PANEL #1

NICE
MAY 2025

Theme

The Challenges of Human Interaction in the Digital Age

NexComm 2025 & DigitalWorld 2025

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Moderator

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Panelists

Prof. Dr. Jan-Torsten Milde, Fulda University of Applied Sciences, Germany

Dr.-Ing. Alexey Cheptsov, TIK – Technische Informations und Kommunikationsdienste, Stuttgart, Germany

Ph.D. Candidate Natalia Murashova, Østfold University College, Norway

Prof. Dr. Hermann Kaindl, TU Wien, Austria

Challenges

1. **Reduced Face-to-Face Communication**
- **Challenge:** Digital tools (e.g., texting, social media, email) often replace in-person interaction. Even worse with AI chatbots (e.g., Siri, Alexa, ChatGPT).
- **Impact:** This can hinder emotional connection, reduce empathy, and lead to misunderstandings due to lack of nonverbal cues like tone, facial expressions, and body language.

2. **Shallow or Superficial Connections**
- **Challenge:** Online interactions are often brief and transactional.
- **Impact:** Relationships may lack depth, leading to feelings of loneliness despite constant connectivity (the “alone together” paradox).

3. **Digital Miscommunication**
- **Challenge:** Text-based communication lacks tone and context.
- **Impact:** Misinterpretations are common, leading to conflict or confusion.

4. **Information Overload**
- **Challenge:** Constant streams of messages, notifications, and content can overwhelm users.
- **Impact:** This leads to reduced attention spans and hinders meaningful conversation.

5. **Decreased Empathy**
- **Challenge:** Online environments can foster detachment from others’ feelings.
- **Impact:** Trolling, cyberbullying, and insensitive comments often result from this emotional distance.

Challenges (cont.)

6. Echo Chambers and Polarization
- **Challenge:** Algorithms curate content that reinforces existing beliefs. Biases creep in.
- **Impact:** This limits exposure to diverse perspectives and can increase social and political polarization.

7. Privacy and Trust Issues
- **Challenge:** Sharing personal information online can lead to breaches of privacy.
- **Impact:** Trust in relationships (personal and professional) may erode when digital surveillance or data misuse is suspected.

8. Dependence on Technology
- **Challenge:** Reliance on digital devices for social interaction.
- **Impact:** This can impair interpersonal skills and make face-to-face interaction anxiety-inducing or awkward.

9. Mental Health Concerns
- **Challenge:** Social comparison, validation-seeking, and cyberbullying are common online.
- **Impact:** These behaviors can contribute to anxiety, depression, and lower self-esteem, especially in younger users.

10. Work-Life Boundary Erosion
- **Challenge:** Remote work and constant connectivity blur personal/professional boundaries.
- **Impact:** This makes it difficult to disconnect and can strain personal relationships.

Mitigation

1. Education

A. Digital Literacy & Emotional Intelligence

- **Teach media literacy:** Help students critically assess online content, identify misinformation, and understand digital footprints.
- **Foster emotional intelligence:** Incorporate social-emotional learning to improve empathy, self-awareness, and relationship skills.

B. Hybrid Communication Skills

- Train students in both digital and face-to-face communication.
- Include conflict resolution and nonverbal cue awareness in curricula.

C. Mindful Technology Use

- Promote tech-free zones or hours in schools.
- Encourage reflection on screen time and its emotional effects.

Mitigation (cont.)

2. Policy & Governance

A. Data Privacy Protections

- Enforce stronger privacy laws (e.g., GDPR-style protections) to rebuild trust in digital platforms.
- Promote transparency in data collection and AI algorithms.

B. Digital Well-Being Campaigns

- Public health campaigns to raise awareness of online harms (cyberbullying, tech addiction).
- Support for digital detox initiatives or mental health awareness months.

C. Platform Accountability

- Encourage or mandate social platforms to implement anti-trolling features, content moderation, and mental health resources.

3. Workplace and Professional Settings

A. Boundary Setting

- Promote a culture that respects “right to disconnect” (e.g., no emails after work hours).
- Use tools to manage availability and encourage async communication when possible.

B. Build Digital Trust

- Provide transparency in communication and decision-making, especially in remote teams.
- Use video calls strategically to enhance connection but avoid overload.

