

# Department of Statistics & Actuarial Science

Orientation for  
New MMath Research Students

Wednesday, Sept 5, 2018

# A Great Choice

- It is a very exciting time to be studying any of the “data sciences”
- These include: Statistics, Actuarial Science, Biostatistics and Quantitative Finance
- It has become widely understood that good decision making should be based on empirical evidence. This requires the “data sciences”

# The Department

- We have recently had a conference to celebrate our 50<sup>th</sup> Birthday
- We are the oldest Department in Canada
- In 1982 the department's name was changed to Statistics and Actuarial Science
- Now home to more than 45 research active full-time faculty
- The Department is also home to over 900 undergraduate students and about 150 graduate students in programs including Actuarial Science, Biostatistics, Quantitative Finance, and Statistics

# Introductions

# The **MOST** important people

- Lisa Baxter - MMath (M3 3138)
- Mary Lou Dufton - PhD (M3 3137)
- Helen Chen - MQF and MActSci (M3 3139)

They know ALL the answers to your questions!

# Some (other) Department People

- *Chair:* Stefan Steiner
- *Assoc. Chair Act. Science:* David Landriault
- *Assoc. Chair Research:* Richard Cook
- *Assoc. Chair UnderGrad:* Pengfei Li
- *Assoc. Chair Grad:* Paul Marriott



# Graduate Student Reps

- Graduate Student Association

<https://uwaterloo.ca/graduate-student-association/>

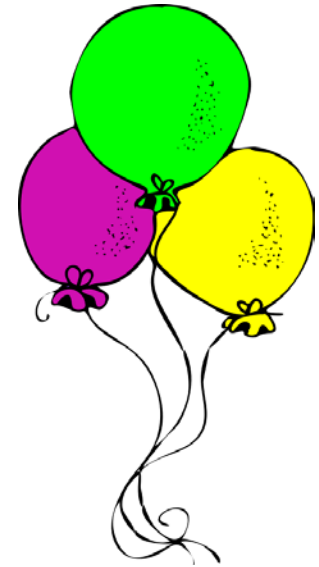
- Two graduate student reps will be announced shortly

# Department Social

When? Wednesday 12<sup>th</sup> September 4:30pm

Where? M3, Bruce White Atrium

What?      Food  
              Drinks  
              Fellow students  
              Professors





# MMath

- Essay option (3 terms):
  - 7 courses (typically 3+3+1)
  - essay (need NOT be original research or publishable)
  - other milestones (grad student skills workshop, etc)
- Thesis option (3 to 4 terms):
  - 4 courses
  - thesis (somewhat original & almost publishable)
  - other milestones

# MMath

- all courses @ 800 and 900 levels
- at most ONE course allowed in other areas  
e.g., not “STAT XXX”
- essay option (by default):
  - numerically graded
  - full-time financial support = 2 TAs/term x 3 terms
- thesis option (extra approval needed):
  - Think carefully and talk to me/supervisor if you want to take this option

# MMath: Statistics

- Essay option: seven (STAT) term courses
- Three of the courses should include STAT 830 (or 835) and STAT 850 and 854
- Average at least 70%
  
- Thesis option: four (STAT) term courses
- Should include STAT 850 and two 900 level STAT courses
- Average at least 70%

# MMath Biostatistics

- We have just made changes to this program and you are in the new and improved program
- Fall: take Stat 831, 850 and 931 since these are only offered in the fall term.
- Winter: take 2 of Stat 932, 935 and 936 + an elective from list
- Spring term normally is 1 elective and the research essay
- Note Stat 936 will only be active as of Winter 2019 and will on the schedule as soon as it is approved.

# MMath Biostatistics

- Elective list
  - STAT 830 Experimental Design
  - STAT 844 Statistical Learning - Function Estimation
  - STAT 854 Sampling Theory and Practice
  - STAT 938 Statistical Consulting
  - STAT 932 Classification and Prediction in High Dimensional Analysis in Health Research
  - STAT 935 Analysis of Survival Data
  - STAT 936 Analysis of Longitudinal Data
  - STAT 946 Topics in Probability and Statistics
  - STAT 947 Topics in Biostatistics

# MMath Actuarial Science

- Essay Option: Seven courses with average 70%
- Must include ACTSC 895
- 2 of ACTSC 855, ACTSC 962, ACTSC 964, or ACTSC 970
- 1 of ACTSC 974, STAT 831, STAT 840, STAT 841, or STAT 906
- At least 3 900-level ACTSC courses must be taken
- Thesis Option: Four course with with average 75%
- ACTSC 895 and at least two 900 courses

