	Engineering	Associate Professor and Director of Sustainable Institute and Forum
SIF MEMBERS	DEPARTMENT	POSITION
Ágúst Valfells	Engineering	Professor
Alisha Moorhead	Engineering	Program Manager
Andrei Manolescu	Engineering	Professor
Anna Sigríður Islind	Computer Science	Associate Professor
Ármann Gylfason	Engineering	Department Chair
Ásgeir Ásgeirsson	Applied Engineering	Department Chair
Birna Baldursdóttir	Psychology	Assistant Professor
Bryndís Björk Ásgeirsdóttir	School of Social Science	Dean
Bjarnhéðinn Guðlaugsson	Engineering	Postdoctoral Researcher
David Christian Finger	Engineering	Associate Professor
Ewa L. Carlson	Business Administration	Associate Professor
Eyjólfur Ingi Ásgeirsson	Engineering	Professor
Guðmundur Kristjánsson	Applied Engineering	Lecturer
Guðrún Arnbjörg Sævarsdóttir	Engineering	Professor
Halldór Guðfinnur Svavarsson	Engineering	Professor
Hannes Högni Vilhjálmsson	Computer Science	Professor
Haraldur Auðunsson	Engineering	Associate Professor
Haukur Ingi Jónasson	Engineering	Assistant Professor
Helgi Thor Ingason	Engineering	Professor
Hugo Félicien Thomas Cazaux	Engineering	Ph.D. Student / TA
Jón Þór Sturluson	Business Administration	Department Chair
Jónas Þór Snæbjörnsson	Engineering	Professor
Joseph Timothy Foley	Engineering	Assistant Professor
Juliet Ann Newson	Iceland School of Energy	Executive Director
Kristján Reykjalín Vigfússon	Business Administration	Lecturer
Kunzes Dolma	Engineering	Ph.D. Student
Marcel Kyas	Computer Science	Assistant Professor
María Óskarsdóttir	Computer Science	Associate Professor
María Sigríður Guðjónsdóttir	Engineering	Associate Professor
Mohamed Abdelfattah	Engineering	Associate Professor
Mohammad Adnan Hamdaqa	Computer Science	Part-time Lecturer
Páll Jensson	Engineering	Professor
Ragnar Kristjánsson	Engineering	Assistant Professor
Ragnhildur Helgadóttir	President's Office	Rektor / President
Randall Morgan Greene	Engineering	Development Director
Sydney Fox	Computer Science	Research Fellow (Fulbright)
Þorgeir Pálsson	Engineering	Professor Emeritus



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