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Safe anytime-valid inference: from theory to implementation in psychiatry research

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Safe Anytime-Valid Inference: from Theory to Implementation in Psychiatry Research

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Origins of the material

This dissertation is based on the following papers. The author of this dissertation contributed substantially to each of these papers.

Chapter 2 is based on the paper with a minor revision pending and available as a technical report as:

Rosanne J. Turner, Alexander Ly and Peter D. Grünwald. Generic E-Variables for Exact Sequential k-Sample Tests that allow for Optional Stopping. arXiv:2106.02693. June 2021.

Chapter 3 is based on the paper that is published in *Statistics and Probability Letters* as:

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Chapter 5 is based on the paper that is published in *Scientific Reports* as:

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Chapter 7 is based on the paper that is accepted for oral presentation *AISTATS 2023*. Chapter 7 in this thesis contains the extra section 7.4, linking it to the psychiatry use-case studied in chapter 5. The paper without extra section 7.4 is available in the *AISTATS* conference proceedings as

Rosanne J. Turner and Peter D. Grünwald. Safe Sequential Testing and Effect Estimation in Stratified Count Data. PMLR 206. February 2023.

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