

Yu Ma

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<http://my8693.github.io>

EDUCATION	Ph.D. Computer science , Shanghai Tech University	Since 2016
	B.S. Microelectronics, Finance (Minor) Qingdao University	2012 – 2016
EXPERIENCE	Doctoral Candidate , Shanghai Tech University	Since 2016
	Supervised by Pingqiang Zhou on artificial intelligence chip	
	<ul style="list-style-type: none">Analyze soft error for resistance RAM (RRAM) and aging for Dynamic RAM (DRAM).Develop efficient techniques for training the memristor-based spiking neural networks targeting better speed, energy and drift lifetime.Develop high reliable computing methods for memristor crossbar based neural network computing.Develop ASIC for neural network based light field rendering.	
	Research Intern , Qingdao University	2013 – 2015
	Supervised by Shandong Li on magnetics	
	<ul style="list-style-type: none">Prepare amorphous films by pulse laser deposition.Set up a biochip testing framework based on giant magnetoresistance (GMR) effect with LabVIEW.	
COURSE-PROJECTS	Convex optimization , Studying pension investment with convex optimization	2017
	Fintech , Stock price prediction with recursive neural network (RNN)	2019
SERVICES	Teaching Assistant , Electronic circuit and system	2016
	Vice-chair , Society for mathematical modeling, Society for voluntary	2015
	Volunteer , Clipper Race	2014
AWARDS	The First Runner-up Team , Seizing Opportunities in Fintech (Fintech Workshop)	2019
	Meritorious Winner , COMAP's Mathematical Contest in Modeling (MCM)	2015
	The Third Price , Challenge Cup	2015
COMPETENCES	Languages Chinese (<i>native</i>), English (<i>limited working proficiency</i>)	
	Techniques Python, C/C++, Matlab, git, L ^A T _E X, MySQL, NoSQL, LabVIEW	
PUBLICATIONS	[1] Y. Ma , L. Zheng and P. Zhou, "Tolerating Stuck-at Fault and Variation in Resistive Edge Inference Engine via Weight Mapping," <i>Proceedings of the Great Lakes Symposium on VLSI</i> , 2021.	
	[2] Y. Ma and P. Zhou, "Efficient Techniques for Training the Memristor-based Spiking Neural Networks Targeting Better Speed, Energy and Lifetime," <i>Proceedings of the Asia and South Pacific Design Automation Conference</i> , 2021.	
	[3] Y. Ma , D. Jia, W. Gao and P. Zhou, "Addressing Aging Issues in Heterogeneous Three-Dimensional Integrated Circuits," <i>Proceedings of the IEEE International Conference on ASIC</i> , 2019. (Invited)	
	[4] Y. Ma , L. Zheng and P. Zhou, "CoDRAM: A Novel Near Memory Computing Framework with Computational DRAM," <i>Proceedings of the IEEE International Conference on ASIC</i> , 2019.	
	[5] Y. Ma , D. Jia, H. Zhang, R. Wang and P. Zhou, "A Compact Memory Structure based on 2T1R against Single-Event Upset in RRAM Arrays," <i>Proceedings of the IEEE International Conference on ASIC</i> , 2019.	

- [6] C. Wu, Y. Huang, Y. Cui, Z. Shen, **Y. Ma**, S. Xie, H. Du, X. Gao and S. Li, "Film Thickness Gradient-Induced Magnetic Anisotropy and Ferromagnetic Resonance in Fe₅₆Co₂₄B₂₀ Amorphous Films Prepared by Pulse Laser Deposition," *IEEE Transactions on Magnetics*, 2015.