

Design

+

Science

2023

Summer

School

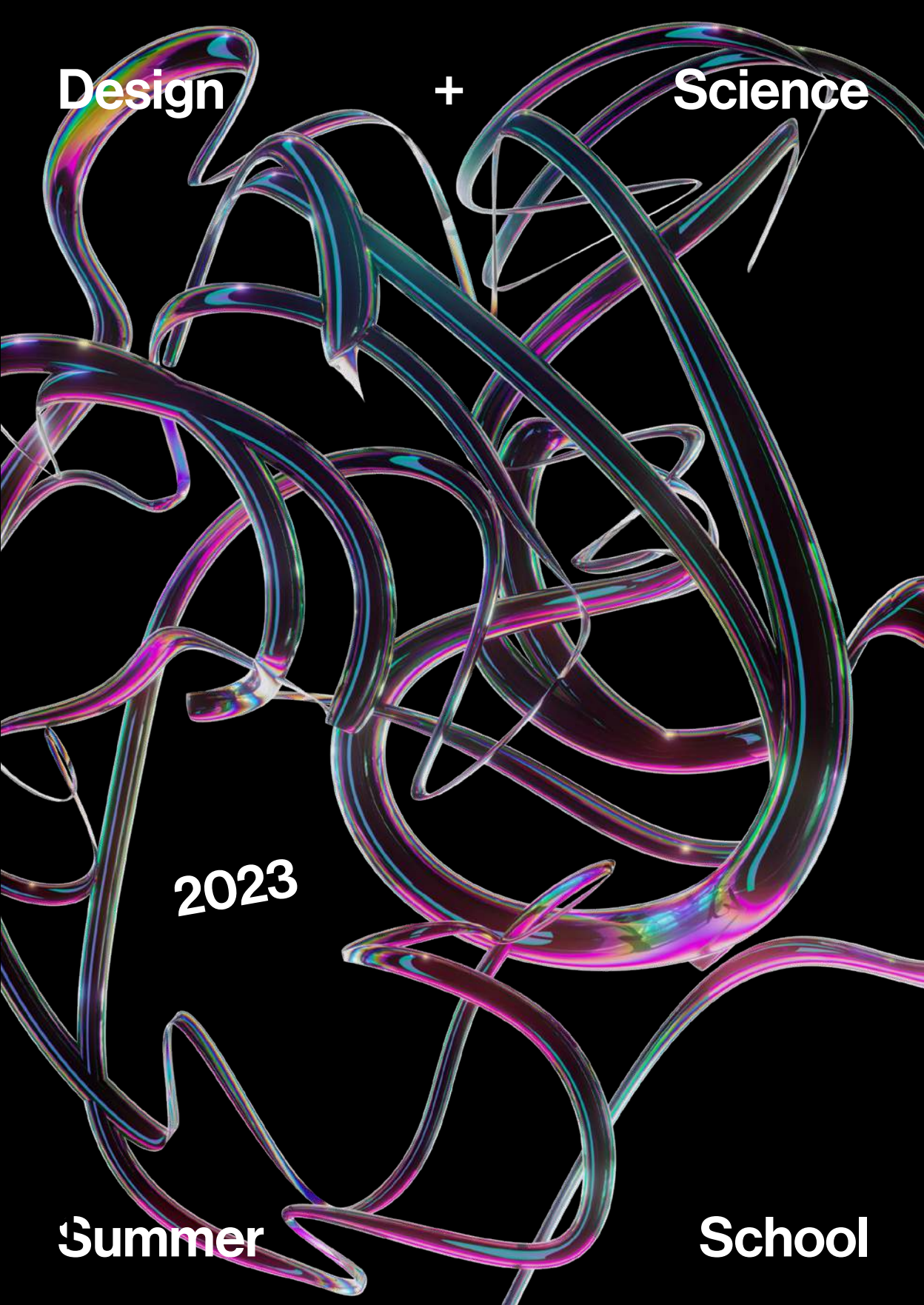


TABLE OF CONTENTS

Introduction

Diary

Student projects

Evaluation

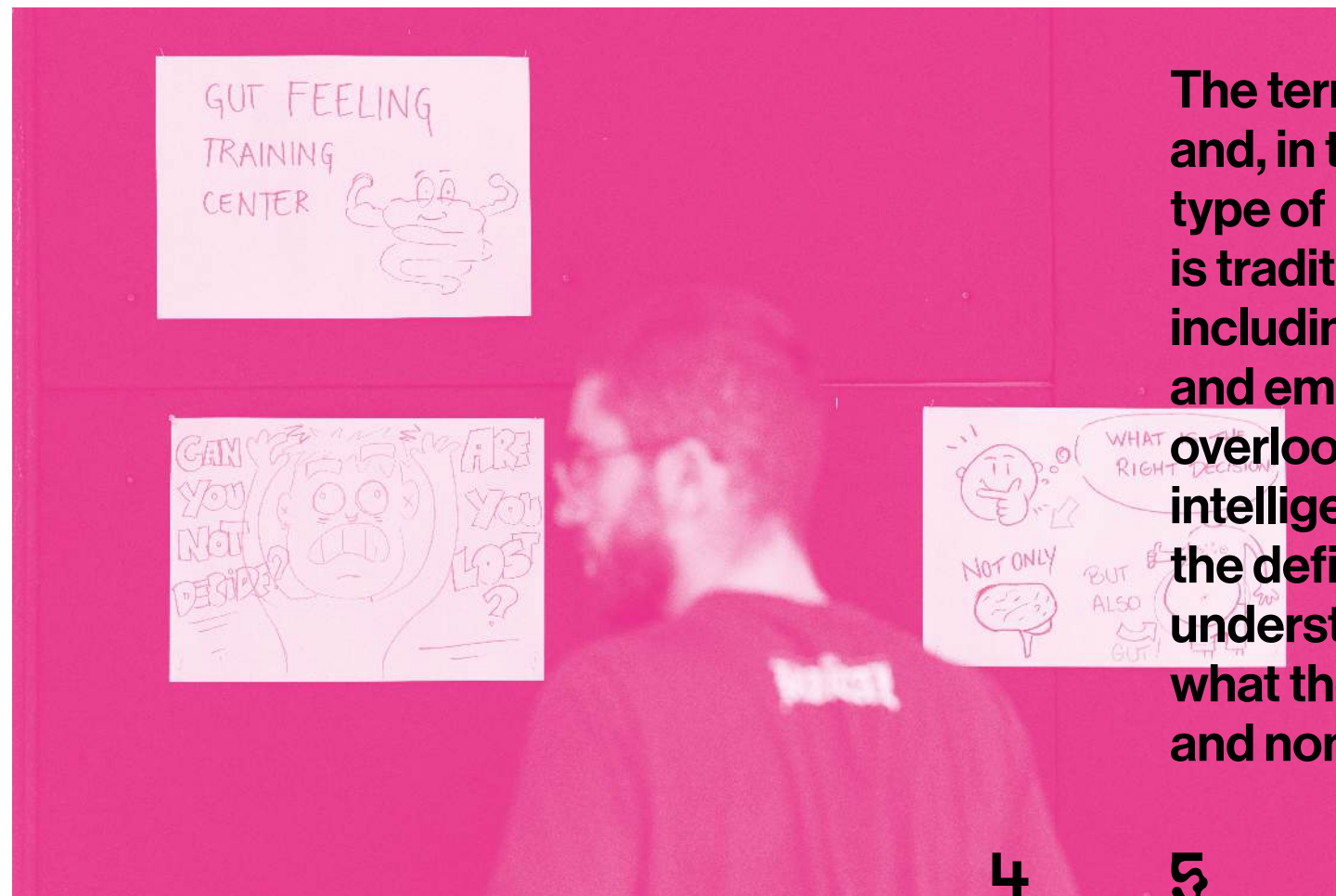
Experiences

Design+Science is a multidisciplinary Summer School that promotes exploration and experimentation at the intersection of design and various scientific fields, led by renowned experts in their respective fields. This week-long Summer School includes workshops, guest lectures, tours, and other activities.


The summer school approach is based on multidisciplinary group work. It is open to participants from the design field but also to all related practices such as architecture, art, computer sciences, social sciences, natural sciences, and others. Both for master's and Ph.D. students and young professionals.

Our vision is to build a collaborative platform that stimulates multidisciplinary approaches and fosters highly interactive individuals for comprehensive perspectives on the important topics of today and tomorrow.

PARA- INTELLIGENCE



GUT FEELING
TRAINING
CENTER




CAN YOU NOT
DECIDE?



ARE YOU
LOSING?

WHAT IS THE
RIGHT DECISION?



NOT ONLY
BUT ALSO
GUT!

The term "**para**" means "beyond" or "beside" and, in the context of intelligence, refers to a type of intelligence that exists beyond what is traditionally recognized as **intelligence**, including notions such as intuition, creativity, and emotional intelligence that are often overlooked in traditional definitions of intelligence. The aim was to redefine the definition of intelligence in order to understand and predict how it will evolve and what the consequences will be for human and non-human beings on this planet.

the third edition of the design+science summer school proves that we are not a one-day fad, that we are able to connect disciplines in the field of both artistic and design practices, and to intertwine key themes with scientific disciplines. cooperation and joint planning with our founding partners has led us to a position in a regional environment where the university of ljubljana, the university of split, and the FH joanneum from graz and pina from koper are building a network of quality educational programmes.

