MINT
MAGENETIC INFORMATION STORAGE TECHNOLOGY
MAHASARAKHAM UNIVERSITY

Magnetic INformation storage Technology (MINT)

Assoc. Prof. Dr. Jessada Chureemart

Department of Physics,

Faculty of Science

Mahasarakham University

Magnetic INformation storage Technology (MINT) Group

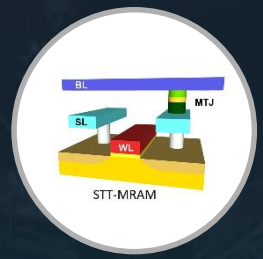
Our Group Members

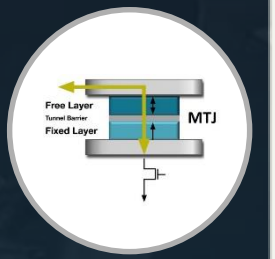
- 3 Academic staffs
- 1 Postdoc
- 5 PhD. students, 1 Master student



Research Interests

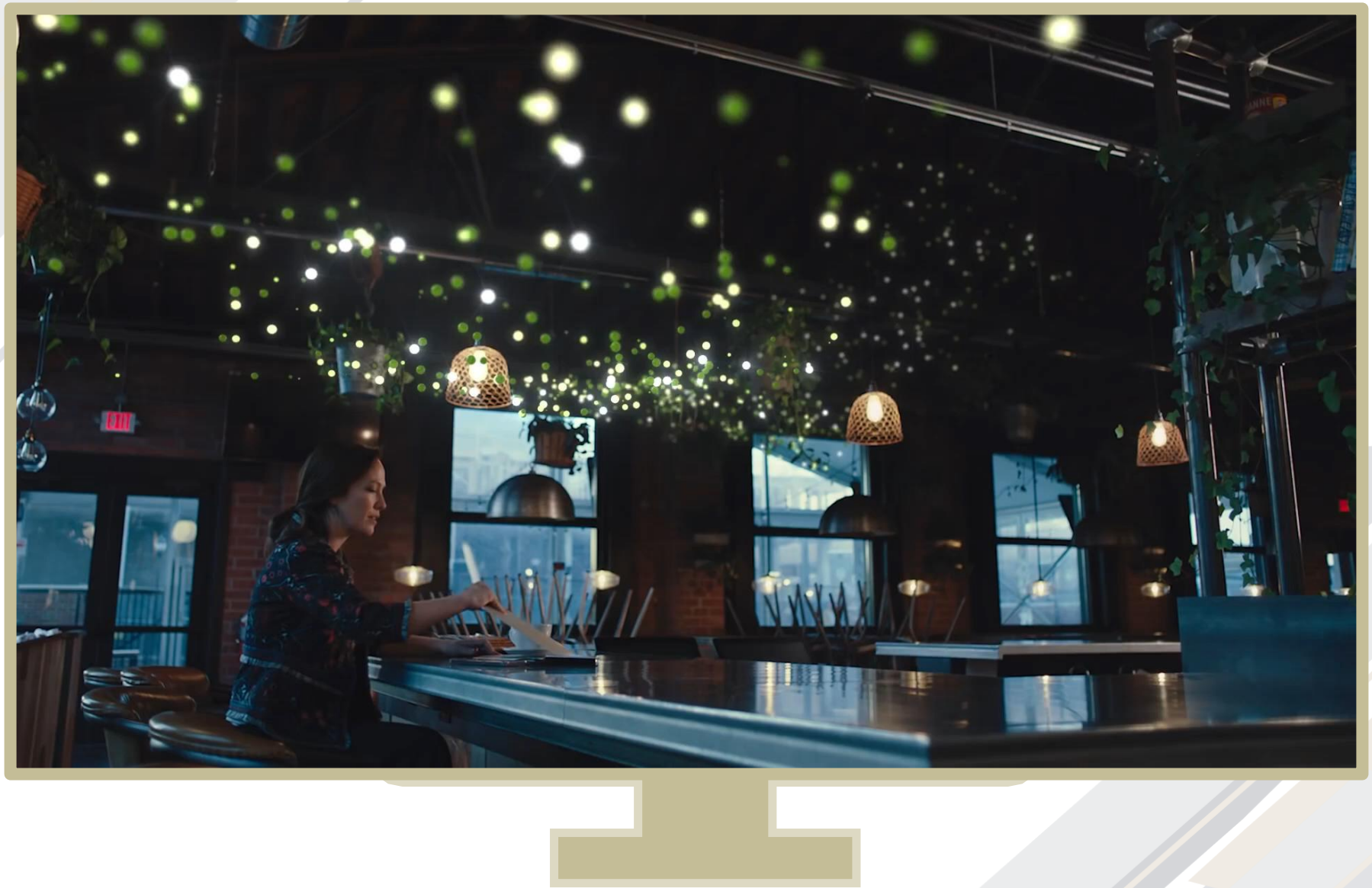
- Hard disk drive components designs
- Heat-assisted magnetic recording media (HAMR)
- Spin transport in read elements
- Magnetic materials and their applications
- Magnetic random access memory (MRAM)
- Magnetization dynamics of MTJs structure








