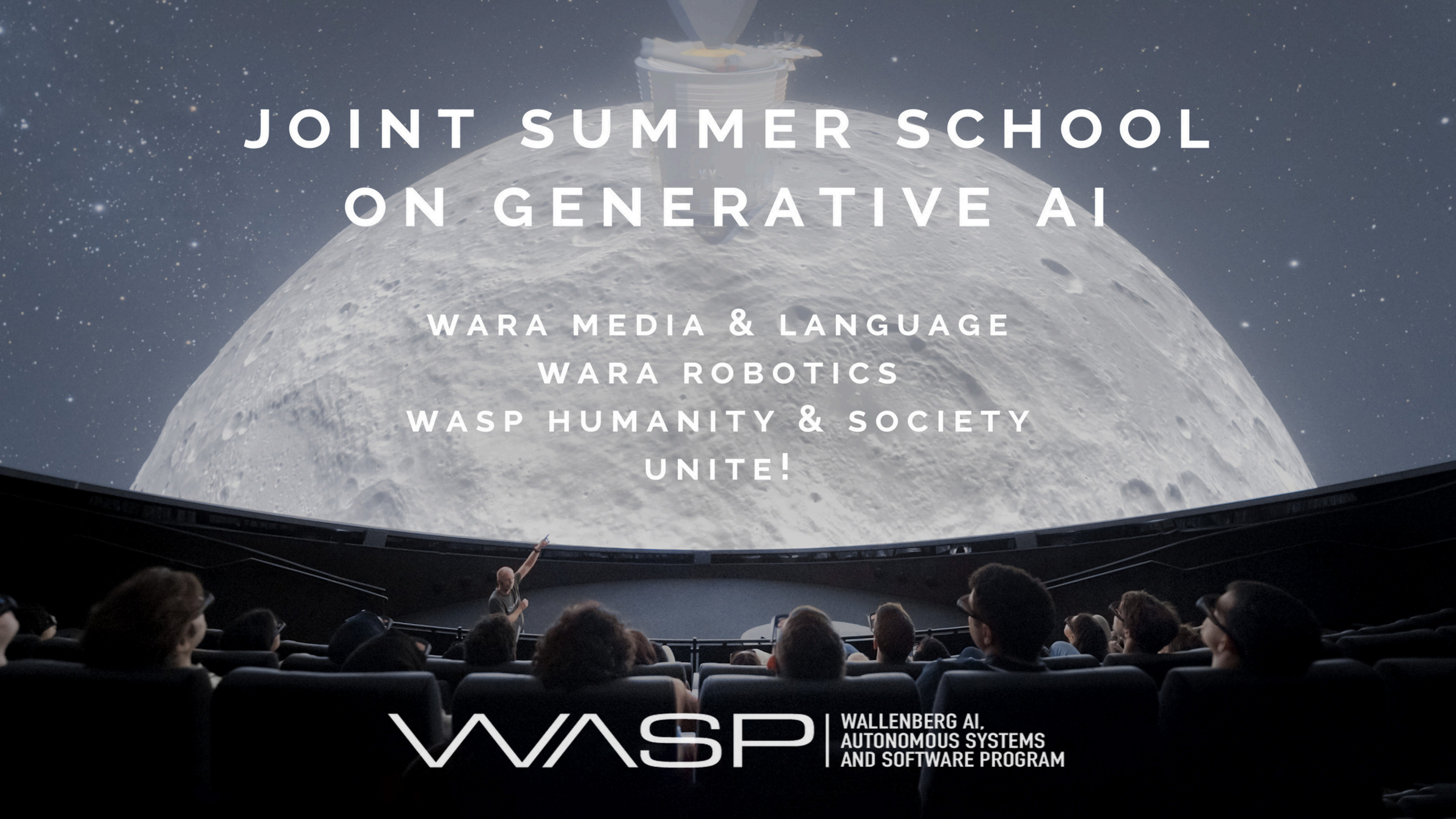

JOINT SUMMER SCHOOL
ON GENERATIVE AI
WARA MEDIA & LANGUAGE
WARA ROBOTICS
WASP HUMANITY & SOCIETY
UNITE!
WASP
WALLENBERG AI,
AUTONOMOUS SYSTEMS
AND SOFTWARE PROGRAM

Table of Contents

Welcome to the Joint Summer School on Generative AI 2024!

