Andrew Kuznetsov, PhD NRP

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RESEARCH INTERESTS

- **Support Systems for Thinking & Teamwork** *(Context and Collaboration Tools, VLM/LLM Finetuning, Orchestration)*
- **Sensemaking & Human-Centered AI** *(Technical Systems, Mixed Methods Analysis, User/Team Studies)*

SUMMARY

- **PhD Thesis** *Lightweight and Deployable Context Mediation for Sensemaking Tool Support*; 7+ years developing technical systems and experiments for managing information context for enhanced productivity and collaboration.
- **Interdisciplinary Academic** *(Human-Computer Interaction, Organizational Behavioral Theory, Prehospital Emergency Medicine)* with healthcare experience; 10+ publications in CHI, UIST, CI, OrgSci, NAEMSP, EMSWorld.
- **Systems Researcher** *(Technical, Mixed Methods, Experimental)*; led prototype user, field, interview, survey studies and large-scale system deployments (1,000+ users); experience with full-stack technical development, system evaluation, dataset creation, and log analysis.

EDUCATION

Carnegie Mellon University | Ph.D. Human-Computer Interaction *(CMLH Fellow)* 2025
Mentors: Dr. Aniket Kittur (HCII), Dr. Anita Woolley (Tepper; OBT)

University of Pittsburgh | NRP Nationally Registered Paramedic *(PEMF Paramedic Education Scholar)* 2023
Center for Emergency Medicine

University of Illinois Urbana-Champaign | B.S. Computer Science 2018
Mentors: Dr. Aditya Parameswaran, Dr. Brian Bailey

PROFESSIONAL EXPERIENCE

Research Scientist | Healthy Home Lab and Emerald Lab, University of Pittsburgh 2025 – Current
- Lead research effort to develop and evaluate coordination support systems for dementia caregiving networks.
- Lead social computing efforts for helicopter EMS and trauma bay data at the Emerald Lab.

Research Lead | Robust Teaming Project, Carnegie Mellon University 2022 – Current
- Direct research effort to develop and evaluate novel AI collaboration support systems in both virtual and physical spaces, implemented in the domain of respite care integration in homecare networks.
- Lead the technical development of AI evaluation systems, methodologies, experimental studies, and support system prototypes; deployed large-scale computation social science experiments (3,000+ online participants) and lab, field tests of prototypes in collaboration with Dr. Yong Choi at the Healthy Home Laboratory at University of Pittsburgh.
- **Published 3+ research papers** in organizational science venues on impacts of interventions on affective commitment, psychological safety, warmth perceptions, and collective memory systems.

Research Collaborator | ESO Solutions 2023 – Current
- Collaborate with ESO Solutions Research Team and Dr. Douglas Kupas to validate and characterize the RPM trauma triage scale in a modern patient cohort.
- **Published 3 research manuscripts** in prehospital emergency medicine venues, journal article in preparation.

Search Planner | Appalachian Search Rescue Conference (ASRC) Remote Support Corps 2023 – Current
- Support the planning operations of ground search efforts in the Appalachian area.

Research Scientist Intern | Google Research June – August 2024
- Developed large (>10k tasks) datasets of complex tasks for human-gaze vision-language (VLM) model training.

Research Scientist Intern | HCI & Visualization Lab, Autodesk Research May – August 2023
- Developed evaluation frameworks for genAI outputs; prototyped human-in-the-loop data provenance review systems.

Research Scientist Intern | Product Design and Strategy Team, Wikimedia Foundation May – Sept 2020
- Developed lightweight and deployable indicator system prototypes to support information trustworthiness assessments

and decision-making across the platform.
- **Published experiments and prototypes** in Proceedings of ACM CHI 2022.

Software Engineer Intern | Core Infrastructure Team, Amazon Mechanical Turk May – Aug 2016
- Prototyped human-in-the-loop workflow systems; became AWS SageMaker Ground Truth & A2I products.