Magnetic INformation storage Technology (MINT) Group



Advanced Magnetic Modeling

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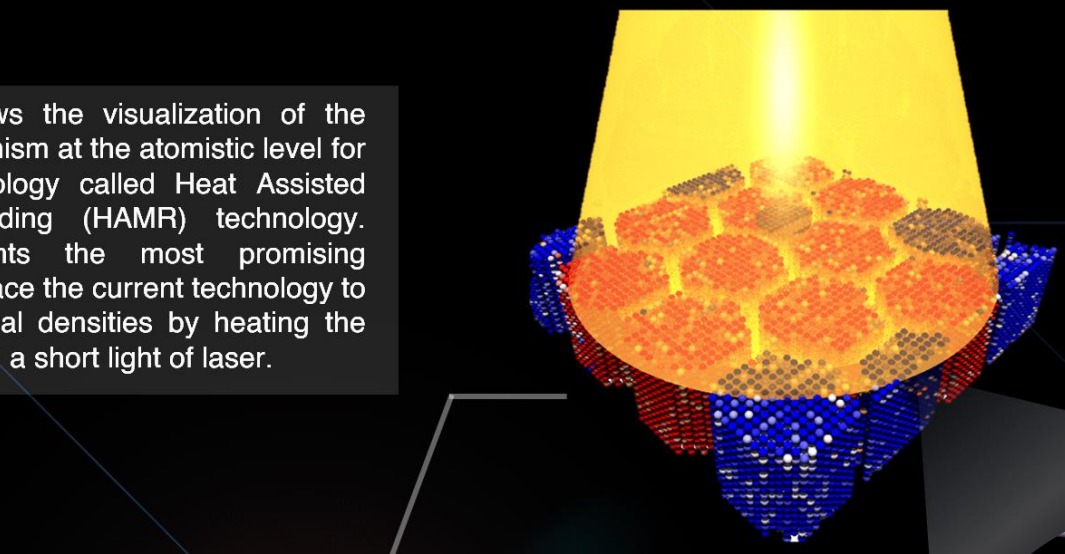
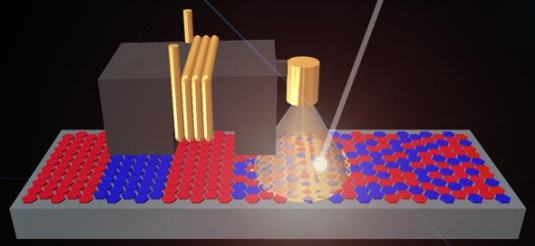
The image shows the visualization of the switching mechanism at the atomistic level for advanced technology called Heat Assisted Magnetic Recording (HAMR) technology. HAMR represents the most promising candidate to replace the current technology to achieve high areal densities by heating the storage layer with a short light of laser.