We are delighted to have you join us for this exciting event, organized in collaboration with the WASP Research Arenas Media and Language (WARA M&L), Robotics (WARA Robotics), WASP-HS, and Unite!.

This year's theme, "Applications and Implications of Deep Generative Models," aims to broaden research horizons by bringing together students from various disciplines. Our goal is to foster interdisciplinary discussions and explore the social and ethical dimensions of Generative AI.

Our program features an enriching blend of lectures, hands-on experiences with cutting-edge technologies, workshops, student presentations, and memorable social activities. Highlights include a conference dinner, a pitch event, and an excursion to the beautiful surroundings of Marmorbruket.

This summer school provides a unique opportunity to delve into your research field at the intersection of technology and society, and to build connections with new colleagues and friends from WASP, WASP-HS, and Unite!.

We look forward to an inspiring and productive time together!

About the organizers

WARA Media and Language

WARA M&L is part of the WASP Research Arenas, with the mission of building a multidisciplinary ecosystem around Media AI, connecting various scientific fields and diverse industrial segments.
Read more here: https://wasp-sweden.org/industrial-cooperation/research-arenas/wara-media-and-language/

Unite! Speech, Language, and AI

The Unite! Graduate School of Speech, Language, and AI Technologies is an initiative of the European University Alliance for Innovation, Technology, and Engineering. This alliance connects nine universities across European regions known for economic prospects, entrepreneurship, and innovation.
Read more here: https://www.unite-university.eu/

About the organizers

WASP-HS

The Wallenberg AI, Autonomous Systems and Software Program – Humanity and Society (WASP-HS) is an eleven-year long research program running from 2019-2029. The vision of WASP-HS is to foster novel interdisciplinary knowledge in the humanities and social sciences about AI and autonomous systems and their impact on human and social development.
Read more here: https://wasp-hs.org/

WARA Robotics

WARA Robotics is part of WASP Research Arenas and was created to explore robot manipulation and navigation technologies in relevant industrial environments, which allows researchers to discover and explore unexpected challenges otherwise invisible.
Read more here: https://wasp-sweden.org/industrial-cooperation/research-arenas/wara-robotics/

Tracks and Credits

WARA Media & Language

In this track, students dive into generative AI technologies, especially for text, audio and 3D animation. You will read up on the topic and attend inspiring lectures and workshops, train a generative AI system, and work in groups to use the different technologies to create a short story told by 3D avatars.

After passing this summer-school track, the student will be able to...

...recount the basic paradigms in deep generative AI and specify how deep generative models differ from regression-based methods
...discuss different aspects of the evaluation of generative models
...present nuanced ways of thinking about bias in machine learning, its social impact, and data-ownership ethics
...name some key legal issues and frameworks for modern machine learning
...outline how the concept of trust applies to a generative-AI world
...train and tune a modern generative model on a problem relevant to media and language

After completing the summer school, students will receive 3.0 ECTS credits (pre-assignments included).
Note that these credits do not count towards the 27 credits you are expected to complete in the WASP Graduate School.

Active participation on site in Norrköping is furthermore required to receive credit.

Track and Credits

Unite!

Unite! graduate students from Speech, Language and AI Technologies will work together with the students from WARA Media and Language. The track content, intended learning outcomes, requirements and credits are identical to those listed in the WARA Media and Language section above.

Please refer to that section for all such information; just ignore the remark about credit requirements for the WASP Graduate School.

Track and Credits

WASP- HS

In this track, students will engage with critical theory and its implications for technology evaluation, exploring methods and theories to approach the societal aspects entangled in generative AI. They will learn about bias and fairness issues related to ML, and the societal impacts of these.

After completing the summer school, students will receive 1.5 ECTS credits (pre-assignments included). Please note that these credits do not count towards the credits you are expected to complete in the WASP-HS Graduate School.

Active participation on site in Norrköping is furthermore required to receive credit.