Technical Consultant | Hackstar Team, Techstars Chicago May – Aug 2014
- Embedded within startups in the Techstars Chicago class of 2014 to assist with technical development in preparation for investor demos and presentations

WORKING PAPERS

2. **Kuznetsov, A.**, Chao, P., Dishop, C. R., Brown, A. S., Woolley, A. W. (2025). Theseus - Synthetic Teamwork for Enhanced Asynchronous Collaboration. *[In Preparation].*
1. **Kuznetsov, A.**, Culvey, E. V., Dalton, S., Koshy, G., Fernandez, A. R., Kupas, D. F. (2025). RPM Revisited: Association of the Respiratory-Pulse-Motor (RPM) and Simplified Respiratory-Pulse-Motor (sRPM) Score with Mortality and Length of Stay in a Modern Prehospital Patient Cohort. *[In Preparation; Prehospital Emergency Care].*

PUBLICATIONS

18. **Kuznetsov, A.**, Dishop, C. R., Brown, A. S., Woolley, A. W. (2026). A Head Start Without a Handshake: Team Context Introductions in Asynchronous Home Care Networks. *Academy of Management (AOM) Annual Meeting, Poster*. **(AOM '26)**
17. Dishop, C. R., Brown, A. S., **Kuznetsov, A.**, Chao, P., Woolley, A. W. (2025) Machines in the Middle: Using Artificial Intelligence (AI) While Offering Help Affects Warmth, Felt Obligations, and Reciprocity. *Springer Nature Journal of Business and Psychology* **(JBP '25)**.
16. Brown, A. S., Dishop, C. R., **Kuznetsov, A.**, Chao, P., Woolley, A. W. (2025, June). Beyond efficiency: Trust, AI, and surprise in knowledge work environments. *Elsevier Computers in Human Behavior*. **(CHB '25)**
15. **Kuznetsov, A.**, Chao, P., Dishop, C. R., Brown, A. S., Woolley, A. W. (2024, November). Transactive Memory in Caregiver Networks Using Artificial Intelligence. *Artificial Intelligence for Aging in Place*. **(AAAI FSS '24)**
14. **Kuznetsov, A.**, Culvey, E. V., Dalton, S., Koshy, G., Fernandez, A. R., Kupas, D. F. (2024, September; 2025, January). Association of a Simplified RPM Triage Score with Mortality May Indicate an Opportunity for Easier but Still Valid Rapid Triage of Injured Patients. *In The 2024 International Scientific Symposium, Prehospital Care Research Forum (ISS/PCRF '24) and National Association of EMS Physicians (NAEMSP '25).*
13. Koshy, G., **Kuznetsov, A.**, Culvey, E. V., Dalton, S., Fernandez, A. R., Kupas, D. F. (2024, September; 2025, January). Is the RPM Trauma Triage Score Valid in Predicting Mortality in Prehospital Patients with Non-traumatic Medical Illness? *In The 2024 International Scientific Symposium, Prehospital Care Research Forum **(ISS/PCRF '24)** and National Association of EMS Physicians **(NAEMSP '25)**.*
12. Culvey, E. V., **Kuznetsov, A.**, Koshy, G., Dalton, S., Fernandez, A. R., Kupas, D. F. (2024, September; 2025, January). Validating the Use of the RPM Score for Triage of Injured Patients in a Current Trauma Population. *In The 2024 International Scientific Symposium, Prehospital Care Research Forum **(ISS/PCRF '24)** and National Association of EMS Physicians **(NAEMSP '25)**.*
11. **Kuznetsov, A.**, Liu, M., Kittur, A. (2024). Tasks, Time, and Tools: Quantifying Online Sensemaking Through a Survey-based Study. *Preprint arXiv:2411.07206*. **(arXiv)**
10. **Kuznetsov, A.**, Chao, P., Dishop, C. R., Brown, A. S., Woolley, A. W. (2024, June). The Collaborative Caring Virtual Testbed: A software platform for prototyping collective intelligence interventions for asynchronous care-teams. *ACM Collective Intelligence*. **(CI '24)**
9. Brown, A. S., Dishop, C. R., **Kuznetsov, A.**, Chao, P., Woolley, A. W. (2024, June). Beyond efficiency: Commitment issues: Feedback, commitment, and performance in algorithmically managed contexts. *ACM Collective Intelligence*. **(CI '24)**
8. **Kuznetsov, A.**, Chang, J., Hahn, N., Rachatasumrit, N., Breneisen, B., Coupland, J., Kittur, A. (2022, October). Fuse: In-Situ Sensemaking Support in the Browser. *35th Annual ACM Symposium on User Interface Software and Technology*. **(UIST '22)**
7. Liu, M., **Kuznetsov, A.**, Kim, Y., Chang, J., Kittur, A., Myers, B. P. (2022, October). Wigglite: Low-cost Information Collection and Triage. *35th Annual ACM Symposium on User Interface Software and Technology*. **(UIST '22)**
6. **Kuznetsov, A.**, Novotny, M., Klein, J., Saez-Trumper, D., Kittur, A. (2022, April). Templates and Trust-o-meters: Towards a widely deployable indicator of trust in Wikipedia. *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*. **(CHI '22)**
5. Reinhart, A., Brooks, L., Jahja, M., Rumack, A., Tang, J., Agrawal, S., …**Kuznetsov, A.**, …, Tibshirani, R. J. (2021). An open repository of real-time COVID-19 indicators. *Proceedings of the National Academy of Sciences, 118(51)*. **(PNAS '21)**

