Rania Abdelghani

Postdoctoral Researcher - Hector Institute of Educational Sciences and Psychology - University of Tübingen - Germany

Education

Inria University of Bordeaux *PhD in Cognitive science* — *Sept. 2024*

- **Advisors:** Prof. Dr. Pierre-Yves Oudeyer and Prof. Dr. Hélène Sauzéon
- **Title:** Conversational agents to train curiosity and metacognition in young learners.

Sorbonne University, Paris — *Sept. 2020*
MSc. in Engineering sciences

INSAT University, Tunis — *Sept. 2019*
M.Eng in intelligent systems

Experience

Postdoctoral researcher — *Tübingen, DE*
Hector Research Institute University of Tuebingen — *November 2024- Now*

- **Advisor:** Prof. Dr. Kou Murayama

Host Lecturer — *Nice, FR*
University of Côte d'Azur — *Sept. 2024- Dec. 2024*

Visiting Researcher — *California, USA*
University of Berkeley - Kidd Lab — *Sept. 2023- Dec. 2023*

- **Host:** Prof. Dr. Celeste Kidd

Contractual lecturer — *Bordeaux, FR*
University of Bordeaux — *Sept. 2022 – Jul. 2023*

Research engineer — *Paris, FR*
EvidenceB — *Sept. 2020 – Dec. 2020*

Research intern — *Paris, FR*
ISIR Institute — *Jan. 2020 – Sept. 2020*

Research engineer intern — *Paris, FR*
Therapanacea — *Jan. 2019 – Sept. 2019*

Publications

A full list is available on Google Scholar

- **Abdelghani, R.**, Murayama, K., Kidd, C., Sauzéon, H., & Oudeyer, P. Y. (2026, June). The Illusion of Understanding: How Middle-School Students Fail to Regulate Inquiry with ChatGPT During a Science Task. In International Conference on Artificial Intelligence in Education (pp. 382-388). Cham: Springer Nature Switzerland.
- **Abdelghani, R.**, Kaiser, P., & Murayama, K. (2026). From prompting to epistemic proactivity: Temporal trajectories of student–AI interaction in mathematics learning ArXiv. https://doi.org/10.48550/arXiv.2606.28472 (under revision).
- Desvaux, C., **Abdelghani, R.**, Oudeyer, P.-Y., & Sauzéon, H. (2026). Curiosity and metacognition: Towards a unified framework for learning and education in the age of AI. Advances in Child Development and Behavior,

https://doi.org/10.1016/bs.acdb.2026.04.005.

- Clerc, O., **Abdelghani, R.**, Desvaux, C., Poisson, E., Oudeyer, P.-Y., Sauzéon, H. (2026). Teaching students to question the machine: An AI literacy intervention improves students' regulation of LLM use in a science task. arXiv. https://doi.org/10.48550/arXiv.2604.01955.
- **Abdelghani**, R., Wang, Y. H., Yuan, X., Wang, T., Lucas, P., Sauzéon, H., & Oudeyer, P. Y. (2024). GPT-3-driven pedagogical agents to train children's curious question-asking skills. International Journal of Artificial Intelligence in Education, 34(2), 483-518.
- Laak, K. J., **Abdelghani, R.**, & Aru, J. (2024, July). Personalisation is not Guaranteed: The Challenges of Using Generative AI for Personalised Learning. In International conference on innovative technologies and learning (pp. 40-49). Cham: Springer Nature Switzerland.
- **Abdelghani, R.** (2024). Guiding the minds of tomorrow: conversational agents to train curiosity and metacognition in young learners (Doctoral dissertation, Université de Bordeaux).
- **Abdelghani, R.**, Sauzéon, H., & Oudeyer, P. Y. (2023). Generative AI in the Classroom: Can Students Remain Active Learners?. arXiv preprint arXiv:2310.03192.
- **Abdelghani, R.**, Law, E., Desvaux, C., Oudeyer, P. Y., & Sauzéon, H. (2023, June). Interactive environments for training children's curiosity through the practice of metacognitive skills: a pilot study. In Proceedings of the 22nd Annual ACM Interaction Design and Children Conference (pp. 495-501).
- Xiao, Z., Yuan, X., Liao, Q. V., **Abdelghani, R.**, & Oudeyer, P. Y. (2023, March). Supporting qualitative analysis with large language models: Combining codebook with GPT-3 for deductive coding. In Companion proceedings of the 28th international conference on intelligent user interfaces (pp. 75-78).
- **Abdelghani, R.**, Oudeyer, P. Y., Law, E., de Vulpillières, C., & Sauzéon, H. (2022). Conversational agents for fostering curiosity-driven learning in children. International Journal of Human-Computer Studies, 167, 102887.
- Yuan, X., Wang, T., Wang, Y. H., Fine, E., **Abdelghani, R.**, Lucas, P., ... & Oudeyer, P. Y. (2022). Selecting better samples from pre-trained llms: A case study on question generation. arXiv preprint arXiv:2209.11000.
- Stower, R., **Abdelghani, R.**, Tschopp, M., Evangelista, K., Chetouani, M., & Kappas, A. (2022). Exploring space for robot mistakes in child robot interactions. Interaction Studies, 23(2), 243-288.

