

# Konstantinos Voudouris

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## EXPERIENCE

<b>Post-doctoral Research Scientist, Helmholtz Munich</b> <i>Institute for Human-Centered AI (PI: Eric Schulz)</i>	Munich, Germany <i>Jul 2024–Present</i>
<b>Post-doctoral Research Assistant/Associate, University of Cambridge</b> <i>Major Transitions in the Evolution of Cognition (PIs: M. Halina, A. Barron, C. Klein)</i>	Cambridge, UK <i>Nov 2023–Jul 2024</i>
<b>COVID-19 Infection Survey Analyst</b> <i>Office for National Statistics</i>	Newport, Wales <i>Jul-Oct 2021</i>

## EDUCATION

<b>PhD (Psychology, Philosophy of Science, Artificial Intelligence)</b> <i>Passed with <b>no corrections</b> (Thesis: <a href="#">From Animals to Algorithms</a>).</i>	University of Cambridge <i>Oct 2020–Mar 2024</i>
<b>Visiting Scholar</b> <i>Psychology Department (Sponsor: Alison Gopnik)</i>	University of California, Berkeley <i>Jul–Sep 2023</i>
<b>MPhil (Biological Sciences: Psychology)</b> <i>Passed with <b>minor corrections</b></i>	University of Cambridge <i>Oct 2019–Sep 2020</i>
<b>MA <i>Cantab.</i> (Theoretical and Applied Linguistics)</b> <i>Starred Double First, 1st in cohort</i>	University of Cambridge <i>Oct 2016–Jun 2019</i>

## SELECTED PEER-REVIEWED PUBLICATIONS (\*FIRST AUTHOR, †SENIOR AUTHOR)

- Slater, B., Mecattaf, M. G., Tešić, M., Prunty, J., **Voudouris, K.**<sup>†</sup> & Cheke, L. G.<sup>†</sup> (forthcoming). A little less conversation, a little more action, please: Investigating the physical common-sense of LLMs in a 3D embodied environment. *PRICAI 2025*. ([Pre-Print](#))
- Voudouris, K.**<sup>\*</sup> (forthcoming). Cognitive Simplicity As An Idealization. *Animal Behavior & Cognition*. ([Pre-Print](#))
- Voudouris, K.**<sup>\*</sup> (forthcoming). Analogies And The Associative-Cognitive Distinction In Comparative Psychology. *Biology & Philosophy*. ([Pre-Print](#))
- Voudouris, K.**<sup>\*</sup>, Schulze-Buschoff, L. M.<sup>\*</sup>, Akata, E., Bethge, M., Tenenbaum, J., & Schulz, E. (2025) Testing the limits of fine-tuning for improving visual cognition in vision language models. *42nd Intl Conference on Machine Learning*. ([Pre-Print](#))
- Pacchiardi, L., **Voudouris, K.**, Slater, B., Martinez-Plumed, F., Zhou, L., Hernández-Orallo, J., & Schellaert, W. (2025) PredictaBoard: Benchmarking LLM Score Predictability. *Findings of the ACL*. ([Pre-Print](#))
- Voudouris, K.**<sup>\*</sup>, Cheke, L. G., & Schulz, E. [Bringing comparative cognition approaches to AI systems](#). *Nature Reviews Psychology*.
- Voudouris, K.**<sup>\*</sup>, ..., & Cheke, L. G. (2025) [The Animal-AI Environment: A Virtual Laboratory For Comparative Cognition and Artificial Intelligence Research](#). *Behavior Research Methods*, 57:107.
- Kipnis, A., **Voudouris, K.**, Buschoff Schulze, L., & Schulz, E. (2025) metabench—A sparse benchmark for reasoning and knowledge in large language models. *13th Intl Conference on Learning Representations. (ICLR) 2025*. ([Pre-Print](#)).
- Voudouris, K.**<sup>\*</sup>, Farrar, B. G., Cheke, L. G., & Halina, M. (2025) Morgan’s Canon and the Associative-Cognitive Distinction Today: A Survey of Practitioners. *Journal of Comparative Psychology* ([Pre-Registration](#); [Pre-Print](#)).
- Voudouris, K.**<sup>\*</sup> & Roe, N. (2024) [Metatheoretical Linguistics: A Philosopher’s Guide](#). *Biolinguistics*, 18, 1–15.
- Voudouris, K.**<sup>\*</sup>, Liu, J. D., Siwinska, N., Schellaert, W., & Cheke, L. G. (2024). [Investigating Object Permanence in Deep Reinforcement Learning Agents](#). In *Proceedings of the Annual Meeting of the Cognitive Science Society (Vol. 46)*.
- Voudouris, K.**<sup>\*</sup>, Cheke, L. G., & Halina, M. (2024). [The Future is Computational Comparative Cognition](#). *Comparative Cognition & Behavior Reviews*, 19.
- Voudouris, K.**<sup>\*</sup>, Donnelly, N., Rutar, D., Burnell, R., Burden, J., Hernández-Orallo, J., & Cheke, L. G. (2022). [Evaluating Object Permanence in Embodied Agents Using the Animal-AI Environment](#). *EBeM’22: Workshop on AI Evaluation Beyond Metrics, July 25, 2022, Vienna, Austria*.
- Voudouris, K.**<sup>\*</sup>, Crosby, M., Beyret, B., Hernández-Orallo, J., Shanahan, M., Halina, M., & Cheke, L. (2022). [Direct Human-AI Comparison in the Animal-AI Environment](#). *Frontiers in Psychology* 13:711821.