in the field of education, we have been able to join the eutopia university alliance, where the design and science learning unit is interwoven into a community of learners and combines the interests of contemporary education and the potential of a number of universities, in particular with the design degree programmes of the university of warwick and the cy university of paris.

we demonstrate that the role of design in an age where the goal is no longer just to produce final aesthetic solutions, but to create social interactions can only be achieved through methods built on multidisciplinary teams that embrace the initiatives and strategies of the contemporary and future society.

three years is not so short a time for that primary desire and ambition to blossom successfully. the road to the establishment of an international study programme on the intersection of creativity and science will still be challenging, but we see a path that is being traced with the great satisfaction of past participants and the interest of future ones, the mutual trust of partners and new and new sympathisers and supporters. thank you all and we will also follow and share the new steps with emotional intensity.

boštjan botas kenda, ul aluo





As already written, the term "para" comes from the Greek word "παρά", which can mean "beside", "next to", "beyond" or "adjacent". The term "para" is used very differently in different disciplines depending on the context: In chemistry (especially organic chemistry), "para" is used to "describe the position of atoms or groups in a molecule". In relation to a benzene ring, two opposing groups are in a para relationship. In medical terminology, "para" can indicate something that goes beyond or deviates from the normal. For example, the term "paranormal" would refer to things that go beyond the normal. →



Understanding this term and combining it with the term intelligence, a term such as "para intelligence" could be interpreted as follows:

1. Beyond intelligence: It could refer to abilities or forms of knowledge that go beyond the traditional understanding of intelligence. This could include non-traditional forms of intelligence such as emotional or spatial intelligence, or even discuss topics such as artificial intelligence that go beyond the traditional scope of human intellect.

