

ASTRA-sim and Chakra Tutorial: *Closing Remarks*

Tushar Krishna
Associate Professor
School of ECE, Georgia Institute of Technology
tushar@ece.gatech.edu



ASTRA-sim Tutorial - Agenda

Time (PDT)	Topic	Presenter
3:00 – 3:30 pm	Introduction to Distributed ML	Tushar Krishna
3:30 – 3:45 pm	Overview of Chakra and ASTRA-sim	Tushar Krishna
3:45 – 4:35 pm	Deeper Dive into Chakra and ASTRA-sim	Will Won
	Workload, System, and Network Layers	
4:35 – 4:45 pm	Demo	Will Won
4:45 – 5:00 pm	Closing Remarks	Tushar Krishna

Tutorial Website

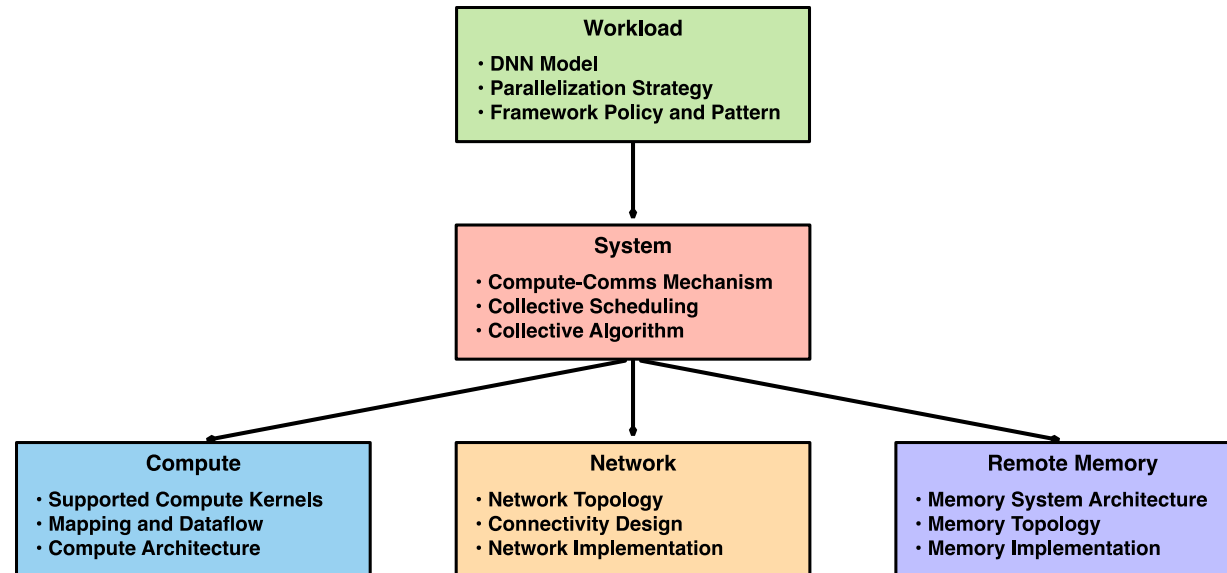
includes agenda, slides, ASTRA-sim installation instructions (via source + docker image)

