#### CISC7016/CISC8001

#### **Advanced Topics in Computer Science**



Department of Computer and Information Science Faculty of Science and Technology



#### About the instructor

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#### **Research interests:**

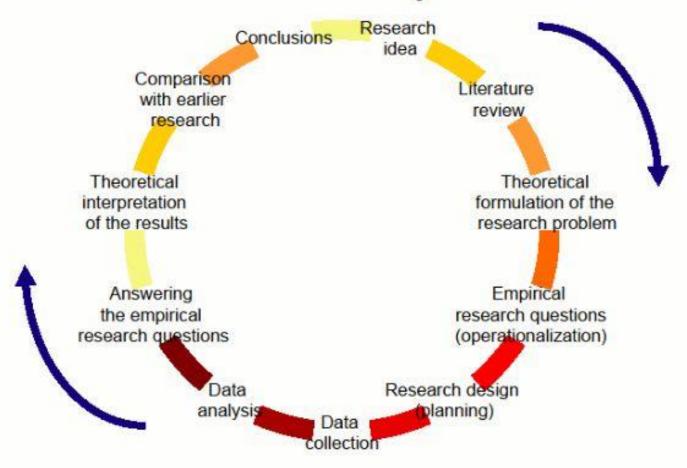
Image Processing and Pattern Recognition; Information Security, Forensic and Privacy for Multimedia; Adversarial Machine Learning and Al Security.



# Course Objectives

- Discuss CS topics including but not limited:
  - Information security, forensic and privacy for multimedia;
  - Image processing;
  - Pattern recognition and computer vision;
  - Deep learning;
  - Al Security.
- Learn and complete the research process for an academic paper.

### The research process



# **Learning Outcomes**

- Understand some selected research topics;
- Able to create a research idea;
- Able to review the literature;
- Able to formulate research problem;
- Able to design and implement the solution;
- Able to collect and analysis data;
- Able to conclude the results.



# **Targeted Students**

- Have taken the related courses: Image Processing, Computer Vision, AI and Machine Learning, etc.;
- Have interest in academic research;
- Have interest in the advanced CS topics;
- Can attend the class every week.



# Marking Scheme

- Class participation and discussions (30%)
  - Paper presentation (5% each)
  - Q&A and discussion (1% each)
- Presentations (40%)
- Academic Paper (30%)

# Questions??

Course Homepage:

https://ummoodle.um.edu.mo/course/view.php?id=122107

