

Welcome

Neural dynamics for embodied cognition

Virtual summer school & workshop
August 31 – September 5, 2020

Organizer, lecturer, tutor



Gregor Schöner

- Professor of Theory of Cognitive Systems
- Director of the Institute for Neural Computation
- Summer school
 - Will do most of lectures in the first days
 - Tied up in EU review meetings; videos

Organizer, lecturer, tutor

- Mathis Richter
 - Computer scientist by training
 - PhD with Gregor, finished in 2018
 - Dynamic field theory account for the grounding of language
 - Will lecture about that on Wednesday
 - Postdoc
 - Projects on mental mapping, conceptual combination (with Daniel Sabinasz)
 - DFT in spiking neurons and neuromorphic hardware (with Yulia Sandamirskaya)

Organizer, lecturer, tutor

- Jan Tekülve
 - Computer scientist
 - Last year of PhD work on intentional agents in neural cognitive architectures
 - Will lecture about this on Thursday
 - Background on movement generation in neural architectures

Organizer, lecturer, tutor

- Raul Grieben
 - Computer scientist
 - Working on PhD thesis in the domain of scene representation, visual cognition
 - Will lecture about this on Wednesday
 - Critical for further development of CEDAR
 - Developed website

Lecturer, tutor

- Daniel Sabinasz
 - Computer scientist and cognitive scientist
 - Working on PhD thesis in the domain of conceptual combination; toward higher cognition
 - Will lecture about this on Thursday

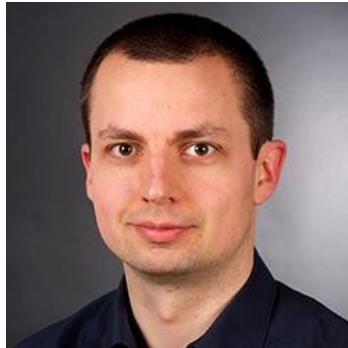
Additional workshop tutors

- Jean-Stephane Jokeit
- Cora Hummert
- Rachid Ramadan
- Lei Zhang
- Sophie Aerdker
- Lukas Bildheim

Guest lecturers



Quentin Houbre
Tampere University, Finland



Sebastian Schneegans
Cambridge University, UK



Yulia Sandamirskaya
Intel Labs, Munich, Germany

Audience

- we have around 150 registered participants
- advantage of the virtual format over the physical format
- we can usually only accommodate about 20 participants
- of course, we don't know how many of you are really committed and able to attend and stay for the entire event

Summer school format

	MON 31	TUE 1	WED 2	THU 3	FRI 4	SAT 5
10:00		Free exercise work (optional) 10:00 – 15:00	Free exercise work (optional) 10:00 – 15:00	Workshop Introduction 10:00 – 11:00	Workshop Tutoring 10:00 – 15:00	Workshop Tutoring (limited) 10:00 – 15:00
11:00				Workshop Tutoring 11:00 – 15:00		
12:00						
13:00						
14:00						
15:00	Welcome (Mathis Richter), 15:00	DFT Exercise Feedback (Mathis Richter), 15:00	CEDAR Exercise Feedback (Mathis Richter), 15:00	Case study 1: Scene Representation 15:00 – 15:45	Case study 3: Conceptual Combinations 15:00 – 15:45	Workshop Project Presentations (Participants) 15:00 – 16:30
16:00	Introduction (Gregor Schöner), 15:30	CEDAR Tutorial, Preparation of Exercises 15:30 – 16:30	Higher Dimensional Neural Fields (Gregor Schöner), 15:30	Case study 2: Relational Concepts (Mathis Richter), 15:45	Case study 4: Intentional Systems (Mathis Richter), 15:45	
17:00	DFT Core Lecture (Gregor Schöner) 16:00 – 17:00	Embodied Neural Dynamics (Gregor Schöner) 16:30 – 18:00	Sequence Generation (Gregor Schöner) 16:30 – 17:30	Guest lecture: Quentin Houbre, Tampere University, 16:00	Guest lecture: Yulia Sandamirskaya, IIT, 16:30	Discussion and Feedback, 16:30
18:00	DFT Models (Gregor Schöner) 17:00 – 18:00		Workshop Project Overview, 17:30	Guest lecture: Sebastian Schneegans, 16:30	General Discussion, 17:30	

- every day we will have lectures and live interactions via this Zoom channel
- from 3 pm to 6 pm Central European Summer Time
– morning in the US, late night in Asia
- core of the school, open to all registered users

Hands-on exercises

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- you can work on these after the lectures or on the next day before the lectures
- this will happen over the first 2-3 days
- you can interact with us through the discussion form on our webpage
 - I'll show you in a moment
- we will be there and responsive right after the lectures
- and before the lectures, on the next day, all working hours of our time zone

Workshop

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- the events of that part are open to everyone
- but only a selected group will get one-on-one tutoring.. .
- due to our limitations in man-power...
- Workshop introduction on Thursday morning

Website

- dynamicfieldtheory.org
- is critical for the school
- you already used it to get here
- show
 - simulator on top page
 - the school page
 - Schedules
 - Documents
 - Discussion forum

Discussions

- we encourage discussions and questions!
- additional discussion at the end of each day
 - we will remain online for a bit longer
- some talks by Gregor Schöner are in video form for logistic reasons
 - but he will always join those discussion sessions

Recordings

- we will record lectures (but not this welcome session)
 - for participants in other time zones
 - for you to revisit material
- ultimately, most of those videos will be accessible on our webpage
- technically, they are housed on Youtube
- if you are uncomfortable with being visible/hearable... let us know
 - Turn off microphone and camera
 - Interact through chat
 - Hold back questions until the discussion at the end
 - We will eliminate those from the videos
- If you are comfortable with being recorded and on Youtube
 - Interact freely, with camera and microphone
- for the most part, only the speakers are “exposed” and those of you who are comfortable

Exercises

- Two exercise sheets
 - Website:
 - Summer school → Documents
- Both use simulators
 - Website:
Learning DFT → Live simulators