Track and Credits

WARA Robotics

In this track students will get a landscape understanding of the different existing approaches that employ LLMs as the main reasoning engine for task planning in robotics. We will focus on describing one of the simplest forms which is employing prompt engineering techniques and remote running APIs (e.g., GPT3.5 and GPT4 from OpenAI). The students will get hands-on experience building prompts for these LLMs, compare performances between different models, and learn to parse and to deploy the generated task plans on robot manipulator systems provided by WARA Robotics.

This track does not require reading material and studying before the summer school, so students will receive 1.5 ECTS credits for successful participation in this track.

Active participation on site in Norrköping is furthermore required to receive credit.

Norrköping Visualization Center

Summer School will take place in beautiful Norrköping that is one hour outside of Stockholm by train. The Norrköping Vizualization Center is 15 min walk from the central station.

Visualization Center C is a research and science center conducting a unique mix of leading visualization research and public outreach activities. The center hosts a large-scale arena for public visits and events including media labs, interactive exhibitions and an immersive 3D fulldome theatre.

With the audience completely immersed in a multisensory environment, a dome film – especially in 3D – becomes a mind-blowing experience. The dome theater is the most technically advanced in northern Europe.

More information www.visualiseringscenter.se/en

Packing List

Here is a short list of the most essential items to bring

- Laptop (bring every day except on the excursion and evening activities)
- Headset or headphones that can be used with the laptop (bring every day except on the excursion and evening activities)
- Comfortable clothes and hiking shoes (for the excursion day)
- Optional bathing suit (for the excursion day)
- Adapter for Swedish outlets (if you're coming from abroad)

Summer School Schedule

Monday August 12th

11:00 Registration - Entrance of the Visualization Center
12:00 Lunch
13:00 Welcome and practical information - Ivana von Proschwitz (WARA M&L)
Eva Sjöstrand (WASP-HS)
13:30 Inspirational Applications of Gen AI - Guy Gadney (Charisma AI)
14:30 Coffee break
15:00 Industrial Applictions of LLMs - Intel
15:30 Generative AI Projects - Diarmuid Corcoran (Ericsson)
14:00 Prompt Engineering -Rolf Johansson (Lund University)

19:00 Welcome Mingle in the Visualisaton Center with treasure hunt

*The schedule may be changed so always keep an eye on the webb for the latest changes. https://wasp-sweden.org/event/joint-summer-school-on-generative-ai-2024/

Summer School Schedule

Tuesday August 13 th

09:00 Bias and Fairness - Hannah Devinney (Umeå University)
10:00 Coffee break
10:30 Trust - Alexandra Kafka Larsson (Parsd) and WASP-HS researchers
12:00 Lunch
13:00 Joint workshop: Analyzing Technologized Interaction in Practic - Mathias Broth (Linköping University) and Hannah Pelikan (Linköping University)
14:30 Coffee break
15:00 Legal Aspects - Katja De Vries (Uppsala University)
16:00 Tracks
WASP HS -In the wild workplace... practical evaluations of AI technology use, Moa Bursell (Institute for Future Studies)(Cinema)
WARA M&L/Unite! - Introduction to assignement (LiU K024)
WARA Robotics - Introduction to assignement (LiU K025)
17:00 Student Council Meeting for WASP-HS only (Cinema)

19:00 Pitch event hosted by Navigare Ventures

Pitch event hosted by Navigare Ventures

Pitch Your Business Idea to Navigare Ventures!

Get ready to unleash your creativity and entrepreneurial spirit! In this exciting activity, you'll work in teams to develop a business idea and pitch it to a panel of Navigare Ventures investors. After your pitch, you'll receive insightful questions and valuable feedback from the experts.

Following the pitch session, join us for a delightful dinner served in the cafeteria.

This event is proudly sponsored by Navigare Ventures, an early-stage investor specializing in science-driven companies. Their investments enhance the industrial and societal impact of cutting-edge research.

Don't miss this unique opportunity to showcase your ideas and gain insights from industry leaders!