2. Adjacent to intelligence: The term could also refer to the domains that are closely related to or coexist with traditional intelligence, such as wisdom, intuition, creativity or emotional abilities, all of which complement cognitive abilities but are sometimes overlooked in traditional intelligence paradigms.

3. Intelligence equivalent: In the context of artificial intelligence, "para-intelligence" could mean a version of intelligence that is similar to human intelligence but exists in a non-human entity, such as an AI system or other technological interface. More importantly, it could be a different form of intelligence. If we look at other animals, for example, their cognitive abilities, including aspects of intelligence, are undoubtedly driven by intelligent decision-making processes, but these are different from those in us humans. Animals exhibit behaviors associated with basic emotions such as fear, joy, anger and love. They have good memory, problem-solving skills and have been observed to exhibit empathy-like behavior. Elephants, for example, are known to comfort fellow elephants in distress, and dogs can read human emotions and respond accordingly. In addition, crows can handle tools, dolphins use complex hunting strategies and octopuses can solve puzzles, indicating various forms of intelligence. It is clear, then, that intelligence is a diverse, multi-faceted phenomenon that transcends individual species and includes

emotional engagement and problem-solving abilities. It is not limited to the human experience, but is a trait that is common throughout the animal kingdom, albeit to varying degrees depending on the needs and abilities of individual species. Are these traits less significant than human intelligence, or are they just different expressions of intelligence, each valuable in its own context? To form an opinion on this complicated and nuanced question, we need to cross traditional disciplinary boundaries. Transdisciplinary approaches such as this

Design+Science Summer School offer us the opportunity to explore intelligence and para-intelligence from different perspectives by incorporating insights from fields such as biology, ethology, psychology, philosophy, artificial intelligence and, of course, design.

By incorporating and synthesizing these different viewpoints, we hope to develop a more comprehensive and nuanced understanding of intelligence in its many forms that goes beyond a human-centric perspective. Such an exploration can bring us closer to understanding not only the true nature of intelligence, but also our place in the infinitely diverse and intelligent web of life.



MAKROBIZNIS

Day 1

Round table

Guests:

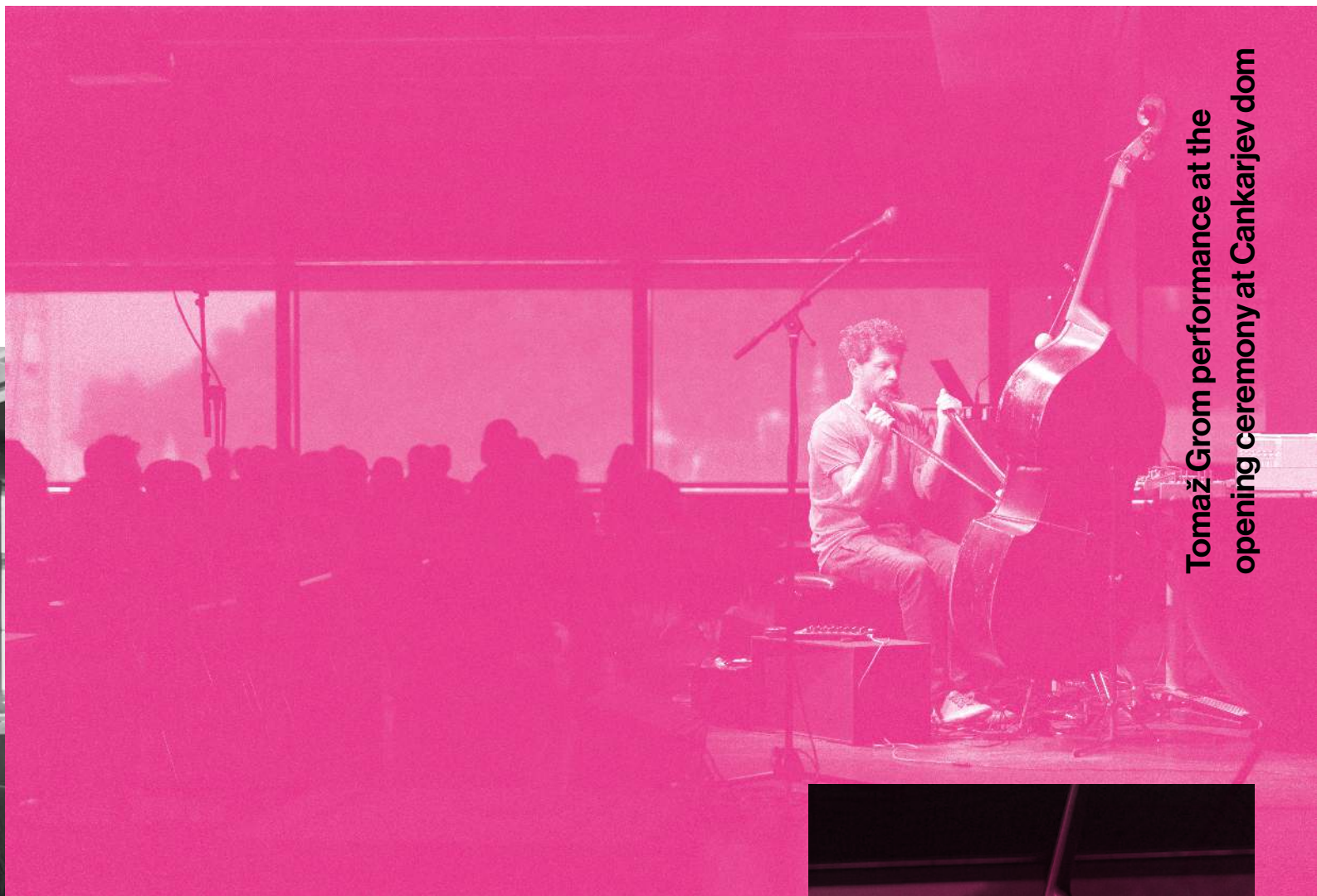
Francesco Ermanno Guida,

Mia Roth-Čerina

Eray Sertaç Ersayin

Ivica Mitrović

Moderator: Karl Stocker



Tomaž Grom performance at the opening ceremony at Cankarjev dom



Keynote speakers

"If we're all on one side, then we have a very imbalanced outlook on the world."

