Schedule : Spring 2021

This is the tentative schedule of Mélange group for the Spring 2021 semester.
Meeting time & Place : Mondays 12:00 PM - 1:00 PM (MST) via Webex

WEEK	DATE	TOPIC	PRESENTER
1	01/29/2021	Intro meeting	
2	02/08/2021	Planning	
3	02/15/2021	From High-Level Inference Algorithms to Efficient Code (link)	William Scarbro
4	02/22/2021	Software for polyhedral compilation (link1,link2,link3)	Louis-Noel Pouchet
5	03/01/2021	Analytical Characterization and Design Space Exploration for Optimization of CNNs (link)	Chiranjeb Mondal
6	03/08/2021	Open discussion	
7	03/15/2021	Program transformations for energy efficiency	Louis Narmour
8	03/22/2021	TBD	Steve Kommrusch
9	03/29/2021		
10	04/05/2021		
11	04/12/2021		
12	04/19/2021		
13	04/26/2021		
14	05/03/2021		
15	05/10/2021		

Previous Semesters, including legacy reading lists

1. Fall 2020
2. Fall 2019
3. Spring 2019

Standard paper study questions

1. Write a short (max 5 sentences) summary of the paper.
2. What is the problem addressed in the paper?
3. Why is the problem important?
4. How do the authors address the problem?
5. How do they evaluate their approach?
6. What is the punch-line (key cool idea, or “what I got out of this paper”)? This is often different for different people and different from what the authors may have intended.
7. Make a list of deeper questions that you would like discussed in the meeting.

Current Reading Pool

- Nathanaël Courant, Xavier Leroy. **Verified Code Generation for the Polyhedral Model**. In *Proc. ACM Program. Lang.*, POPL, 2021. https://doi.org/10.1145/3434321

- Rui Li, Yufan Xu, Aravind Sukumaran-Rajam, Atanas Rountev, P. Sadayappan. **Analytical Characterization and Design Space Exploration for Optimization of CNNs**. In *The ACM Conference on Architectural Support for Programming Languages and Operating Systems*, ASPLOS, 2021. https://arxiv.org/pdf/2101.09808.pdf
- Rajan Walia, Praveen Narayanan, Jacques Carette, Sam Tobin-Hochstadt, Chung-chieh Shan. **From High-Level Inference Algorithms to Efficient Code**. In *Proc. ACM Program. Lang.*, ICFP, 2019. https://doi.org/10.1145/3341702
- Eli Bingham, Jonathan P. Chen, Martin Jankowiak, Fritz Obermeyer, Neeraj Pradhan, Theofanis Karaletsos, Rohit Singh, Paul Szerlip, Paul Horsfall, Noah D. Goodman. **Pyro: Deep Universal Probabilistic Programming**. In *J. Mach. Learn. Res.*, JMLR, 2019. https://paperswithcode.com/paper/pyro-deep-universal-probabilistic-programming
- Zoubin Ghahramani. **Probabilistic machine learning and artificial intelligence**. In *Nature*, 521, 2015. https://doi.org/10.1038/nature14541