4. Hastings, E. M., Alamri, A., **Kuznetsov, A.**, Pisarczyk, C., Karahalios, K., Marinov, D., Bailey, B. P. (2020, April). LIFT: Integrating Stakeholder Voices into Algorithmic Team Formation. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. **(CHI '20)**
3. Jain, A., Seo, J. Y., Goel, K., **Kuznetsov, A.**, Parameswaran, A., Sundaram, H. (2016). It's just a matter of perspective(s): Crowd-Powered Consensus Organization of Corpora. *Preprint arXiv:1601.02034*. **(arXiv)**

PRESENTATIONS

4. Brown, A. S., Dishop, C. R., **Kuznetsov, A.**, Woolley, A. W. (2026). Safe to Talk: Psychological Safety and Conversational AI at Work. *Academy of Management (AOM) Annual Meeting*. **(AOM '26)**
3. Brown, A. S., Dishop, C. R., **Kuznetsov, A.**, Woolley, A. W. (2026). Safe to Talk: Psychological Safety and Conversational AI at Work. *Interdisciplinary Network for Group Research (INGRoup)*. **(INGRoup '26)**
2. (Oral Presentation; 1% of submissions) Culvey, E. V., **Kuznetsov, A.**, Koshy, G., Dalton, S., Fernandez, A. R., Kupas, D. F. (2024, September). Is Your Trauma Triage Accurate? *In The 2024 World Trauma Symposium.* **(WTS '24)**
1. Brown, A. S., Dishop, C. R., **Kuznetsov, A.**, Chao, P., Woolley, A. W. (2023, September). Beyond efficiency: Commitment issues: Feedback, commitment, and performance in algorithmically managed contexts. *Academy of Management Annual Meeting, "Humans + AI: Organizational behavior research on human-machine interactions."* ***(AOM '23 Symposium)****.*
0. **Kuznetsov, A.**, Chao, P., Dishop, C. R., Brown, A. S., Woolley, A. W. (2023, September). Scaffolding Trust and Context in Asynchronous Collaboration. *Trust: Social Bridge Between Humans and Technology. Virtual.*
0. Brown, A. S., Dishop, C. R., **Kuznetsov, A.**, Chao, P., Woolley, A. W. (2023, September). Beyond efficiency: Trust, AI, and surprise in knowledge work environments. *Trust: Social Bridge Between Humans and Technology. Virtual.*