



COMP7900

Research Frontiers in Computing 1

Session 1, Weekday attendance, North Ryde 2020

Department of Computing

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General Information

Unit convenor and teaching staff

Unit Convenor, Lecturer

Mehmet Orgun

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Contact via Email

4 Research Park Drive, Room 282

Mondays 1-3pm

Credit points

10

Prerequisites

Admission to MRes

Corequisites

Co-badged status

Unit description

This unit is designed to engage students with current research in computing. It will introduce students to a number of the current open research questions across the range of the broad discipline. It is the first of a pair of such units, with the second appearing in the second year of the MRes program. This unit addresses research across the breadth of the discipline, while the second unit will focus on more particular issues related to the student's project area.

Activities may include such things as seminar attendance, directed reading of research papers, the discussion and critiquing of research topics and introduction to new practical techniques with preparatory reading, hands-on experience and a final report. Presentation of a seminar and a written report based on the topics examined are required for completion of this unit.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Demonstrate an understanding of research being done in the Department of Computing

ULO2: Summarize the state of art in selected disciplines of Computing

ULO3: Interpret and apply the principles of ethical conduct in selected disciplines of Computing

ULO4: Write a critical overview of a research topic

ULO5: Present a research topic orally

Assessment Tasks

Coronavirus (COVID-19) Update

Assessment details are no longer provided here as a result of changes due to the Coronavirus (COVID-19) pandemic.

Students should consult [iLearn](#) for revised unit information.

[Find out more about the Coronavirus \(COVID-19\) and potential impacts on staff and students](#)

General Assessment Information

Note that COMP7900 does not have a final examination and therefore the final grades will be determined by the assessment tasks attempted throughout the semester.

The deadlines of the assessment tasks are tentative. Please consult iLearn for any possible updates.

Late submission

No extensions will be granted without an approved application for Special Consideration. There will be a deduction of 20% of the total available marks made from the total awarded mark for each 24 hour period or part thereof that the submission is late. For example, 25 hours late in submission for an assignment worth 10 marks – 40% penalty or 4 marks deducted from the total. No submission will be accepted after solutions have been posted.

Grading rubric for the first and second reports

| Criterion | Fail | Pass | Credit | Distinction and High Distinction |
|--------------|--|--|---|---|
| Abstract | Missing abstract or incomplete, in that it does not provide a brief statement of the problem, significance and state of the art. | Conveys the problem, significance and state of the art, but in a little less clearly than might be expected, or at an inappropriate level of detail. | Stands as a surrogate for the full report: a clear summary of the problem, significance and state of the art; but may require some rewording to make it accessible to a non-specialist. | An excellent summary that clearly states the problem, significance and state of the art, in a manner that is accessible to a technical but a non-specialist audience. |
| Introduction | The introduction does not clearly state the problem and significance. | The introduction does state the problem and significance, but it takes a little effort to disentangle. | The introduction states the problem clearly, and its significance is clear. | The introduction provides an exceptionally clear and well-motivated problem statement, presented in a way that makes the reader eager to learn about the details of the state of the art. |

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| Review of related work | Patchy or badly organised review of related work; unclear why the work presented is relevant to the problem addressed. | The material covered seems comprehensive and relevant, and some attempt has been made at clustering the materials reviewed in a thematic manner. | Thematic organisation of the review, demonstrating a considered extraction of key ideas from sources and how they impact the problem at hand. | Thoughtful analysis of the material that goes beyond the themes identified explicitly by the sources, concisely drawing out the key points and comparing the approaches. |
| Ethical implications | There is no mention of ethical implications in the research area or it does not cover most of the fundamental ethical aspects. | Most of the fundamental ethical implications in the research area are covered. | The fundamental ethical implications are explained clearly. | There is an insightful discussion of the ethical aspects of the research area. |
| Discussion | The work is presented but not discussed, or the discussion is very patchy. | There is some discussion of the work beyond merely presenting it. | The related work is discussed, the key issues have been clearly explained, and the key subtopics of research have been presented. | The discussion of the related work is exceptionally clear. The reader has a clear picture of what has been achieved, what subtopics are current research, and what are the issues that will be hot topics for possible PhD projects in the near future. |
| Quality of writing | Very poor; problems with coherent presentation of ideas. | Understandable, but with some problems in grammar, style and spelling. | Grammar and style of an acceptable standard; could be safely given to an external party with only minor editing. | High quality prose; well written; could comfortably be published in an academic website. |
| Appropriate use of referencing conventions | The information in the bibliography is incomplete, or there is lack of consistency in formatting. There are also missing references and/or uncited references. | The information in the bibliography is incomplete, or there is lack of consistency in formatting. | The information in the bibliography is formatted consistently, but with a few missing details. | All references are complete and consistently formatted. |

Grading rubric for the first and second presentations

| Criterion | Fail | Pass | Credit | Distinction and High Distinction |
|--------------------------|--|--|---|---|
| Presentation structure | Muddled and dis-organised; the structure of the presentation was not made clear via either signposting on the slides or explicit indications in the verbal presentation. | It was possible to determine that the presentation had a structure, but this was not made explicit on either the slides or in the verbal presentation. | The structure of the presentation was made clear via both the slides and verbal cues. | An exceptionally well-structured presentation; would serve as a great example for others to follow. |
| Communication of content | Unclear what was the problem, significance or state of the art in the chosen topic. | The problem, significance and state of the art were presented, it a little unclear. | The presentation clearly indicated the problem, significance, state of the art. | An exceptionally good presentation. Besides a good review of the state of the art, it is clear where research in this area is heading and what would be desirable PhD topics in the area. |