Navigare Ventures

Summer School Schedule

Wednesday August 14 th

09:00 WASP HS -Critically evaluating explainability: performing transparency and credibility to what end? - Katherine Harrison (Linköping University)(LiU K022 & K023)
10:15 Coffee break
10:45 WASP HS -Probing the Techno-messianism of Chatbots: Toward Criticality with Existential Sensibility - Amanda Lagerkvist (Uppsala University)
(LiU K022 & K023)
12:00 Lunch
13:00 WASP HS - Critiquing power in tech 1 - Data Feminism
Amir H. Payberah (KTH Royal Institute of Technology)(LiU K022 & K023)
14:45 Coffee break
15:15 WASP HS - Critiquing power in tech 2 - Autonomous Design -
Tessy Cerratto-Pargman (Stockholm University)(LiU K022 & K023)

WARA M&L/Unite! - Work on the assignment (LiU K024)
WARA Robotics - Work on the assignment (LiU K025)

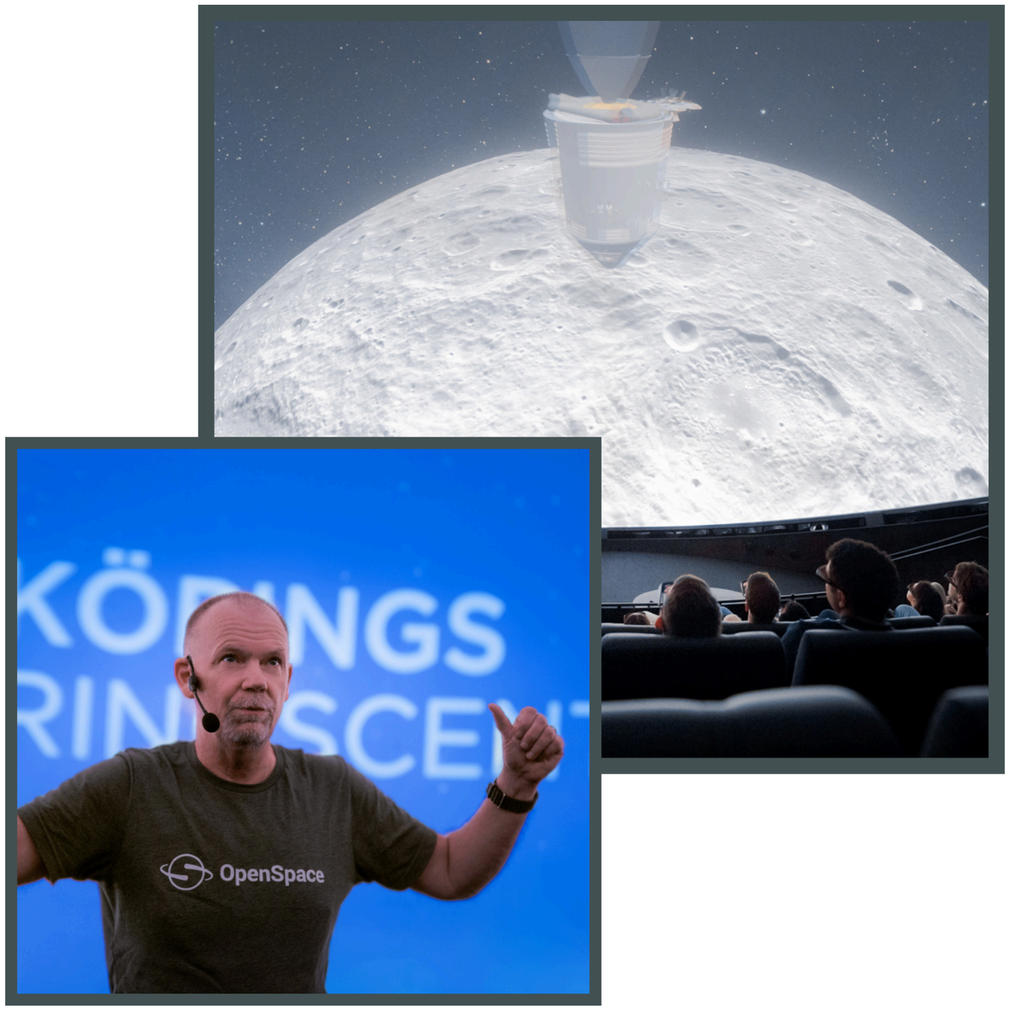
19:00 DOME SHOW: A Walk in Space with Anders Ynnerman
20:00 Wraps and drinks
20:30 DOME SHOW: Making Magic

A Walk in Space with Anders Ynnerman

Visualiseringscenter C is a key participant in ESERO Sweden, an initiative by the European Space Agency (ESA) and the Swedish National Space Agency. Their goal is to integrate space more prominently into education and to support schools in the areas of technology, science, and mathematics. The Royal Institute of Technology in Stockholm leads this collaboration in partnership with the five Wisdome arenas (the National Museum of Science and Technology, Malmö Museum, Universeum, Visualiseringscenter C, and Curiosum). Together, they strive to offer a wide range of customized resources and courses.