# Co-op in Stats/BioStats

- Co-op options are available
- Same courses as regular MMath programs
- Co-op work report milestone
- Usual co-op schedule:
  - Two academic terms
  - Two work terms
  - Final academic term

# MMath

- Find a supervisor by 2<sup>nd</sup> month of 2<sup>nd</sup> term
  - e.g., Feb 2018 for those who started in Sept 2018
- Check faculty's research profiles & talk to them
- Ask program advisors for suggestions
- Many highly-energetic **new faculty**
  - at the very frontiers of our discipline
  - strongly encourage you to approach them



# Grad Student Skills Workshop

- part of degree requirement (milestones)
  - TA skills workshop (one evening, ~ 3 hrs)
  - writing skills workshop (three sessions)
- mandatory for all new grad students

# Grad Student Skills Workshop

- Date: Thursday, Sept 6, 2018
- Time: 16:30–19:30
- Location: M3, 3127 (seminar room)
- Food: light dinner provided

# Writing Skills Workshop

- 1<sup>st</sup> session is Tuesday September 11 from 4:30 – 6:30
- 2<sup>nd</sup> session is Tuesday September 25 from 4:30 – 6:30
- 3<sup>rd</sup> session is Tuesday October 23<sup>rd</sup> from 4:30-6:30
- All these session are in M3 3127

# Academic Integrity

- mandatory online course
- access through learn.uwaterloo.ca
- watch out for email in your mailbox

# Harassment and Discrimination

- Harassment and Discrimination are issues taken seriously by the University of Waterloo
- mandatory online course
- access through [learn.uwaterloo.ca](http://learn.uwaterloo.ca)

# Departmental Seminars

- Thursdays, 16:00 – 17:00
- great way to get educated **for real**
- try to attend as many as you can
- Don't be afraid to ask question!
- minimum requirements:
  - MMath students: 2 (Fall); 2 (Winter)
  - PhD students: 4 (Fall); 4 (Winter)
  - attendance forms available from Lisa or Mary Lou

# Teaching Assistantship

- each TA unit ~ 80 hrs of work during the term
  - **marking** assignments (& keeping student records)
  - holding **office hours**
  - teaching **tutorial** sessions
  - **proctoring** tests/exams
  - etc
- learning the course material
  - not counted in the “80 hrs” workload
  - considered part of your qualification

# Teaching Assistantship

- Have chance to express preferences (though they are not always met)
- Funding level depends on number of TA units you request/hold (0, 1, or 2)
- MMath expectation: 2 TAs/term x 3 terms if satisfactory work both academically and in past TA work



# Teaching Assistantship

- Workload varies each week
- Discuss early with the Professor to find out what the requirements are and when they take place
- Not necessarily uniform across the term

# Teaching Assistantship

- MUST communicate with instructor if
  - cannot meet a deadline or perform a TA duty (e.g., proctoring)
  - suggestion: find qualified substitute; either swap duties or buy dinner/gift; but MUST have permission from instructor
- NEVER book any trips (vacation) UNLESS you know it will fit into your TA schedule. This is particularly important in the exam period.

# Teaching Assistantship

- all TAs also in the “faculty reserve pool”
- can be randomly selected to proctor exams for large courses in the Math Faculty
- part of your TA duty

# Computing

- MFCF will be running a number of information sessions. You **must** go to one of these
- Fri. Sept 7 11:00-12:00 **M3- 3103**
- Thurs. Sept 13 3:50-4:50 **M3- 3103**
- Fri. Sept 14 1:00-2:00 **M3- 3127**

# Your UW Email



- your UW email, e.g., `jdoe@uwaterloo.ca`
  - your responsibility to manage it
  - free to forward to gmail, yahoo from your Watlam account from [jdoe@connect.uwaterloo.ca](mailto:jdoe@connect.uwaterloo.ca)
  - Ensure you set you gmail to send as if from `jdoe@uwaterloo.ca`
  - but excuses such as “I don’t check my uwaterloo email” are NOT acceptable

# Problems, Questions

- People to ask ..
  - Supervisor or Program Advisor (...)
  - Grad Student Reps
  - Grad Coordinators Lisa (Mmath), Mary Lou (PhD)
  - Associate Chair of Grad Studies (Paul)