Stuart Walker is a professor and researcher. His main area of research is design for sustainability, exploring the inter-related issues of social equity, ethics and the spiritual, aesthetics, localization and the environment.



"Design plays a very important role in the development of institutions, industries, brands, cities and nations. There are positive approaches to the relationship between production and consumption that can promote the goals of responsible production and responsible consumption. This power, which is very important for our planet, needs to be evaluated within the design process."

Eray Sertaç Ersayın

Engaged in integrating designers with the government and industry in Turkey through responsible production and consumption in various sectors.

TUESDAY

Day 2

Field trip to Divača cave

Lectures:

Saša Spačal

KRATER Collective



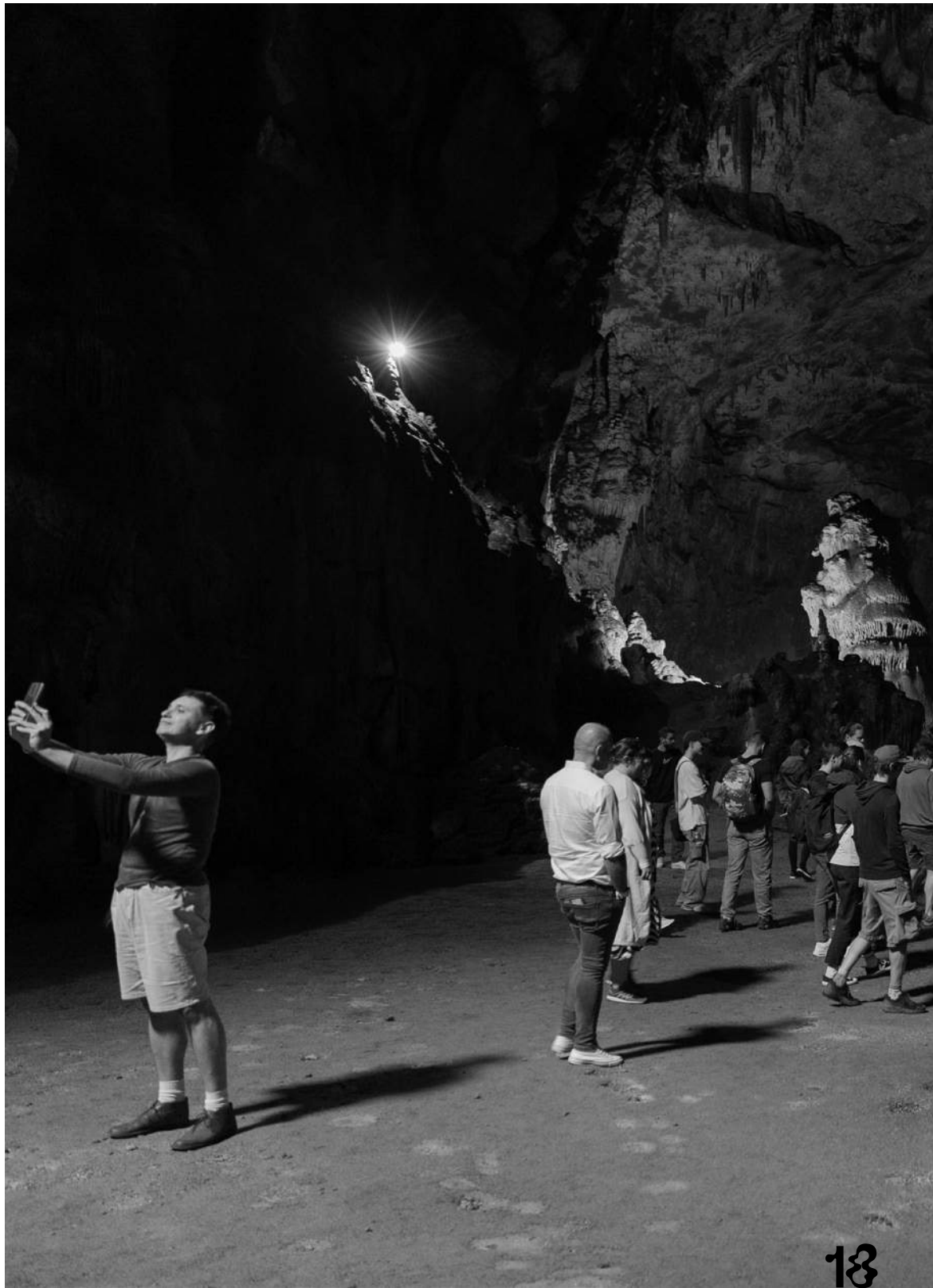
Saša SPAČAL is a postmedia artist working at the intersection of living systems research, contemporary and sound art. Her work focuses primarily on the posthuman continuum.