Atomistic model

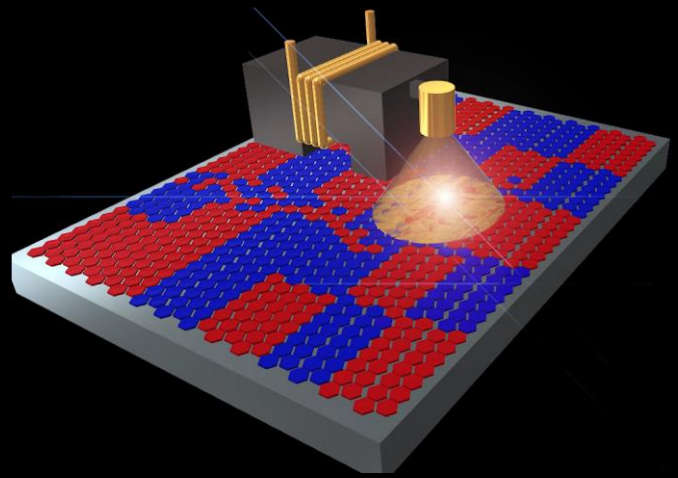


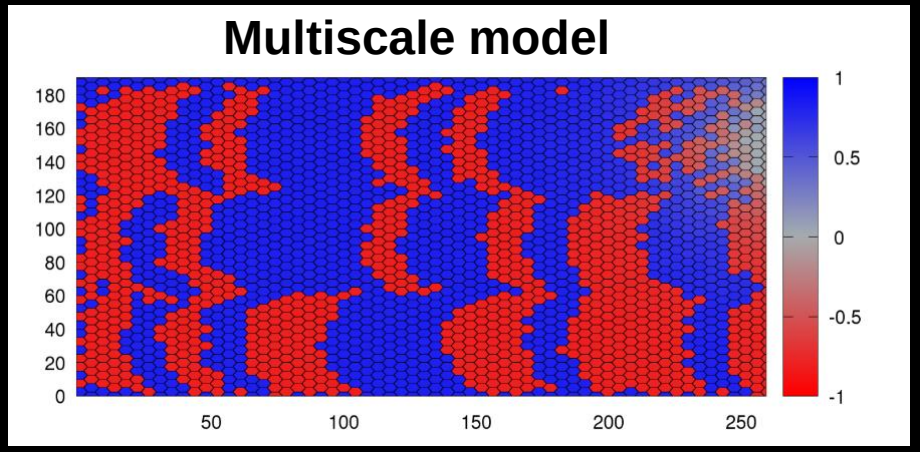
Micromagnetic model

MINT RESEARCH UNIT

Advanced Recording Technologies

Heat Assisted Magnetic Recording Technology (HAMR)





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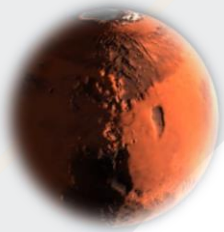
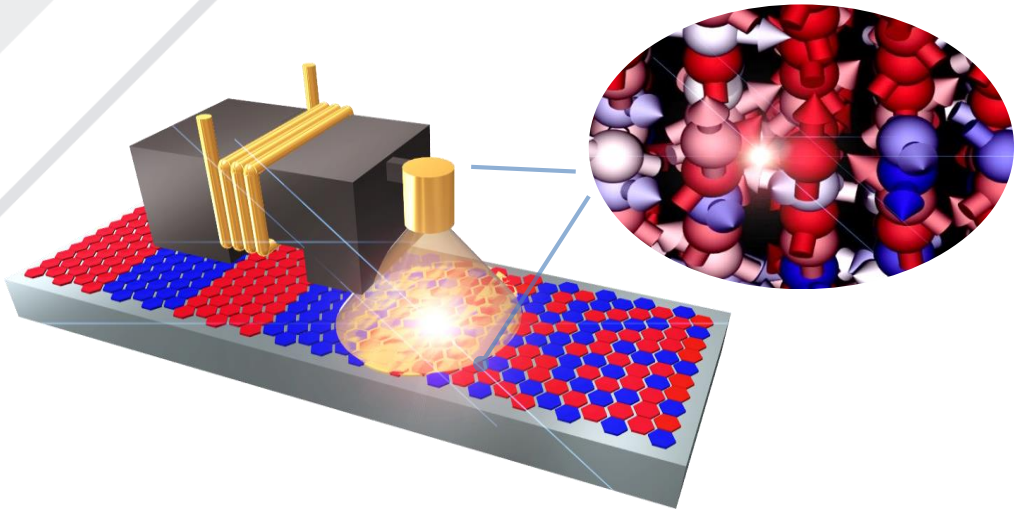
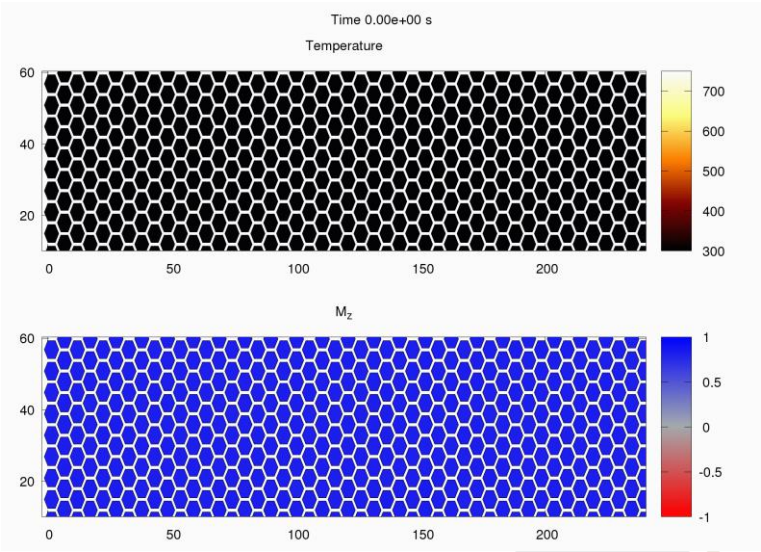
OUTCOMES 2022

