# AIDEA 2025

## Sunday, February 23, 2025

| Time | Activity |
|------|----------|
| 19:00 | Optional joint dinner, Gablerbräu: www.gablerbrau.at |

## Monday, February 24, 2025

*See below for further information on the location of the rooms.*

| Time | Activity | |
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| 8:30-9:00 | Registration *Room: HS 402 Blauer Hörsaal* | |
| 9:00-9:30 | Opening and introduction *Room: HS 402 Blauer Hörsaal* | |
| 9:30-10:30 | Refactoring Computer Science & Data Science Education in the Age of Generative AI, **Orit Hazzan** *Room: HS 402 Blauer Hörsaal, Chair: S. Schönbrodt* | |
| 10:30-11:00 | Break | |
| 11:00-12:30 | CRITICAL EDU & SOCIAL GOOD<br>1: Critical Bildung: Society as Algorithmic Social Machine? Machine metaphors for the Digital Enlightenment **Harald Gapski**<br>2: On creative thinking in AI and data science education, **Dan Verständig**<br>3: Unplugged activities as introduction to data science with focus on ethical and social dimensions, **Christian Andersson**<br>*Room: HS 413, Chair: K. Binder* | DS EDUCATION & SOCIAL GOOD<br>4: Data science for informed citizen: Learning at the intersection of data literacy, statistics and social justice, **Joachim Engel**<br>5: Data are at the Center of Data Science: My take on what everyone should know about data, **Arne Bathke**<br>6: High-school data science: a "data moves" perspective, **Tim Erickson**<br>*Room: HS 414, Chair: S. Podworny* |
| 12:30-13:45 | Lunch | |
| 13:45-14:45 | Generation AI: Tools for AI Education, **Matti Tedre, Henriikka Vartiainen** *Room: HS 402 Blauer Hörsaal, Chair: S. Schneider* | |
| 14:45-15:15 | Break | |

| 15:15-16:15 | LEARNING MATERIAL ON AI/ DESIGN PRINCIPLES<br>7: Data-related concepts, practices and design principles for teaching AI topics in secondary schools, **Viktoriya Olari**<br>8: AI in an online schoolbook, **Hannes Heusel**<br><br>*Room: HS 413, <u>Chair: S. Schneider</u>* | AI & DS CURRICULA/LEARNING MATERIAL<br>9: Insights and approaches from the AI Competency Center of the Hamburg State Institute for Teacher Training and School Development, **Britta Kölling**<br>10: Fostering data and AI competencies in primary schools, **Anja Gärtig-Daugs**<br><br>*Room: HS 414, <u>Chair: S. Kindler</u>* |
|---|---|---|
| 16:15-16:55 | Small group discussions, *Moderators: S. Schneider, S. Podworny, R. Biehler, Y. Fleischer, I. Gal, C. Schulte, T. Erickson, T. Weiland, J. Engel* | |
| 17:00-18:00 | Workshop 1: An introduction to CODAP, **Tim Erickson**<br><br>*Room: HS 413* | Workshop 2: Hands-on introduction to K-12 AI education using XAI social media simulator "Somekone", **Matti Tedre, Henriikka Vartiainen**<br><br>*Room: HS 414* |
| 18:30 | Optional joint dinner: La Cantinetta, www.cantinetta.at | |

# Tuesday, February 25, 2025

| Time | Activity | |
|------|----------|---|
| 9:00-9:30 | Morning session, recap of day 1<br><br>*Room: HS 402 Blauer Hörsaal, <u>Chair: I. Gal</u>* | |
| 9:30-10:30 | Lessons Learned from the ProDaBi Project: Shaping Perspectives at the Intersection of Data, AI, and Education, **Rolf Biehler, Carsten Schulte**<br><br>*Room: HS 402 Blauer Hörsaal, <u>Chair: I. Gal</u>* | |
| 10:30-11:00 | Break | |
| 11:00-12:30 | PRODABI PERSPECTIVES<br>Empowering students in a data-driven world: Explanatory models for understanding data-driven technologies from everyday life, **Lukas Höper, Yannik Fleischer**<br><br>*Room: HS 413* | PRODABI PERSPECTIVES<br>Empowering students to gain insights within data exploration projects in the classroom - Using, modifying and creating data moves through a scaffolded use of digital tools, **Sven Hüsing, Susanne Podworny**<br><br>*Room: HS 414* |
| 12:30-13:45 | Lunch | |
| 13:45-14:45 | Education with and about AI: Implementation of a participatory teaching platform, **Sarah Schönbrodt, Steffen Schneider**<br><br>*Room: HS 402 Blauer Hörsaal, <u>Chair: H. Vartiainen</u>* | |
| 14:45-15:15 | Break | |
| 15:15-16:15 | AI & DS EDUCATION FROM A MATH PERSPECTIVE<br>11: Competencies and curriculum implications at the intersection of mathematics, data science and statistics, **Cathy Smith**<br>12: Unsupervised machine learning as learning content in lower secondary school, **Katharina Bata**<br><br>*Room: HS 413, <u>Chair: Y. Fleischer</u>* | LEARNING MATERIAL ON AI – MATH PERSPECTIVE<br>13: What university-level mathematics needed to understand deep learning can be made accessible in high-school?, **Martin Frank**<br>14: Analysis of artificial neural networks as mathematical functions in the classroom, **Stephan Kindler**<br><br>*Room: HS 414, <u>Chair: M. Geroldinger</u>* |
| 16:15-17:00 | Small group discussion, *Moderators: S. Hüsing, L. Hörper, K. Binder, O. Hazzan, M. Wilkerson, J. Waite, D. Verständig, H. Vartiainen, V. Olari* | |
| 18:30 | Optional joint dinner: Wirtshaus Metzgersteig, www.metzgersteig.at | |