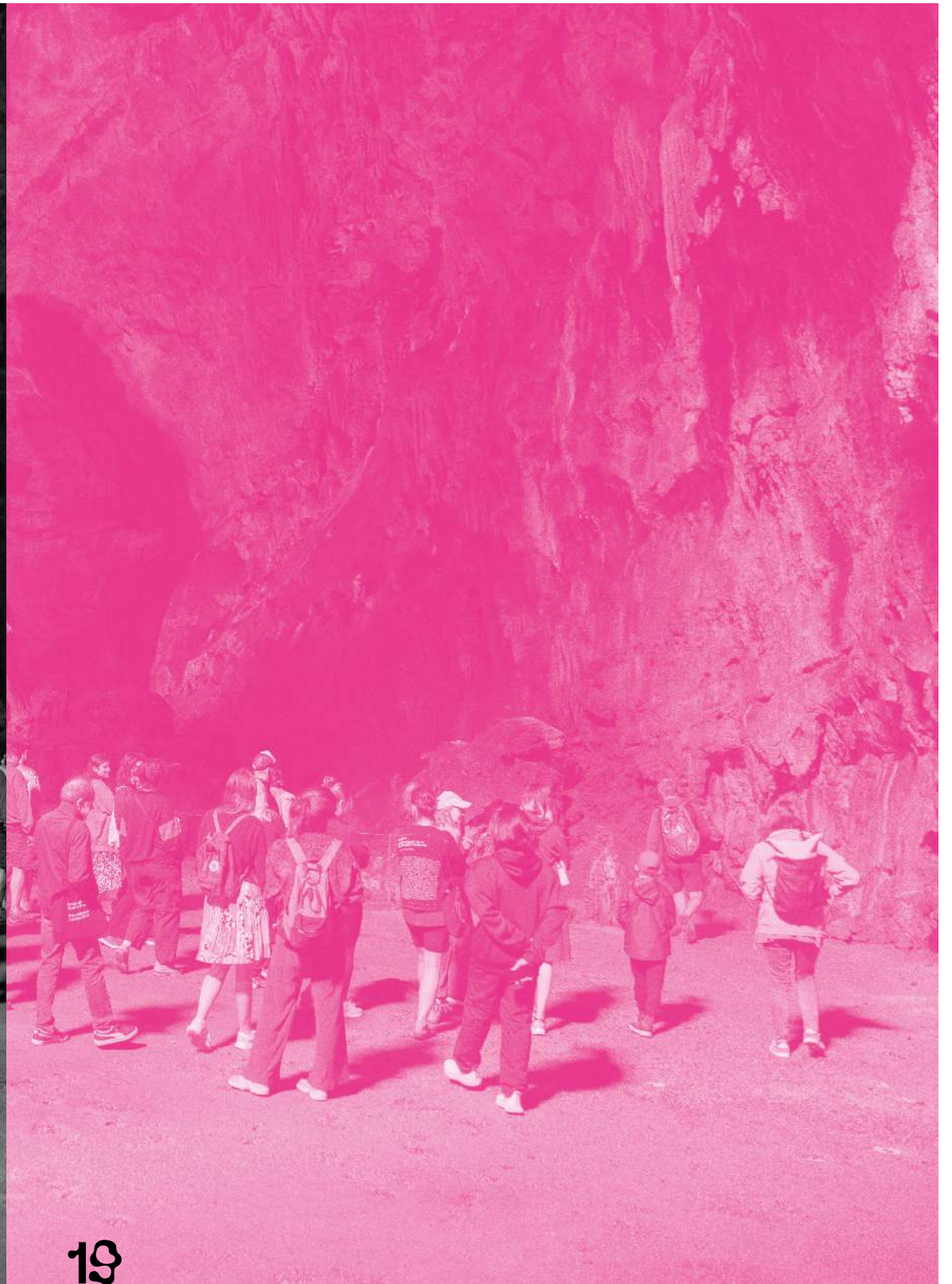
KRATER Collective

Danica Sretenović is a researcher, curator, educator and designer focusing on critical reading of contemporary spatial production, and the role of theoretical concepts, modes of presentation, and media in the construction of space.

Gaja Mežnarić Osole works across the fields of design, ecology, and participation, creating space for questioning established management strategies in connection with our disturbed urban ecologies.



18



19



20



21

WEDNESDAY

Day 3

Lectures:

Uroš KRČADINAC:
Androids don't dream about anything, but do we?

dr. Matevž POGAČNIK:
The Good, the Bad, and the Ugly:
Navigating the Benefits and Drawbacks of AI



Uroš Krčadinac is a Belgrade-based digital artist, technologist, writer, and educator interested in new ways of sensing and feeling the shared world of humans, networks, and data.



dr. Matevž Pogačnik is a professor at Faculty of Electrical Engineering researching development of user experience in new technologies.



Film night at Prulček

Donna Haraway: Story Telling for Earthly Survival



THURSDAY

Day 4

Lectures

Eva FISCHER:
AI as a collaborative tool in music,
art and design

Laura TRIPALDI:
Encounters with intelligent materials

Eva FISCHER is an independent curator, cultural manager and lecturer in the field of experimental media, immersive art and art&technology.



09



Laura TRIPALDI is a PhD scholar in Materials Science and Nanotechnology, who researches hybrid nanomaterials and writes about science and technology, with a focus on the intelligence of materials.

10

FRIDAY

Day 5

Group
projects
presentations









Key Info

Participants are split in 3 groups

They work together every afternoon to build a shared project

All groups work in-person on-site

English is the official language

Main location for group work is the Academy of Fine Arts and Design in Ljubljana, on Wednesday there is an offsite to Mojstrana

Week structure

Monday / understanding

Share experiences, build a mutual understanding of the topic and try to find specific areas of the topic that you are interested in.

