



CONVIVIAL PLANET

CLEA

Centre Leo Apostel for  
transdisciplinary research  
Vrije Universiteit Brussel



CerSo

TRANSDISCIPLINARY

# SEMINAR

**Understanding for change**

*societal equations,  
their construction  
and use*



27 & 28 JUNE 2024  
BRUSSELS



# The role of mathematics ...

***could it be at the heart of a transdisciplinary approach to the societal problems we face and to building new more sustainable and resilient models together?***

At the first interaction seminar on the use of mathematics and data science in the field of social intervention, held in Nice in February 2024, fruitful exchanges opened up a field of enhanced collaboration between social actors in the field and academic researchers. It seems that social experimentation and the expertise of citizens and social workers should provide more input for research to address the urgent need for change. It is a question of sharing our educability by learning from each other and building together tools that we can understand and manage. The fields of interaction are very varied, both in the social sector and in terms of our modes of production and consumption in the broadest sense. The ambition to 'put into equations' or even to 'model' society and intervention practices also implies questioning the ethics of the relationship between mathematics and social commitment.

We are inviting new speakers to Brussels on 27 and 28 June 2024 to broaden these interactions by placing them in the context of the UN's sustainable development goals. How can mathematics contribute today to achieving these goals more effectively? What role can artificial intelligence play? We believe it is necessary to take stock of the models we are already using and to better understand and build, through participatory action research, those that will enable us to move forward as responsible human beings.

## Objectives

To broaden the scope for transdisciplinary exchanges and encourage collaboration to build participatory action research projects geared towards sustainable development objectives. Facilitate the understanding, appropriation and co-construction of relevant mathematical models.



## Understanding and modelling dynamically

Quantitative approaches are many and varied, widely used in some scientific fields and much less so in others. Debates often focus more on objectives than on the means of achieving them. It is these means of analysis, research and action that we want to examine here from a historical, dynamic and forward-looking perspective. Mathematics can be used to model the impact of different types of intervention. For example, the World Bank uses a mathematical model to assess the impact of different poverty reduction programmes, and the United Nations Development Programme (UNDP) uses a mathematical model to monitor countries' progress towards achieving the Sustainable Development Goals (SDGs). Our aim is to put different models on the table and encourage new forms of interaction between these existing or yet-to-be-created models and all those involved in society.

## Participatory Action Research

How can researchers, social players, citizens and businesses work together, taking into account the points of view and interests of all concerned, including future generations? One model for developing impact projects is based on the principle of 'participatory action research'. We want to offer an incubation space for these projects by facilitating 'matching' between partners from different backgrounds.

We also propose sharing experiences and tools with players at different levels who have experience of action research.

## Programme

Thursday 27 June 2024: Understanding models to be able to evolve

Friday 28 June 2024: sharing tools for action research

Decentralised work in themed workshops and pooling of results.

## Speakers

[Didier Baudewijns](#), [Antoine Bodin](#), [Sandra Bohmann](#), [Noémi Bontridder](#), [Evo Busseniers](#), [Frank Deconinck](#), [Nahla Dhib](#), [Francine and Marc Diener](#), [Giovana D'Inverno](#), [Olivier Martin](#), [Anna Mergoni](#), [Zdena Middernacht](#), [Ides Nicaise](#), [Majid Sameti](#), [Julien Scheepers](#), [Goéric Timmermans](#), [Natacha Zuinen](#), ...

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