<https://astra-sim.github.io/tutorials/hoti-2024>

Attention: Tutorial is being recorded

Motivation of this Tutorial

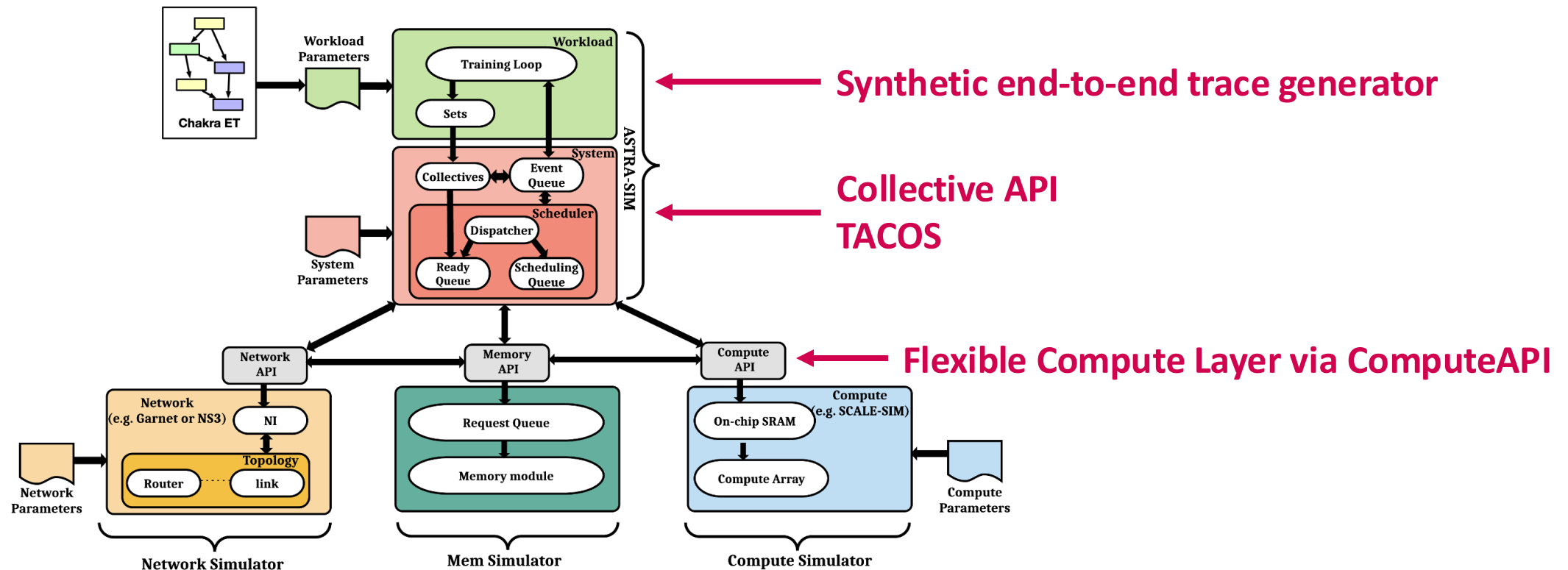
- Large-scale distributed ML is an ongoing open-research area
- Various co-design aspects for performance, efficiency, sustainability



- Many emerging supercomputing systems being designed specifically for this problem!

ASTRA-sim is Evolving

- Highlighted works in progress + many more collaborative efforts



Contribution and Participation

- **ASTRA-sim is open-source!**

- Feel free to raise GitHub issues and contribute via pull-requests

- **Helpful Resources**

- **[Website]** <https://astra-sim.github.io>
- **[Wiki]** <https://astra-sim.github.io/astra-sim-docs/index.html>
- **[Validation]** <https://astra-sim.github.io/astra-sim-docs/validation/validation.html>
- **[Paper]** <https://arxiv.org/abs/2303.14006>
- **[Mailing List]** <https://forms.gle/18KVS99SG3k9CGXm6>
- **[ASTRA-sim GitHub]** <https://github.com/astra-sim/astra-sim>
- **[Chakra]** <http://mlcommons.org/working-groups/research/chakra>
- **[Chakra GitHub]** <https://github.com/mlcommons/chakra>

Presenters and Contributors

Presenters



Tushar Krishna

Associate Professor, School of ECE
Georgia Institute of Technology
tushar@ece.gatech.edu



Will Won

Ph.D. Student, School of CS
Georgia Institute of Technology
william.won@gatech.edu

Contributors

Georgia Tech

Jinsun Yoo
Joongun Park
Changhai Man
Divya Kiran Kadiyala

NVIDIA

Srinivas Sridharan
Taekyung Heo

Intel

Sudarshan Srinivasan

Meta

Saeed Rashidi

AMD

Brad Beckmann
Furkan Eris
Kishore Punniyamurthy

*+ many more industry/academia collaborators
+ growing!*

Discussions, Q/A, and Conclusion

Thank you!