Visualiseringscenter C also contributes to the development of the OpenSpace software, a collaborative project involving Linköping University, NASA Goddard Space Flight Center, the American Museum of Natural History in New York, the University of Utah, and New York University.

In this session Anders Ynnerman will guide us in a 3D voyage through space using satellite data. Who knows, we also might land on Mars.



Making Magic

A VISUAL EFFECTS STORY

In the magical world of visual effects, anything can happen. Making Magic is the story of how visual effects are created for film and computer games - and how they are affected by the laws of nature that govern the real world.

Join Peter Stormare on a breathtaking journey and discover how visual effects are created - from equations to explosions. Making Magic is an 8K fulldome show in 3D based on the research behind digital visual effects.

Produced within the WISDOME project by Norrköping Visualization Center C. With support from the Knut and Alice Wallenberg Foundation.

Summer School Schedule

Thursday August 15 th

09:00 Designing differently 1, Sara Ljungblad (Chalmers University of Technology) and (Gothenburg University)(LiU K022 & K023)
10:30 Coffee break
11:00 Designing differently 2, Sara Ljungblad (Chalmers University of Technology) and (Gothenburg University)(LiU K022 & K023)
12:00 Lunch
13:00 Excursion to Marmorbruket Nature Reserve

WARA M&L/Unite! - Work on the assignment (LiU K024)
WARA Robotics - Work on the assignment (LiU K025)

Deadline for the assignment is 12:00

19:00 Conference Dinner at VY

Excursion to Marmorbruket

Get ready for an unforgettable adventure! On Thursday, we will visit the stunning Marmorbruket nature reserve. This breathtaking area stretches 3.5 km along the northern Bråviken beach and offers a diverse landscape featuring beautiful scenery, historic buildings, and ancient marble quarries. It's the birthplace of the world-famous Kolmårdsmarmor marble, mined here until the 1970s.

Important Information:

- What to Bring: Comfortable clothes and hiking shoes.
- Pickup Location: The bus will pick you up at 13:00 o'clock at Skvallertorget, just 100 meters from the Visualiseringscenter.
- Travel Time: It takes about 30 minutes to reach the reserve.
- Activity Duration: We will have 4 hours to hike and explore the captivating surroundings.
- Return Trip: The bus will pick us up at 17:00 o'clock and bring us back to the Visualiseringscenter.
- Refreshments: Snacks will be provided.

For more details, check out the map: Marmorbruket Nature Reserve.

Conference Dinner at Restaurant VY

On the evening of August 15, you are invited to an extraordinary conference dinner at Restaurang VY, renowned for offering the best view of the city!

Perched in the iconic, historically significant Strykjärnet building—aptly named "the Iron" for its unique shape—this restaurant shares its location with the Arbetets Museum. As you dine, you'll be treated to breathtaking panoramic views, adding a touch of magic to the evening.

Join us for an unforgettable night of delightful cuisine, captivating conversations, and stunning scenery. Don't miss this perfect blend of history, ambiance, and camaraderie!

Address: Laxholmen
602 21 Norrköping
hwww.vynkpg.se

Summer School Schedule

Friday August 16 DEMO DAY

09:00 Introductions & Feedback
09:30 WARA M&L/Unite! student presentations
10:30 Coffee brak
10:45 WASP HS presentations
11:30 WARA Robotic student presentations

12:00 Lunch

End of Conference

Pre-Assignment WARA M&L/Unite!

Before the summer school:

There are two remote components that students are expected to complete using the online learning platform Canvas at KTH:

- Reading on generative modelling and related topics such as evaluation of synthesis models
- Getting hands-on experience training a strong generative model

These are described in more detail below. More up to date information will be available on Canvas, so make sure to accept your invite to the Canvas system.