Conference talks and workshops

Some oral presentations:

European Conference on Personality — *Edinburgh, Scotland*
The Illusion of Understanding: How Middle-School Students Fail to Regulate Inquiry with ChatGPT During a Science Task. — *Jul. 2026*

27th International Conference on AI in Education — *Seoul, South Korea*
From Prompting to Epistemic Proactivity: Temporal Trajectories of Student-AI Interaction in Mathematics Learning — *Jun. 2026*

Webinair "Cogni'classes" — *Paris, France*
Question-asking in the digital classroom: theoretical aspects and applications — *Jan. 2025*

25th International Conference on AI in Education — *Recife, Brasil*
Generative AI for promoting active learning strategies — *Jul. 2024*

GenAI in Education Workshop - 37th Conference on Neural Information Processing Systems (NeurIPS) — *New Orleans, USA*
Generative AI in the classroom: can students remain active learners — *Dec. 2023*

Interaction Design and Children Conference — *New Orleans, USA*
interactive environments for training children's curiosity through the practice of metacognitive skills : a pilot study. — *Jun. 2023*

Budapest CEU Conference on Cognitive Development *Budapest, Hungray*
An interactive environment for training children's curiosity-driven learning through metacognition. *Jan. 2023*

Interaction Design and Children Conference *Braga, Portugal*
Role of curiosity-driven design in promoting sustainable learning technologies. *Jan. 2022*

European Advanced Educational Technology Conference *Cambridge, UK*
Conversational agents for training children's curiosity-driven behavior *March. 2022*

Participation in workshop organization:

Independent workshop *Bordeaux, France*
Workshop: Designing assistive technology *Sept. 2021*

Independent workshop *Bordeaux, France*
Workshop: Inquiry and creativity in childhood: what role for new technologies? *Sept. 2024*

Budapest CEU Conference on Cognitive Development *Budapest, Hungary*
Symposium: Truth, lies, and misinformation during cognitive development *Jan. 2023*

Skills

- **Disciplines:** Educational psychology, AI for education, Human-centered AI, Human-centered design, Cognitive science, experimental cognitive psychology, Natural Language Processing and prompt engineering
- **Coding:** Python, R, C, HTML, CSS
- **Tools:** Bash, Git
- **Operating systems:** Linux
- **Typesetting:** LaTeX
- **Languages**: Arabic (native), French (bilingual), English (Fluent), Spanish and German (Advanced beginner).

Mentoring

Daliah Messaykah *Feb. 2026- Jul. 2026*
Bachelor Thesis Supervision - Educational Psychology Program

Carole Morvan and Lucas Spooner *May. 2024- Jul. 2024*
Masters 1 students in cognitive sciences - 3-month internships

Chloé Desvaux *Jan. 2023- Jun. 2023*
Masters 2 student in cognitive sciences - 6-month internship

Pauline Lucas *Jan. 2022- Jun. 2022*
Masters 2 student in cognitive sciences - 6-month internship

Cléa Gardin *Jun. 2021- Sept. 2021*
Masters 1 student in cognitive sciences - 3-month internship

Grants & Award experiences

LEAD Intramural Grant - Accepted *Investigating students' strategies when using LLMs during mathematical learning* *July 2025*
€ 5000

Bordeaux mobility scholarship (UBGRS Mob) Grant - Accepted *May 2023*
€ 4,500

Best presentation award at the "European Advanced Educational technologies" conference *March 2022*