

# Computer Networking (CN)

## 2017/18, Semester 2

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# Overview

- This is a follow-on course to introductory Computer Communications & Networks (COMN) course for 3<sup>rd</sup> year UG students
  - In fact, COMN is a prerequisite for this course
- Focus largely on wireless and mobile networks
- Basic programming experience assumed
  - Will be handy for one of the coursework assignments
- Taking this course will be beneficial for UG4/UG5/MSc students who are (or will be) doing a project in the networks area



# Administrative Details

- Course descriptor:
  - <http://www.drps.ed.ac.uk/17-18/dpt/cxinfr11049.htm>
- Course webpage:
  - <http://www.inf.ed.ac.uk/teaching/courses/cn/>
  - Schedule w/ lecture slides, assignments, TA contact info, past exam papers, etc.
- Lecturer:
  - Mahesh Marina ([mahesh@ed.ac.uk](mailto:mahesh@ed.ac.uk)), Informatics Forum room 1.20
- Lectures: Semester 2
  - Times: Tuesdays 1410-1600hrs
  - Venue: G.06, High School Yards



# Administrative Details (contd.)

- Teaching Assistant:
  - Mr Mohamed Kassem ([M.M.M.Kassem@sms.ed.ac.uk](mailto:M.M.M.Kassem@sms.ed.ac.uk)), Informatics Forum room 1.17
- Out-of-class communication:
  - Course related announcements and Q&A on mailing list: [cn-students@inf.ed.ac.uk](mailto:cn-students@inf.ed.ac.uk)
  - Meetings with Lecturer and TAs, by appointment



# Activities & Assessment

- Usual two lectures per week, but back-to-back this year
- No formal tutorials
- **Coursework (25% of course mark): two assignments**
  - Assignment 1: 15% of course mark / 60% of coursework mark
    - Simulation based performance study of network protocols
    - Period: Tue, 30<sup>th</sup> Jan – Fri, 2<sup>nd</sup> Mar
  - Assignment 2: 10% of course mark / 40% of coursework mark
    - Survey a cutting edge topic in networking based on a set of recent research papers
    - Period: Fri, 2<sup>nd</sup> Mar – Fri, 23<sup>rd</sup> Mar
- **Exam (75% of course mark)**
  - Past exam papers: [http://www.inf.ed.ac.uk/teaching/exam\\_papers/](http://www.inf.ed.ac.uk/teaching/exam_papers/)
  - Examinable material will be primarily based on lecture slides



# Syllabus

- Aim to cover the following topics:
  - Overview of wireless networks and communications
  - Wi-Fi or Wireless Local Area Networks (LANs) based on IEEE 802.11 standard
  - 2G/3G/4G Mobile Networks
  - Short-range wireless technologies (Bluetooth, RFID)
  - Mobility Management
  - Power Management
  - TCP over Wireless



# Text Books and References

- J. F. Kurose and K. W. Ross, “Computer Networking: A Top-Down Approach” 6<sup>th</sup> Edition, Pearson Education, 2013.
- A. S. Tanenbaum and D. J. Wetherall, “Computer Networks,” 5<sup>th</sup> Edition, Pearson Education, 2011.
- L. L. Peterson and B. S. Davie, “Computer Networks: A Systems Approach,” 5<sup>th</sup> Edition, Morgan Kaufmann, 2012.
- Additional readings (in the form of other reference texts and research papers) will be indicated as needed.

