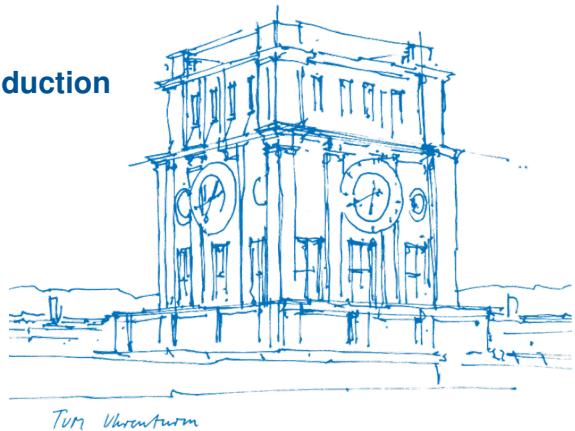
Chair of Connected Mobility
School of Computation, Information and Technology
Technical University of Munich

Networked AI Systems

Master Seminar · Winter 2026/27 · Introduction



Wei Geng **David Guzman** **Hyerin Kim**

Chair of Connected Mobility
School of Computation, Information and Technology
Technical University of Munich

October 21, 2026

Outline

1 The Seminar

2 How Sessions Run

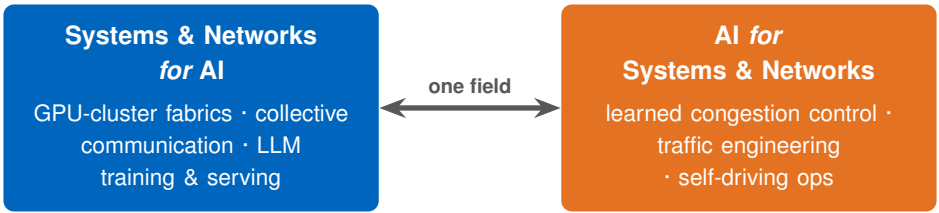
3 Grading & Deliverables

4 Logistics

5 Policies & Contact

What is this seminar?

Networked AI Systems, from both directions



We read & discuss **recent papers** from top venues:

SIGCOMM · NSDI · MLSys · OSDI · SOSP

Discussion- and presentation-based. **No written reviews** — we talk instead.

Topics

Drawn from *this year's* top-venue papers around these areas

- Networking for large-scale **ML training**
  collective comm, congestion control, GPU fabrics, RDMA
- **LLM serving & inference**
  scheduling, caching, disaggregation, latency/throughput
- **ML for networking & systems**
  learned CC, traffic engineering, telemetry, app-layer routers
- AI across the **device–edge–cloud** continuum
- **Resource management** for AI workloads
  GPU sharing, job scheduling, energy efficiency
- Emerging **interconnects** & hardware–network co-design
- **Sustainability** & energy efficiency of AI systems

Why take it?

Discussion, not review-writing

- Engage with **state-of-the-art research** — without the overhead of formal reviews
- Practice the **discussion culture** of real research groups and program committees
- **Develop your own research ideas** with direct feedback from peers and instructors

Outstanding participants may be offered **Guided Research**, a **Master's thesis**, or an **internship** topic

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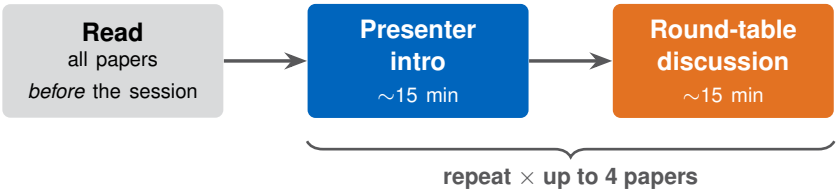
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One session, round-table style

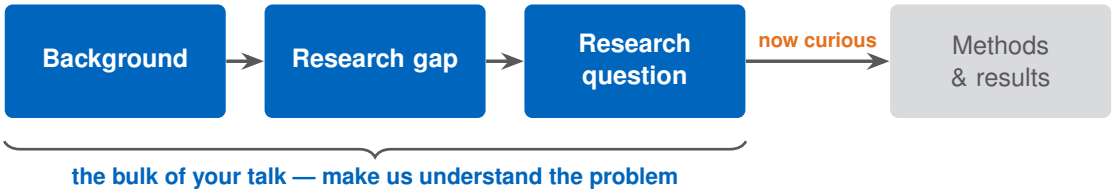
Max 4 papers per session — everyone reads all of them



Strengths · weaknesses · hidden assumptions · follow-up ideas —
debate is encouraged. **No passive listeners.**

Presenting to lead discussion

Set up the *question* before the *method*



A talk that frames the **question** well **sparks discussion**; a methods dump **ends it**.