Tuesday / define

Think about weak signals of today and possible futures. What is the key issue / scenario / temptation / you would like to focus on? How might we tackle it?

Wednesday / ideate

Search for solutions, build scenarios and come up with a comprehensive concept of the team project that thinks about the wider implications of the work.

Thursday / prototype & test

Experiment, build quick prototypes, test them and discuss with people. Iterate and search for new and better solutions or just ways to act now.

Friday / present

Present your work in a clear and engaging way.



Nia Gombac

Jaka Oman

Kristina Selinski

Alexandra Kraler

Katarina Babic Derenda

Arthur de Liz Sperb

Group1
Mentor: Sigrud Burstmayr
Co-mentor: Ivica Mitrović



GRIT is an intermedial and physical space that invites individuals to reconnect with their inner selves and strengthen their intuition.

In the post digital era, people are becoming increasingly disconnected from their bodies and surroundings, relying heavily on technology. This leads to a collapse of self-awareness and strained relationships.

The aim of this project is to recognize the importance of the very individual para-intelligent intuition – the connection between our brain, gut and the microbiota living there. This system is inherent in human bodies and helps us guide emotions and decision-making processes.



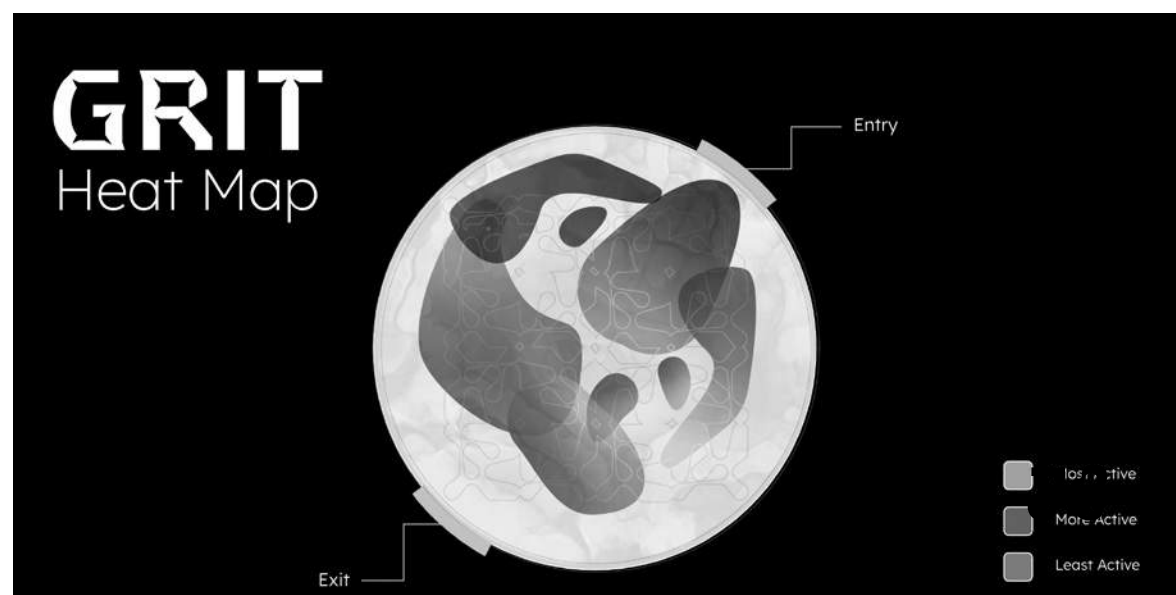
36

37

The idea is to offer a modular and flexible space, where individuals engage in diverse exercises that stimulate their intuition and gut feelings as well as enhance their emotional intelligence. The training inspires collaboration, enabling a better understanding and acceptance of different species.

Let your gut guide you through an unconventional environment of decision-making exercises at GRIT. Challenge yourself, raise self-awareness, and build connections.

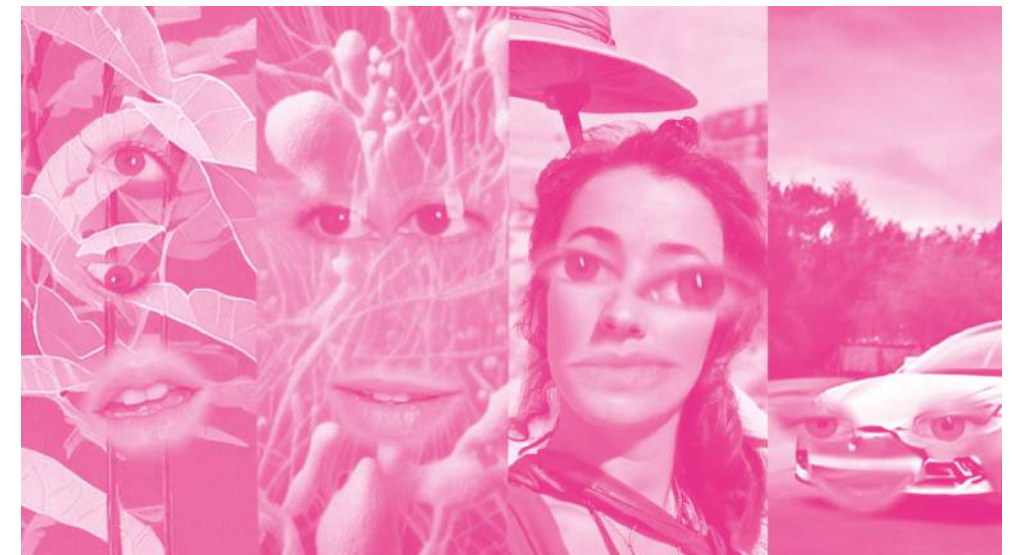
It's time to reconnect with your inner self and embark on this transformative journey.