## RESEARCH PROJECT SUPERVISION

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### PhD Student Assistant Supervisor

*Helmholtz Munich - 2 students*

Jul 2024—Present

*Munich, Germany*

### Psychology & Behavioural Sciences Dissertation Supervisor

*Department of Psychology (Statistics, AI Evaluation, Cognitive Modelling) - 4 Students*

Oct 2021—Jun 2023

*Cambridge, UK*

## SELECTED INVITED TALKS, WORKSHOPS, & SYMPOSIA (<sup>‡</sup>CO-PRESENTED)

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**What Are AI Capabilities & How Can We Measure Them?** *Science of Intelligence Seminar, March 20 2025, TŮ Berlin.*

**Generalization in Fine-Tuned Vision Language Models** *Kinds of Kinds of Intelligence, January 31 2025, University of Cambridge.*

**Intuitive Physics in Animals and Machines** *Intuitive Physics Across Species and Development Workshop, December 17-18 2024, MPI for Evolutionary Anthropology, Leipzig, Germany.*

**Measurement Layouts for Capability-oriented AI Evaluation**<sup>‡</sup> *AAAI-24, February 20 2024, Vancouver, Canada.*

**Studying Artificial and Natural Intelligence with the Animal-AI Environment** *ARCANI Workshop, March 28 2024, Macquarie University, Sydney, Australia.*

**Oops, I Did It Again: A typology of phonological iterativity**<sup>‡</sup> *Penn Linguistics Conference March 20 2021.*

## WORKSHOPS, TUTORIALS, & SYMPOSIA

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**Co-organiser and co-presenter** of the *Measurement Layouts for Capability-oriented AI Evaluation* Lab at AAAI-24 (Vancouver, Feb 2024).

**Co-organiser** of the *Predictable AI* Conference in Valencia, Spain (8th March 2023).

## RESEARCH GRANTS

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**Voudouris, K..** Graham, C. R. Scimeca, L, Roll, N. Methods for evaluating short-cut learning in transformer-based ASR systems and its implications. (**£3,120**). *Cambridge Language Sciences Incubator Fund 2021.*

**Voudouris, K..** Graham, C. R., and Shinohara, Y. AccentBench: A Framework for evaluating ASR generalisation from native to non-native speech. (**£2,960**). *Cambridge Language Sciences Incubator Fund 2022.*

## TEACHING

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*Cambridge University Undergraduate Supervision:* **Cognitive Neuroscience & Experimental Psychology** (Part IB, second-year; 2022-2023), **Philosophy of Cognitive Science** (Part II, third-year; 2022-2023), **Comparative Cognition** (Part II, third-year; 2022-2023), **Phonological Theory** (Part II, second- and third-year; 2020-2022). **Introduction to Linguistics** (2020, 2021; [Syllabus](#)).

## MEDIA & PROFESSIONAL SERVICES

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**Interview with Greg Goth** for *Communications of the ACM* (Sept 2022) **Is AI Becoming Sentient?** **Podcast with Kyle Polich** for *DataSkeptic* (May 2024) **Evaluating AI Abilities.** **CFI Blog** (June 2024) **Cognitive Psychology for AI Evaluation.** **Reviewer** for *Synthese*, *Linguistics Vanguard*, *ICLR 2025*, *British Journal of Philosophy of Science*, *CogSci 2025*, *CCN 2025*, *AI & Society*.

## TECHNICAL SKILLS

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**Programming Languages:** Python, Julia, R, PowerShell, SQL, L<sup>A</sup>T<sub>E</sub>X.

**Libraries and Frameworks:** git, Docker, Lux.jl, MySQL, SLURM, tidyverse, torch, transformers, trl, unsloth.

**Natural Languages:** English (native), Greek (C1), French (B2), German (B1), Turkish (A2), Mandarin Chinese (A2).

## REFERENCES

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**Eric Schulz** Postdoc Advisor ([eric.schulz@helmholtz-munich.de](mailto:eric.schulz@helmholtz-munich.de))

**Lucy Cheke** PhD Supervisor ([lgc23@cam.ac.uk](mailto:lgc23@cam.ac.uk))

**Marta Halina** PhD Supervisor ([mh801@cam.ac.uk](mailto:mh801@cam.ac.uk))

**José Hernández-Orallo** Academic Collaborator ([jorallo@upv.es](mailto:jorallo@upv.es))

**Nicola Clayton** PhD Examiner ([nsc22@cam.ac.uk](mailto:nsc22@cam.ac.uk))

**Cameron Buckner** PhD Examiner ([cjbuckner@uh.edu](mailto:cjbuckner@uh.edu))