Realistic Advanced Model



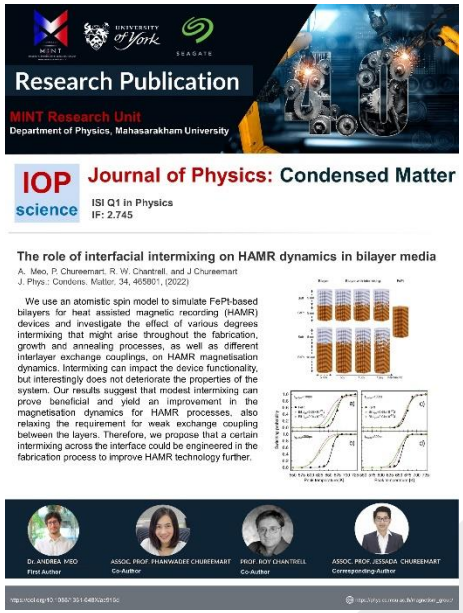
Advanced Model (MARS) for Industrial Applications





Publications

- **We published 5 research articles in ISI Quartile 1-2 (2022-2023).**



International Conferences

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IEEE MAGNETIC SOCITY- TH CHAPTER 16-18 Nov 2022

Technical Course Training for Industry

HAMR Technology Reskil/Upskill Training June 23-24, 2022 (Teparuk)