42

43



INVISIBLE COHABITATION

Eva Popit
Nadja Reifer
Eva Šmigoc
Riccardo Samsa
Gabriela Semanová
Niko Fernandez



Group 3
Mentor: Nejc Prah
Co-mentor: Ivica Mitrović



Invisible cohabitation, or the relationship between frequently disregarded or undervalued elements, such as room atmosphere and global north-south divides, was the focus of our week-long workshop. In order to raise awareness of these entities and give their protection a higher priority in daily life, we suggested the establishment of a Ministry of Invisible Cohabitation. At a press conference, the new ministry was introduced.





THE GHOSTS IN THE DIVACA CAVE

Alexandra Kraler

Nadja Reifer



48

Group 4
Mentor: Nejc Prah
Co-mentor: Ivica Mitrović

49

"The Ghosts in the Divaca Cave – Resonance Revealed" is an artistic project that combines imaginative and audio manifestations with Biodata-Sonification and feministic approaches to delve into the mystical realm of Divaca Cave, using rocks carefully collected from its ancient depths as a source of inspiration

The primary goal of the project is to explore the contrasting perceptions of AI and humans. It aims to examine how these two entities perceive, specifically focusing on the mystical creatures that can be imagined within the natural formations of the cave.

The project utilizes Biodata-Sonification – a technique that converts biological data into sound – to create an audio representation of the imagined creatures. By employing this method, we aim to establish an interspecies collaboration between humans and AI, allowing for another artistic approach to imaginative and narrative processes.

In addition to exploring the imaginative aspects, the project also addresses critical aspects of AI. It aims to investigate the transparency of the source of power behind AI systems and raises questions about the carbon footprint associated with the learning process of these systems. By highlighting these issues, the project invites viewers to reflect on the ethical and environmental implications of AI technology.

Overall, the project seeks to merge artistic expression, interspecies co-creation, and environmental consciousness. It encourages viewers to contemplate the relationships between humans, AI, nature, and the potential for collaborative creation.

HOW WOULD YOU RATE ...

THE FIRST DAY?

THE SECOND DAY?

THE THIRD DAY?

THE FOURTH DAY?

8,6

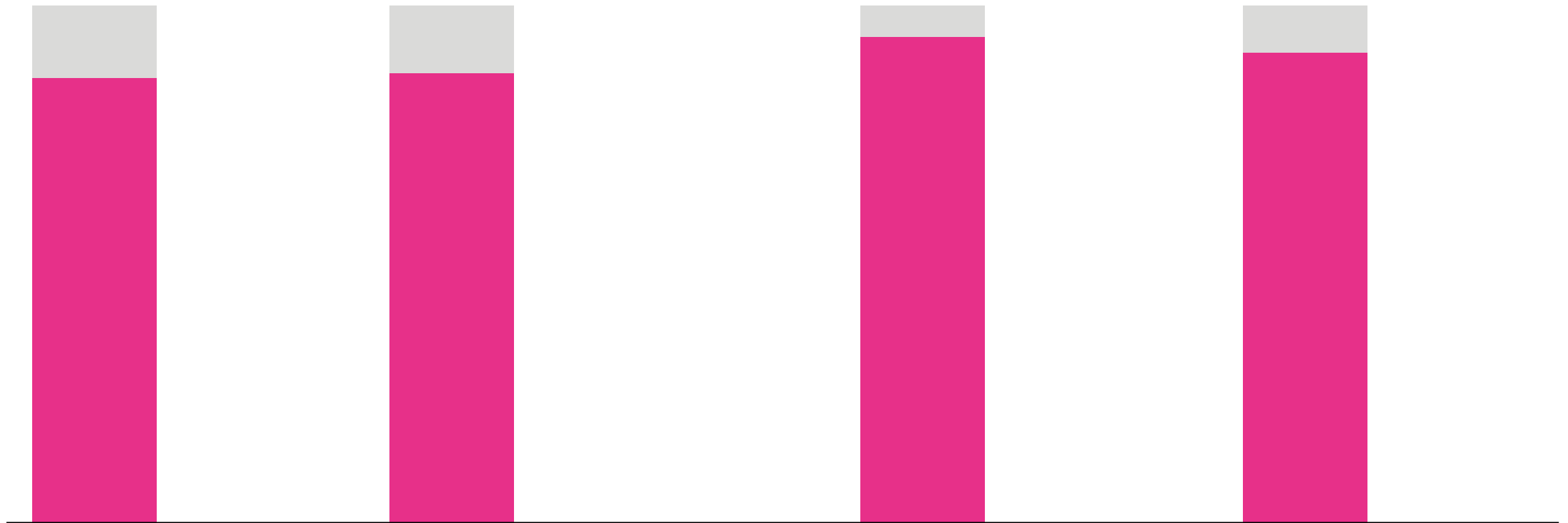
8,7

9,4

9,1

50

51



HOW DO YOU FEEL TODAY?

tired

disappointed

interested

inspired

excited

in a right place

listened to

exciting

happy

challenged

great

curious

grateful to be here

fun

engaged

talkative

motivated by topics

accepted

intrigued

stimulated

long day

enriched

inspired by people

motivated

a bit disappointed

nervous

like my input matters

WHAT WOULD YOU LIKE TO HAVE MORE OF?



