Seminar program
Bergen
Monday September 19., 2022,
Auditorium 3 at Jusbygget, Magnus Lagabøtes plass 1.

10:00 Opening and welcome
Birgit Kopainsky

10:15 Introduction to Monday program with a brief report on the System Dynamics Group 1995 - ……
Pål I. Davidsen

Recent studies in sustainable development. Methods for the analysis of complex, dynamic systems.

10:50 African Co-existence Landscapes (ACLs)
Nuno Videira and Mohamed Saleh

Dr. Nuno Videira is a graduate of the Masters programme in System Dynamics at the University of Bergen. He is currently a professor at NOVA University in Lisbon and has been an important partner in the European Masters Programme in System Dynamics (EMSD) as well as a driving force in the ACL project. Videira will offer a description of the ACL project, - including its origin, partners, scope, process, consultations and conclusions thus far.

Dr. Mohamed M. Saleh is a Ph D graduate in System Dynamics from the University of Bergen, specializing in advanced modelling and model analysis. He is currently a professor at the Kairo University. As such, he has been an important partner fostering and facilitating student exchanges with the University of Bergen. Saleh has been one of two lead modelers in the ACL project and will offer an introduction to the TNS model, a general model, to be applied across all ACLs.

12:15: Lunch in Sammen cafeteria for presenters

13:15: Integrated Modeling for Sustainable Development
Matteo Pedercini

Dr. Matteo Pedercini is a Ph D graduate in System Dynamics from the University of Bergen, specializing in sustainability studies. He has served for many years as the lead scientist and modeler, and is currently the interim president, of the *Millenium* Institute (MI), - an NGO aimed at bringing about a sustainable, equitable, and peaceful global society. MI received the System Dynamics Application Award for their work in over 50 countries across the world. Through our collaboration with MI, Pedercini has been a visiting lecturer in Bergen for over 10 years offering a very popular spring course in national developing planning (GEO-SD 321). MI employs a number of graduates from the University of Bergen in their diverse work addressing sustainability issues across the globe. Pedercini will present the approach currently taken by Millennium Institute addressing integrated, national planning.

14:00: Using System Dynamics to support policy and investment decisions: from national planning to asset valuation, and back
Andrea Bassi

Dr. Andrea Bassi is a Ph D graduate in System Dynamics from the University of Bergen. After being employed by the Millennium Institute, he founded and is now the president of the consulting agency *KnowEdge srl*., specializing in regional and nation-wide sustainability studies across the globe. Bassi will present an approach currently taken by KnowlEdge srl to address national planning and asset evaluation.

14:45: Coffee Break for all participants

15:00 Learning Economics with Dynamic Modeling: Comparative Experiences
David Wheat

Dr. David Wheat is a Ph D graduate in System Dynamics from the University of Bergen where he served as professor of system dynamics for over a decade. In addition to his position as professor emeritus in Bergen, he is currently serving as professor at the economics and Finance Faculty of the National University of Kyiv-Mohyla Academy, Kyiv, Ukraine, as professor at the Financial Economics Faculty at the ISM University of Management and Economics, Lithuania, and as professor of economics at the Western Virginia Community College. He is a Dana Meadows Award winner.
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Wheat has specialized in model-based economics education. Based upon his extensive experience in that capacity, he will offer his current perspective on learning economics by way of system dynamics.

15:50 Loops That Matter
William Schoenberg

Dr. William Schoenberg is a Ph D graduate in System Dynamics from the University of Bergen. He is the scientist behind the Loops that Matter (LTM) model analysis method and the lead developer of software in *isee systems* that enable modelers to take advantage of the method in their analysis of complex, dynamic models. He will offer a status report on LTM and present his vision for future developments, - opening up for a discussion regarding where to go next.

16:50 Adjourn

Seminar program Tuesday 20 September 2022,
Auditorium 3 at Jusbygget, Magnus Lagabøtes plass 1.

Why do humans manage climate poorly and how could we improve?

9:00 ***Why does the "wait and see strategy" dominate climate policies?***

Erling Moxnes (Professor Emeritus, UiB)

The wait and see strategy simplifies otherwise complex decisions. However, with its focus on new data, it ignores the prior knowledge that is needed when managing natural resources. Based on historical experiences and laboratory experiments, the wait and see strategy is found to explain overshoot and collapse developments of local resources. The innate and automatic application of this strategy helps explain why stakeholders, civil servants, researchers, and members of the electorate make the same mistakes. Wait and see enables the commons problem, excessive conflict, and the choice of policies with undesired consequences. Furthermore, wait and see advice takes most of the effect out of expert advice that makes proper use of prior knowledge. Finally, local resources provide a nearly perfect analogy for the problem of global climate change.

10:00 ***The lacking global response to The Limits to Growth since 1972; - a 100-year perspective.***

Jørgen Randers (Professor Emeritus BI and co-author of Limits to Growth)

The Limits to Growth book motivated the formation of the global environmental movement. While the book was a call for better policies to prevent overshoot and collapse developments, it was often misperceived to be a prediction of doom. Fifty years later, the dominating planetary boundary is represented by the climate problem. Using a new socio-economic model, the climate problem is found to be reinforced by social conflict. The costs of stopping climate change are found to be low.

10:45 ***Coffee break***

11:15 ***Interactive policy models help catalyze climate action from the White House and Congress to corporate boardrooms and school classrooms.***

John Sterman (Jay W. Forrester Professor of Management and Director of the MIT System Dynamics Group at the MIT Sloan School of Management)

Most people believe that climate change threatens our prosperity, health, security, and lives. To avoid the worst impacts, greenhouse gas emissions must be cut quickly and deeply. But what policies and actions are most effective? The interactive C-ROADS and En-ROADS climate policy simulation models enable leaders in government, business, civil society, education—and the public—to learn for themselves about high-leverage actions and help build consensus for action. Thousands of senior leaders and more than 225,000 people around the world have used these simulations, not only learning more about climate change, the energy system, and the economy, but also experiencing growing emotional engagement with the issue and greater hope that what we do, collectively, can make a difference—both of which motivate increased engagement and action.

12:00 ***Climate change: the role of emotions in decision-making***

Gisela Böhm (Professor, Department of Psychosocial Science, UiB)

Emotions are essential for decision-making; they influence behaviors as well as policy preferences. Emotions are aroused by what we learn from experience. The kind of emotion we experience reflects how we understand and interpret a situation. Emotions in turn influence our ability to learn. Importantly, diverse emotions play different roles in decision making and have different effects. This matters when trying to educate electorates and policy-makers.

12:30 ***System dynamics helps teams to make decisions on complex issues. Can it also support deliberative democracy?***

Etiënne Rouwette (Professor of Management at Radboud University)

Involving decision makers, experts and other stakeholders in model construction and simulation has a number of benefits. A range of cases and controlled studies show that participating in modelling supports learning, consensus on the problem, and commitment towards actions. These results have been obtained for intra- and inter-organizational teams of stakeholders struggling with complex issues. Today's urgent societal challenges are even more complex, as stakeholders hold widely divergent views and conflicting goals, while decision making responsibilities are dispersed. Societal challenges such as climate change, wealth and gender inequalities have also led to a number of innovations in public policy making. One of these is deliberative democracy, based on reasonable deliberation between those affected by a decision. Can model construction and simulation support deliberative democracy?

13.00 ***Adjourn***