# Wednesday, February 26, 2025

| Time | Activity |
|---|---|
| 9:00-9:30 | Morning session, recap of day 2<br><br>*Room: HS 402 Blauer Hörsaal, <u>Chair: M. Frank</u>* |
| 9:30-10:30 | Research to Practice: Designing Learning Experiences for Teachers around Reading the World and the World with Data Visualizations, **Travis Weiland**<br><br>*Room: HS 402 Blauer Hörsaal, <u>Chair: M. Frank</u>* |
| 10:30-11:00 | Break |
| 11:00-12:30 | AI COMPETENCIES<br>15: AI interaction competencies: feedback literacy and legitimation code theory semantics, **Jane Waite**<br>16: Constructing & Deconstructing Large Language Models in High School Classrooms, **Karl-Emil Kjær Bilstrup**<br>17: Data and AI Readiness: Competencies for school students to become informed citizens, **Sarah Huber**<br><br>*Room: HS 413, <u>Chair: C. Schulte</u>* | AI EDUCATION IN CS<br>18: On the Interdependency between Artificial Intelligence and Environment and its Implications on CS Education, **Marc Berges**<br>19: AI as content not tool, **Arnold Pears**<br>20: Understanding understanding AI, **Andreas Mühling**<br><br>*Room: HS 414, <u>Chair: S. Hüsing</u>* |
| 12:30-13:15 | Small group discussion, *Moderators: G. Steinbauer-Wagner, M. Frank, C. Smith, K. Bata, S. Schönbrodt, S. Kindler, S. Sentance, M. Tedre, K. Miller* |
| 13:15-14:00 | Lunch |
| 15:30-17:30 | City Tour |

# Thursday, February 27, 2025

| Time | Activity |
|---|---|
| 9:00-9:30 | Morning session, recap of day 3<br><br>*Room: HS 402 Blauer Hörsaal, <u>Chair: T. Weiland</u>* |
| 9:30-10:30 | Exploring a US Framework of Learning Progressions for K-12 Data Science Education, **Katherine Miller, Michelle Wilkerson**<br><br>*Room: HS 402 Blauer Hörsaal, <u>Chair: T. Weiland</u>* |
| 10:30-11:00 | Break |
| 11:00-12:30 | **AI LITERACY IN SCHOOL**<br>21: Navigating the Digital Frontier - Teaching Data Science and AI Skills in the Austrian school subject digital literacy, **Martin Geroldinger**<br>22: Providing AI Literacy in Schools – Two Sides of a Medal, **Gerald Steinbauer-Wagner**<br>23: Data and AI Literacy … with creativity and fun! **Kate Farrell**<br>*Room: HS 413, <u>Chair: L. Höper</u>* | **DS FROM A MATH PERSPECTIVE**<br>24: AI education in the mathematics classroom, **Sarah Schönbrodt**<br>25: Software-supported and simulation-based introduction to significance tests, **Karin Binder**<br>26: Data cleaning in mathematics education, **Jakim Eckert**<br><br>*Room: HS 414, <u>Chair: K. Bata</u>* |
| 12:30-13:45 | Lunch |
| 13:45-14:45 | Design principles and resources for introductory AI lessons for 11 to 14 year old learners, **Jane Waite, Sue Sentance**<br><br>*Room: HS 402 Blauer Hörsaal, <u>Chair: M. Wilkerson</u>* |
| 14:45-15:30 | Small group discussion, *Moderators: A. Mühling, K. Schüller, A. Pears, A. Kuhnla, B. Kölling, K. Kjær Bilstrup, J. Eckert, M. Geroldinger, H. Gapski* |
| 15:30-16:00 | Break |
| 16:00-17:15 | Panel discussion (Rolf Biehler, Carsten Schulte, Sue Sentance, Dan Verständig, and Michelle Wilkerson)<br><br>*Room: HS 402 Blauer Hörsaal* |
| 18:30 | Symposium Dinner, Sternbräu, www.sternbrau.at |

# Friday, February 28, 2025

Note: The talks take place in a different building (see below for more details)

| Time | Activity |
|---|---|
| 9:00-9:30 | Morning session, recap of day 4<br><br>*Room: 1.006/1007, Chair: T. Erickson* |
| 9:30-10:30 | Infusing 'data science and AI literacy' for the general learner population: Conceptual, instructional, and systemic challenges, **Iddo Gal**<br><br>*Room: 1.006/1007, Chair: T. Erickson* |
| 10:30-10:40 | Break |
| 10:40-11:30 | General discussion of the symposium<br><br>*Room: 1.006/1007, Moderation: R. Biehler* |
| 11:30-11:45 | Farewell and takeaways<br><br>*Room: 1.006/1007* |

**Information on the location of the rooms:**

The talks on *Monday - Thursday* take place at Hellbrunnerstraße 34 (google maps) in rooms:

- HS 402 Blauer Hörsaal: Ground Floor (see on building plan)
- HS 413: 2. Floor (see on building plan)
- HS 414: 2. Floor (see on building plan)
- The coffee breaks take place on the 2. Floor (see on building plan)

The talks on *Friday* take place at Erzabt-Klotz-Straße 1 (see google maps) in room:

- Room 1.006/1007