Keep methods & results tight — just enough for us to debate them.

What counts as active engagement

Quality of contribution, not how often you speak

Counts

- **Prepared questions** — “claims X, but evaluation only covers Y. . . ”
- **Constructive critique** — a hidden assumption, a missing baseline — *and* how to address it
- **Connections** — link to another paper, technique, or session
- **New ideas** — a follow-up experiment or extension
- **Moving it forward** — build on others, disagree with *arguments*, not persons

Does *not* count

- Merely attending
- Repeating the presenter’s summary

Generous grading for generous contribution. The grading could be subjective, and we try to be as objective as possible. That’s why we have 3 instructors to grade.

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Grading & workload

40% presentation · 60% discussion



The 1-page write-up is required to receive a grade — and is assessed *within* the discussion (your summary of, and inspirations from, the sessions).

Workload: **read** all papers ∼1–3 h/session · **present** 1 paper ∼2–5 h once · **write-up** once

The 1-page write-up

One focused idea, distilled from the discussions

- Distill your **summary & inspirations** from the discussions into **one focused idea** — a critique, an extension, or a new direction
- *Not* a paper review; argue it **formally** with evidence. Choosing what *not* to write is part of the exercise
- **Required to be graded**; counts within your **discussion** grade. We read each one **carefully** — convey *your own* thoughts

Deadline — one week after the last session
Template — LaTeX template

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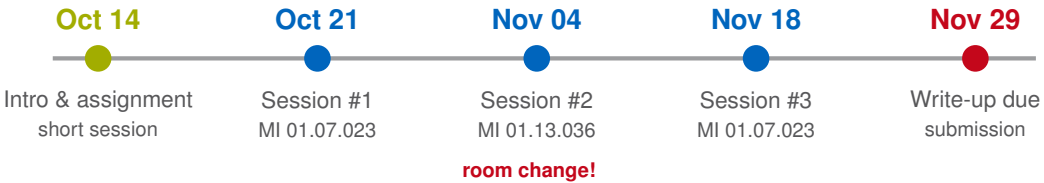
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Semester timeline

All sessions 16:00–18:00, on-site



Attendance is **mandatory** — discussion is the core of the seminar;
only well-excused absences (e.g. illness with certificate) are accepted.

Location: **MI building** · Calendar: subscribe via Google / iCal

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AI policy

Tools to learn — your words to write

You may

- Use LLMs to **learn** technical details and background
- Use AI coders for **practice** or for code backing your write-up

You may not

- Submit an AI-written write-up — it **must** be entirely your own words
- Rely on AI in discussion — come prepared to **think on your feet**

AI-detection tools screen submissions; AI-generated content is treated as **cheating**.

Contact & resources

Email all of us — subject: “[Seminar NAIS] - your query”

Lecturers

- Wei Geng — wei.geng@tum.de
- David Guzman — david.guzman@tum.de
- Hyerin Kim — hyerin.kim@tum.de

Modules IN2107, IN45177 · Moodle: Master Seminar: NAIS

Further reading (how to read critically)

- S. Keshav — *How to Read a Paper*
- W. Griswold — *How to Read an Engineering Research Paper*
- T. Roscoe — *Writing Reviews for Systems Conferences*
- J. Smith — *The Task of the Referee*

Questions?

Now: **paper assignment** — state your preferences.

There are no passive listeners in this seminar. Welcome aboard.

Revision history

Date	Change	Author
2026-06-22	Initial creation	Wei Geng <wei.geng@tum.de>
2026-10-14	Corrections	Wei Geng <wei.geng@tum.de>