WHAT WOULD YOU LIKE TO HAVE LESS OF?

a little less pressure on finalising would be awesome - maybe one more day to finish the group works ...

less human-centered topics, more input on regeneration of other critters and environments

Rain

a bit less pressure on the final project perhaps

less workshop stress

Rain

WHAT WAS SOMETHING INSPIRING YOU HEARD?

I think the round table was super nice, they gave us some views

Think, discuss, criticise

The talk by Uroš was extremely inspiring, it was the first time I heard of sth like his practice.

I loved the meditation workshop. I really felt the connections with nature.

New materialism and intelligent materials.

The talks

Donna Harraway.

58

Messages embodied in a space or physical experience can communicate at a subliminal level.

Teach to question, learn to learn

The material studies and how to use AI as a tool.

The whole talk of Uroš.

The concept of KRATER, I really want to visit them and collaborate.

I really enjoyed being able to see what other projects the groups are working on.

Awareness is a great tool.

I guess you to be more conscious or aware to the way we are connected to our surroundings, and our own body.

Seek problems not solutions

I loved watching Donna Harraways movie, and Laura's talk was suouer interesting as well.

59

Both Design+Science Summer Schools were a great experience! The week consists of workshops, lectures, guided tours, and creative explorations at the intersection of design and science with colleagues from around the world. Working with excellent mentors and the flexibility of the program allows you to develop your paths and creative solutions while learning new methods and research approaches.

Nia Gombač, attendee

My experience at the Design Science Summer School in Ljubljana was truly transformative. The focus on para-intelligence was fascinating and pushed us to explore forms of intelligence beyond the traditional. I enjoyed working with a group of participants and mentors with diverse backgrounds, which made our collaboration profound. The lectures on speculative design were particularly enlightening, filled a gap in my knowledge, and sparked a deep interest in the field. I would highly recommend this program to anyone looking to broaden their horizons in a collaborative and innovative environment.

Eva Šmigoc, attendee

Since I'm a huge fan of site-specific problem-solving in somewhat specific, speculative circumstances, not restricted by resources such as cash or client's opinion, I found the Design+Science Summer Schools method inspiring, creative, and freeing in many ways. I learned a lot about myself and my approach to design thinking and doing.

Eva Popit, attendee

Design+Science Summer School 2023:
Paraintelligence

Organizing team

Boštjan Botas Kenda
Maja Drobne
Borut Jerman
Jernej Kežar
Marina Klemenčič
Emil Kozole
Ana Markežič
Sigrid Bürstmayr
Birgit Bachler
Daniel Fabry
Ivica Mitrović

Mentors

Ivica Mitrović
Sigrid Bürstmayr
Emil Kozole
Nejc Prah

Lecturers and Experts

Stuart Walker
Eray Sertaç Ersayın
Laura Tripaldi
Eva Fischer
Danica Sretenović
Gaja Mežnarić Osole
Saša Spačal
Matevž Pogačnik
Uroš Krčadinac
Francesco Ermanno Guida
Mia Roth-Čerina

Evaluators

Anja Zorko (MAO)
Karl Stocker
Eberhard Schrempf (CIS)
Ivica Mitrović
Marija Nabernik (UL ALUO)
Domen Fras (UL ALUO)
Rok Kuhar (UL ALUO)
Julian Hanna
Horst Hörtner
Bo Kelestyn (Warwick University)

Participants

Katarina Babič Derenda
Bianca Bauer
Niko Fernandez
Nia Gombač
Alexandra Kraler
Arthur de Liz Sperb
Jaanika Malla
Jozef Eduard Masarik
Jaka Oman
Eva Popit
Nadja Reifer
Ana Laura Richter
Larissa Rodiga
Alexandra Samandarova
Riccardo Samsa
Kristina Selinski
Gabriela Semanová
Eva Šmigoc
Sofia Gonzalez Villalobos

Organizers

Univerza v Ljubljani
FH Joanneum
Sveučilište u Splitu
PiNA, Kulturno izobraževalno društvo,
Associazione Culturale Ed Educativa

Strategic partners

EUTOPIA
Creative Industries Styria

Supporters

Ministry of Culture, Republic of Slovenia
Evropski sklad za regionalni razvoj
Museum of Architecture and Design Ljubljana
Studio Ljudje
GPS Group
Evrosad
Cankarjev dom
IAQUIN
Europlakat
Mercator
RUK
Veleposlaništvo Republike Avstrije

Published by

Kulturno izobraževalno društvo PiNA

Editors

Boštjan Botas Kenda
Marina Klemenčič
Maja Drobne
Borut Jerman
Emil Kozole
Jernej Kežar

Photography

Tine Lisjak

Social media

Malachai Schreiner
Darja Oražem

Ljubljana, 2024

The project was created with support of the
Ministry of Culture of the Republic of Slovenia.

Kataložni zapis o publikaciji (CIP) pripravili v
Narodni in univerzitetni knjižnici v Ljubljani

COBISS.SI-ID 200557827

ISBN 978-961-94054-9-9 (PDF)



UNIVERZA
V LJUBLJANI



FH JOANNEUM
University of Applied Sciences

piNa

Creative
Industries
Styria

EUTOPIA



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA KULTURO



EVROPSKA UNIJA
EVROPSKI SKLAD ZA
REGIONALNI RAZVOJ
NALOŽBA V VAŠO PRIHODNOST



MUSEJ ZA ARHITEKTURO
IN OBLIKOVANJE
MUSEUM OF
ARCHITECTURE AND DESIGN

cankarjev dom



EVROSAD

I · A · Q · U · I · N

eurolakat
Digital



Mercator

