

Journal Articles

- [1] Erwig, M., Kumar, P. (2024). Explanations for Combinatorial Optimization Problems. *Journal of Computer Languages*, Vol. 79.
- [2] Erwig, M., Kumar, P. (2021). Explainable Dynamic Programming. *Journal of Functional Programming*, Vol. 31, No. e10.

Conference Publications

- [1] Pacak, A., Kumar, P., Xu, R., Erdweg, S. (2024). AUTOINC: Incrementality for Free . *SPLASH Companion '24 (Short Paper)*.
- [2] Kumar, P., Erwig, M. (2023). MatchMaker: A DSL for Game-Theoretic Matching. *Symposium on Trends in Functional Programming*, LNCS 13868 (**John McCarthy Best Paper Award**).
- [3] Erwig, M., Kumar, P. (2021). MADMAX: A DSL for Explanatory Decision Making. *ACM SIGPLAN Conference on Generative Programming: Concepts & Experiences*.
- [4] Erwig, M., Kumar, P., Fern, A. (2020). Explanations for Dynamic Programming. *International Symposium on Practical Aspects of Declarative Languages*, LNCS 12007.

Under Progress

- [1] Kumar, P., Pacak, A., Erdweg, S. (2025). Incremental Computing by Differential Execution. **Submitted to ECOOP, 2025.**
- [2] Erwig, M., Kumar, P. (2024). Explaining Results of Multi-Criteria Decision Making. *Journal of Multi-Criteria Decision Analysis*. **In Revision (Minor Revision).**

Thesis

- [1] Kumar, P. (2023). Automatic Explanations of Computation Results with Value Decompositions and Dominating Sets. PhD Thesis, Oregon State University.
- [2] Kumar, P. (2018). Implementation of Message Passing Language. MSc Thesis, University of Calgary.