C. Encourage In-Person or Deep Interaction

- Hybrid work models should include regular in-person retreats or team-building activities.
- Design “deep work” time by limiting notifications and meetings.

Mitigation (cont.)

4. Technology Design & Innovation

A. Human-Centered Design

- Design platforms to enhance—not replace—human connection.
- Include features that support mental health, empathy, and thoughtful interaction.

B. AI & Ethical Use

- Develop AI systems that promote well-being (e.g., content moderation, mental health chatbots-supervised).
- Build safeguards against bias and abuse, especially in communication tools.

5. Individual and Community Actions

A. Digital Mindfulness

- Practice mindful engagement: quality over quantity of interactions.
- Set personal boundaries for tech use, especially around sleep and social events.

B. Community Building

- Encourage local, offline community engagement to counteract digital loneliness.
- Support intergenerational digital inclusion to prevent isolation of the elderly.

Advantages

- Global Connectivity
  - Instant Communication, Expanded Social Networks, Diverse Cultural Perspectives
- Convenience and Accessibility
  - Asynchronous Communication, Remote Interaction, Inclusivity
- Enhanced Collaboration and Innovation
  - Collaborative Tools, Crowdsourcing & Open Innovation, Accelerated Learning through access to global experts
- Empowerment through Amplified Voices and Advocacy
  - Social Movements, Marginalized Voices, Citizen Journalism
- Support Systems and Mental Health Resources
  - Online Support Communities, Mental Health Apps & Chat Services, Reduced Stigma
- Continuous Learning and Personal Growth
  - E-learning Platforms, Knowledge Exchange, Real-time Feedback
- Adaptive Communication Styles
  - Affords Multimodal Expression, AI and Translation Tools, Digital Identity & community Exploration
- Access to digital communication (macro) data to advance research and understanding of our society

Panelist Position

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Jan-Torsten
Milde
Fulda UAS

- **The Challenges of Human Interaction in the Digital Age**

  - AI and LLMs are currently perceived as synonymous.
  - In combination with technologies such as MCP or ADK extensive possibilities arise for the integration of AI into virtually any process.
  - Language-centric interaction with processes and data is becoming a natural part of human-machine interaction.

  - How can reliable and comprehensible systems be developed using LLMs?
  - How can the quality of such systems be tested comprehensibly?
  - How can knowledge about the capabilities and limitations of LLMs be increased for non academic users?
  - How can the educational curriculum for the field of Applied Computer Science be expanded?

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- AI will revolutionize the Machine-Human interaction.
- But what is the price for this progress?
  - Trustworthiness and explainability of AI engines
  - Society and ethical aspects
  - Education impact
  - Sustainability of the natural resources (electricity)

Alex Cheptsov
Uni Stuttgart

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BnF, Département des Estampes et de la photographie, ENT QB-1 (1968, 12)
Birhane, et al. (2022)

- **Growing digital divide at workplace, schools due to accessibility of AI tools.**

Different digital exposure and access privileges result in different opportunities/speed/quality etc. of work with information.

- **Digital dependency vs. creativity.**

Emerging fashion to use AI tools in everyday can both benefit and interrupt creative processes for professionals.

Knowledge without context and social cues: to what extend we can rely on statistically calculated output?

"*Just because something else has all of your knowledge, it doesn't make it have your stream of consciousness.*" (Dr Justin Lane, 2023)

- **"Ghost work" behind automation and content moderation.**

Unrecognized, poorly compensated labour behind training of the algorithms.

"*Depression, anxiety, PTSD, suicide attempts - hidden human cost behind the "safe" platforms we use daily.*" (Okinyi M., via LinkedIn 2025)

Natalia Murashova

Østfold University College

Panelist Position

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Hermann
Kaindl
TU Wien
WU Wien
UWK Krems

- **Retired Professor from TU Wien, still working on funded research projects at three universities, primarily as consortium leader**
  - My focus:
    Human-human interaction via some form of computing as an intermediary, in particular human-human communication
  - Digitalization of telecommunication in the 1980s improved it.
  - Computing-based mobile telecommunication improved it further.
  - The Web based on the Internet, e.g., through Skype made it cheap.
  - Mobile Internet access made it ubiquitous.
  - Integrating electronic meetings, e.g., through Zoom enabled collaboration even during the pandemic.
  - I see much more advantages than challenges in this regard!

THE STAGE IS YOURS