Student Opportunities

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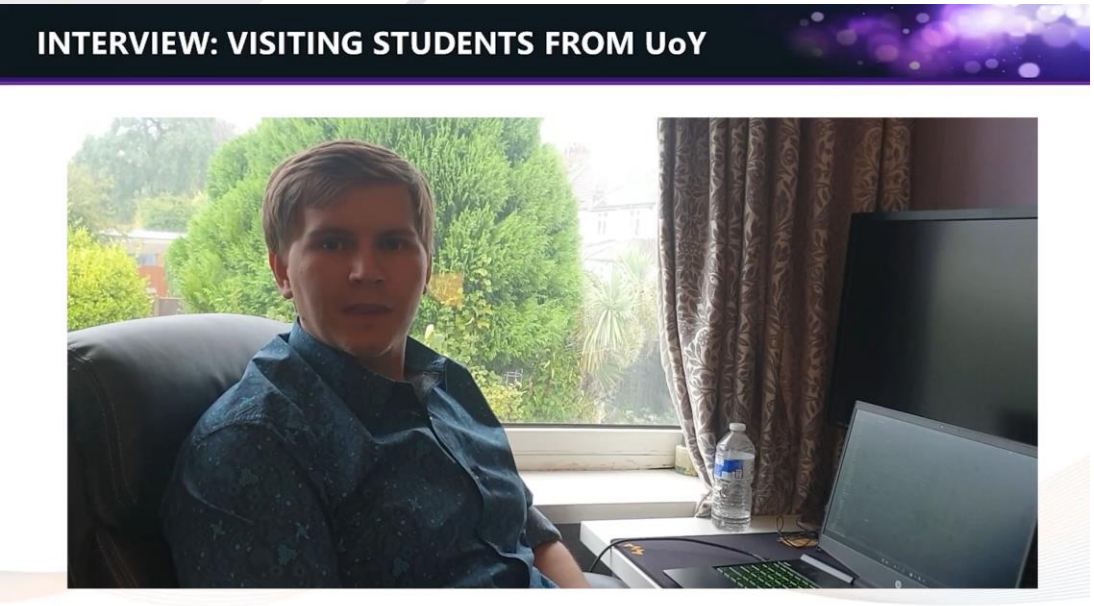
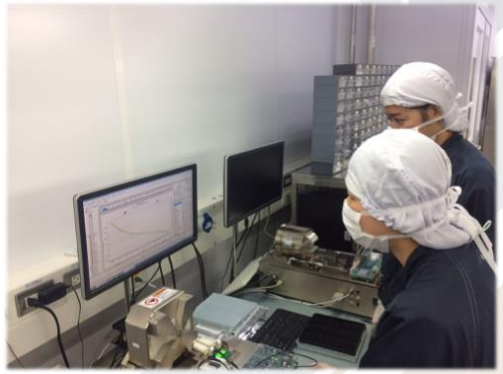
Exchange Student from UoY-MSU



Seagate Internship



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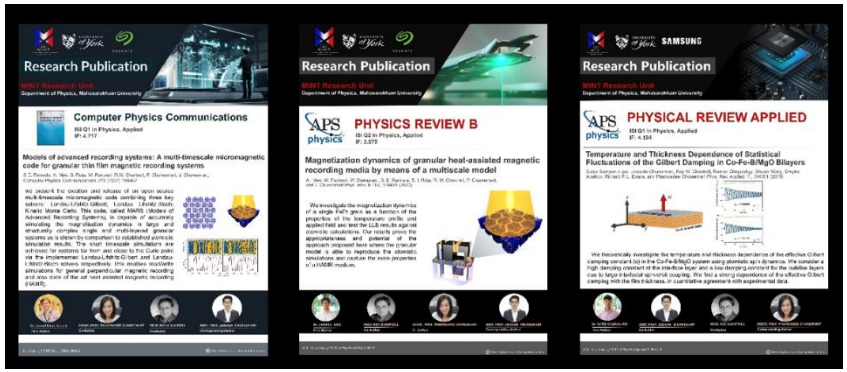
ACTION PLAN & OUTCOMES 2023

Action Plan 2023

กิจกรรมที่จะดำเนินการ	2023-2024			
	Q1	Q2	Q3	Q4
1.ประชุมวางแผน โครงการวิจัยที่จะดำเนินการ ตั้งเป้าหมาย ผลลัพธ์ของหน่วยวิจัย รวมถึงการสร้างเครือข่ายความร่วมมือกับอุตสาหกรรม				
2. ดำเนินงานวิจัยด้านที่วางแผนและทำการเผยแพร่งานวิจัยและทำการตีพิมพ์ในวารสารที่มีคุณภาพ				
3. จัดงานประชุมวิชาการ school/ workshop ภายใต้การนำของสมาคม IEEE Magnetic Society (Thailand Chapter) เพื่อเป็นการถ่ายทอดเทคโนโลยีและแลกเปลี่ยนความรู้ระหว่างมหาวิทยาลัยและภาคอุตสาหกรรม				
4. จัดอบรบ course training ให้กับภาคอุตสาหกรรม เพื่อสร้างเครือข่ายวิจัยและเพื่อพัฒนาทักษะ องค์ความรู้แก่นิสิตระดับบัณฑิตศึกษาเพื่อเข้าทำงานและรองรับการขยายตัวของภาคอุตสาหกรรม				

Expected Outcomes 2023

- We expect to publish 4 research articles in ISI Quartile 1-2.
- We plan to organize the workshop or school to expand magnetic society and set up the collaboration between MSU and other universities.
- We plan to organize the technical course training in order to deliver and share the knowledge from university to industry



THANK YOU

Any Question?