Reading on generative modelling and related topics:

The list of material to read will be accessible from early June onwards through the Canvas learning platform at KTH Royal Institute of Technology. Some of it will be research article pdfs with instructions regarding which sections to read, but other components may be blog posts, videos, and similar. The main topics covered will be:

- Basic principles of synthesis
- Generative modelling paradigms
- Evaluation of synthesis models
- Legal aspects of generative systems

The reading materials will be associated with a number of mini-quizzes that you can use to check that you picked up on the most important points from the material. Most or all of the quizzes will be 3–18 multiple-choice questions, depending on the amount of material the quiz covers. They are corrected automatically and instantly upon submission, and you can retake them as many times as you like.

Pre-Assignment WARA M&L/Unite!

Hands-on experience of generative modelling:

The assignment will comprise a notebook (likely on Google Colab) where you will train/fine-tune a state-of-the-art open deep generative model. Specifically, you will fine-tune a text-to-speech system to speak with your own voice. The system uses flow matching, which can be seen as a refinement of diffusion models. You can then use your own text-to-speech system as component of your assignment during the on-site week in Norrköping.

Running training for a deep generative system can take some time. The fine-tuning task we intend to propose can give good results in less than 10 minutes of wall-clock training time. Nonetheless, it might be useful to use a strategy of starting a training run, then letting it run in the background whilst you do whatever else you are busy with, and then returning to the training after it has finished to check the results, perhaps tweak a few parameters, and kick off another run. This way, you can devote most of your attention to other tasks on your plate, and can get to try many different things even with a small amount (say 8 hours) of active time invested. We will also provide access to teaching assistants that you can contact if you get stuck.

Pre-Assignment WARA M&L/Unite!

To pass the remote component of the summer school, you have to:

- Achieve a score of 70% or more on each Canvas quiz. (This is not hard since they are multiple choice, corrected instantly and you can retake them as many times as you like and keep your best score.)
- Complete the text-to-speech system training/fine-tuning assignment. This is likely to be examined by you submitting a few examples of system output to our teaching assistants.

You will be expected to do complete the remote component of the summer school at least a week before the in-person week in Norrköping. If you do not, you will have to complete the above tasks after the summer school in order to be entitled to credits for passing the course.

If you fail to complete the quizzes or train the generative system in advance of the summer school, you can still attend and participate. The role of the mini-quizzes and the system training is to ensure proper preparation, not to fail students. The administrative consequence is that you do not receive any course credits until these parts have been completed, but the main consequence of not being properly prepared would be a reduced ability to follow along with the on-site talks and an impeded collaboration within the project group there. Please complete the expect work ahead of the on-site week to avoid such issues.

On-site Assignment WARA M&L/Unite!

During the on-site week in Norrköping, students work in groups to use the generative AI technologies to create a short story told by 3D avatars.

Specifically, you will be working with an existing pipeline that combines text generation, text-to-speech, and speech-to-gesture to produce a talking and gesticulating avatar, and then use your creativity to find useful (or at the very least entertaining) applications for the resulting system. You are encouraged to use the text-to-speech system that you previously fine-tuned on your own voice as part of the pipeline.

Deadline to hand in the assignment is Thursday 14th August at 12:00.

On Friday, the last day of the Summer School, all teams will present their assignments in the Dome at the Norrköping Visualization Center.

Last year´s assignment for inspiration

This is the link to the video: https://www.youtube.com/watch?v=by40aaCbLpY

Assignment WARA Robotics

WARA Robotics will bring physical YuMi robots from ABB to Summer School. The robots will have reprogrammed skills, that give them the capability of achieving different motions (e.g., pick, place, insertions) and actions (e.g., capturing images and identifying objects). A Python interface will be provided to communicate with the robots and with LLM/VLM generative AI models.

<u>The assignment will be divided into several steps:</u>

1. Build a prompt for LLMs to build a task plan from a description of the available robot capabilities. Can be done first manually in a text editor, but later needs to be integrated in Python.
2. Provide a Python interface for a user to add a goal request to the previous prompt. Can be speech-to-text, or only text.
3. Evaluate the result of combining steps 1 and 2 to get a task plan from an LLM. Iterate over steps 1 and 2 until consistency is achieved in creating task plans.
4. Using the task plans outputted from the LLM in previous step, create a Python parser and interpreter that allows calling the different steps in the task plan using the available robot capabilities in the YuMi robots.
5. Evaluate qualitatively the correctness of the created task plans using steps 1-4, building a complete system that allows the user to go from natural language to robot execution in a matter of minutes.