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| Visual aspects of the presentation | Slides not well-presented. Some combination of inappropriate content, inappropriate level of detail, and inconsistencies in formatting. | Slides contained the right level of detail, with perhaps a few lapses in quality. | Slides contained the right level of detail throughout, and were formatted neatly and consistently. | Exceptionally well-presented; could be used in an academic website or slide sharing site. |
| Speaking skills | Some combination of: non-adequately rehearsed; incoherent presentation; inaudible; almost entirely read off the slides; ran out of time. | Read off the slides some of the time, but the presentation was coherent and audible, and overall the verbal presentation added something to the material on the slides. | Obviously well-rehearsed. The verbal presentation was clear and precise, and complemented the slides rather than repeating their content. | Exceptionally polished presentation; the recording could be shared in an academic website. |
| Audience interaction | Didn't look at the audience; spent most of the time looking at the screen or elsewhere. | Looked at the audience throughout the presentation. | Scanned the audience throughout the presentation, watching for signs of misunderstanding or boredom; responded appropriately. | Actively interacted with the audience (via questions, a poll, a good joke, or some other means); made eye contact with most people in the audience. |

Grading rubric for each post-seminar discussion & summary report

Note that this rubric includes a section that is related to the student participation in the discussions.

| Criterion | Fail | Pass | Credit | Distinction and High Distinction |
|---|---|--|--|---|
| Communication of content in the summary report & discussion | It is completely unclear what was the problem, significance, methods or conclusions. | The problem, significance, methods and conclusions were summarized, but a little un-clearly. | The problem, significance, methods and conclusion, were clearly indicated | An exceptionally good report & discussion which provided further insights into the methods used and the results reported. |
| Quality of writing of the report | Very poor; problems with coherent presentation of ideas. | Understandable, but with some problems in grammar, style and spelling. | Grammar and style of an acceptable standard; could be safely given to an external party with only minor editing. | High quality prose; well written; could comfortably be published in an academic website. |
| Class participation | There were no questions or comments asked in the discussions, or the questions asked were not relevant. | There were relevant questions asked in some of the discussions. | There was interesting and useful engagement with the discussions delivered by staff and other students. | There was exceptional engagement with the discussions delivered by the other students which lead to further understanding of the methods and the results. |

Delivery and Resources

Coronavirus (COVID-19) Update

Any references to on-campus delivery below may no longer be relevant due to COVID-19.

Please check here for updated delivery information: <https://ask.mq.edu.au/account/pub/>

[display/unit_status](#)

CLASSES

Classes will be held on Mondays, 9am - 11am in 3 Innovation Rd - G230 In the classes, we will have several different types of activities:

- **Seminars** -- the unit basic component is a collection of three seminars. Each seminar is given by an academic with international research standing. The seminars are going to present both the state of art and recent developments in the three selected research areas of Computing. They will also introduce the relevant research groups and areas in the Department.
- **Reports and Presentations** -- there will be two reports and two presentations by the students. The first report has to discuss a topic chosen from Seminars 1 and 2. The second report has to discuss a different topic chosen from Seminars 1 to 3. The reports are going to be presented at two presentation sessions.
- **Discussion Sessions** -- in the week after each seminar, there will be a discussion session, based on the summary reports of a chosen paper from the seminar.
- **Regular Sessions** -- the unit may also include sessions and/or independent reading on how to manage time, write scientific reports and how to present research results.

UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

- [iLearn](#) is going to be used as a main web server for the unit.

Unit Schedule

Coronavirus (COVID-19) Update

The unit schedule/topics and any references to on-campus delivery below may no longer be relevant due to COVID-19. Please consult [iLearn](#) for latest details, and check here for updated delivery information: https://ask.mq.edu.au/account/pub/display/unit_status

The following schedule is tentative. Please consult iLearn for any possible updates.

| Week | Topic | Lecturer |
|--------|-----------------------------|--------------|
| Week 1 | Welcome and Introduction | Mehmet Orgun |
| Week 2 | Doing Postgraduate Research | Mehmet Orgun |
| Week 3 | Seminar 1 | TBA |

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|---------|-------------------------------------|--------------|
| Week 4 | Discussion Session 1 | Mehmet Orgun |
| Week 5 | Seminar 2 | TBA |
| Week 6 | Discussion Session 2 | Mehmet Orgun |
| Week 7 | How to give presentations | Mehmet Orgun |
| | 2-Week Recess | |
| Week 8 | Presentations of the first reports | Mehmet Orgun |
| Week 9 | Seminar 3 | TBA |
| Week 10 | Discussion Session 3 | Mehmet Orgun |
| Week 11 | Independent reading | Mehmet Orgun |
| Week 12 | Open discussion | Mehmet Orgun |
| Week 13 | Presentations of the second reports | Mehmet Orgun |

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.