On Tuesday 13th and Wednesday 14th, we will focus on achieving the assignment using only a single Large Language Model (LLM). On Thursday 15th, we will introduce the possibility of running other LLMs and Vision Language Models (VLMs), to compare and contrast the different results that are achieved through them.

WASP-HS Reading List

Tuesday 13 August
Joint workshop: Analyzing Technologized Interaction in Practice
Instructors: M. Broth, H. Pelikan
Room: Cinema-Huvudrollen
Time: 13.00-14.30

This session will introduce methods for seeing and evaluating technology in practice.

Readings:
Heath, C., Hindmarsh, J., & Luff, P. (2010). Video analysis and the Social Sciences. In Video in Qualitative Research: Analysing Social Interaction in Everyday Life. SAGE Publications, Inc. https://doi.org/10.4135/9781526435385

Dingemanse, M. et al (2023). Beyond Single-Mindedness: A Figure-Ground Reversal for the Cognitive Sciences. Cognitive Science, 47(1), e13230. https://doi.org/10.1111/cogs.13230

WASP-HS Reading List

Tuesday 13 August
Legal Aspects
Instructor: K. De Vries
Room: Cinema-Huvudrollen
Time: 15.00-16.00

This session will discuss legal aspects of generative AI

Reading:
Katja de Vries, Yaffa Epstein, Olga Goriunova and Niels van Dijk (forthcoming) Encountering Rivers and Robots as Legal Subjects in Four Acts: Law/Critical Theory/Speculative Fiction. Chapter draft, please do not distribute.

WASP-HS Reading List

Tuesday 13 August

In the wild workplace… practical evaluations of AI technology use

Instructor: Moa Bursell

Room: TBA

Time: 16.00-17.00

What happens when technology is (early) adopted into existing practices and social structures, with examples of ‘anti-bias’ AI recruitment tools? The lecture will present actual AI technology use in the Nordics, actual evaluation of the results, and discussions of where/how and by whom these evaluations could/should be carried out and what impact such evaluations can have (on use and iterative development).

Readings: none

WASP-HS Reading List

Wednesday, 14 August

Note: For the morning session and the afternoon session, each lecture will be given twice. Students will be divided into two groups and switch classrooms between the lectures, so that the group size is approximately 30 students per class.

Morning: Critical theory and evaluations

Probing the Techno-messianism of Chatbots: Toward Criticality with Existential Sensibility
Instructor: Amanda Lagerkvist
Room: TBA
Time: 9:00-10:15 session 1 - 10.15-10.45 break, students switch rooms - 10:45 -12:00 session 2

Philosophical critiques of ChatGPT

Readings:
Bender, E. & T. Gebru et al. (2021) “On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?” FAccT ’21, March 3–10, 2021, https://doi.org/10.1145/3442188.3445922

Zimmerman, A. ed., (2020) Philosophers on GPT-3 (updated with replies by GPT-3). Daily Nous. https://dailynous.com/2020/07/30/philosophers-gpt-3/

WASP-HS Reading List

Wednesday, 14 August

Note: For the morning session and the afternoon session, each lecture will be given twice. Students will be divided into two groups and switch classrooms between the lectures, so that the group size is approximately 30 students per class.

Critically evaluating explainability: performing transparency and credibility to what end?
Instructor: Katherine Harrison
Room: TBA
Time: 9:00-10:15 session 1 - 10.15-10.45 break, students switch rooms - 10:45 -12:00 session 2

This workshop/seminar will explore how criticality appears in conversations about transparency and credibility

Readings:

Chong, P. and Bourgoin, A., (2020). Communicating credibility by expert service workers: The credibility tactics of fiction critics and management consultants.Valuation Studies, 7(1), pp.65-65. https://doi.org/10.3384/VS.2001-5992.2020.7.1.65

Nauta, M., et al (2023). From anecdotal evidence to quantitative evaluation methods: A systematic review on evaluating explainable ai. ACM Computing Surveys, 55(13s), pp.1-42. https://doi.org/10.1145/3583558

WASP-HS Reading List

Wednesday, 14 August

Note: For the morning session and the afternoon session, each lecture will be given twice. Students will be divided into two groups and switch classrooms between the lectures, so that the group size is approximately 30 students per class.

Afternoon: Critiquing the power in and of technology

Data Feminism
Instructor: Amir Paybereh
Room: TBA
Time: 13.00-14.45 Session 1 - 14.45-15.15 break, students switch rooms - 15.15-17.00 Session 2

What tools can be used to see power in data and tech design and evaluation?

Readings: Data Feminism (select sections at will): https://data-feminism.mitpress.mit.edu/ Data Feminism study guide: https://5a3dfaa4-f144-40dc-b9d0-55e0c3c844f6.filesusr.com/ugd/06f7eb_d67d8077aeb14492a2e3e4c81444ea9b.pdf
Data Feminism video lectures: https://datafeminism.io/blog/book/data-feminism-reading-group/

WASP-HS Reading List

Wednesday, 14 August
Autonomous Design
Instructor: Teresa Cerratto-Pargman
Room: TBA
Time: 13.00-14.45 Session 1 - 14.45-15.15 break, students switch rooms - 15.15-17.00 Session 2

The session will be based on Arturo Escobar's Design for the Pluriverse. Before class, please highlight the parts of the text you find compelling, provocative, inspiring, helpful, or other when reading the chapters. Bring quotes to the class so you can share them with others, and in groups, make a collage/poster with the selected quotes

Readings:
Escobar, A. (2018). Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds. Duke University Press. https://www.dukeupress.edu/Assets/PubMaterials/978-0-8223-7105-2_601.pdf

· Introduction chapter – (20 pages)
· Chapter 4 - An Outline of Ontological Design – from page 110 (What is Ontological Design?) to page 129 & from page 131 (Back to Ontological Design) to p. 134.
· Chapter 5 – Design for Transitions –from page 151 (Designs for Transitions) to p. 164
· Chapter 6 – Autonomous Design and the Politics of Relationality and the Communal– from page 184 (An Outline of Autonomous Design) to p. 190
· Chapter 3 – in the Background of Our Culture – (23 pages) – Optional

WASP-HS Reading List

Thursday, 15 August

Designing differently
Instructor: Sara Ljungblad
Room: TBA
Time: 9.00-12.00 with a break

This workshop will use the implosion method on ChatGPT or other AI- based solutions in groups.

Reading:
Dumit, Joseph. 2014. “Writing the Implosion: Teaching the World One Thing at a Time.” Cultural Anthropology 29, no. 2: 344–362. https://doi.org/10.14506/ca29.2.09.

Contact Details

WARA Media & Language

Ivana von Proschwitz
WARA Media & Language
Community Manager
ivana.von.proschwitz@umu.se

Johanna Björklund
WARA Media & Language Project Manager, Assoc. Professor, Department of Computing Science, Umeå University
johanna@cs.umu.se

Unite!

Gustav Eje Henter
Assoc. Professor KTH
ghe@kth.se

Olov Engwall
Unite!
engwall@kth.se

WASP-HS

Ericka Johnson
Director of the WASP-HS Graduate School
iericka.johnson@liu.se

Eva Sjöstrand
Graduate School Coordinator
WASP- HS
igraduate.school@wasp-hs.org

WARA Robotics

Matteo Iovino
WARA Robotic Track
matteo.iovino@se.abb.com

Sebastian Zudaire
WARA Robotic Track
sebastian.zudaire@se.abb.com

We look forward to see you on site in Norrköping and to have many interesting discussions together. If you have any concerns or questions, please don't hesitate to reach out to us.

- For general questions regarding your participation, please send an email to Ivana or Johanna.
- For questions regarding the WARA M&L/Unite! pre-assignment (e.g., study materials, quizzes, and code), please send an email to all three of:
  Gustav Eje Henter <ghe@kth.se>
  Ludvig Johansson <ludde099@gmail.com>>
  Ossian Arn <ossian.arn@gmail.com>
- For questions regarding the WASP -HS track or reading materials, please send an email to Ericka or Eva.
- For questions regarding the WARA Robotic Track, please send an email to Matteo or Sebastian.