Math 199C Spring 2017 (Course Code 45448)
Independent studies on non associative algebra
Bernard Russo and Robert Pluta

- **Meeting details**:
  Weekly lectures (Russo) on Wednesdays 4:00-4:00 in RH340N
  Problem sessions (Pluta) on Mondays 4:00-4:50 in RH340P
- **Main source for material**:
  Introduction to Lie algebras and representation theory, by J. E. Humphreys
- **Material to be covered**
  - Fall 2016 (Math 199A): Meyberg: Chapters 1,2,3,4
    (Associative algebras and associative triple systems)
  - Winter 2017 (Math 199B): Meyberg: Chapters 5,6,7,8
    (Jordan algebras and Lie triple systems)
  - **Spring 2017 (Math 199C): Humphreys: Chapters 1,2**
    (Lie Algebras)
- **Instructors**: Bernard Russo RH525 Robert Pluta RH440N (plutar@tcd.ie)
- **Grading**: There are no midterms or final. You may audit this course if you wish. You are allowed to enroll for 2 or 4 units. If you enroll for credit you can choose to receive a letter grade or the P/NP option. Your grade will be determined as follows

  2 units Submit solutions to a total of 40 of the 77 exercises from Chapter 1 and 2 of Humphreys, according to the following **STRICT** deadlines (A grace period of a few days will apply to each deadline)
  - **Assign.1** April 19 (week 3): 6 problems from Exercises 1-12 on pages 5-6
  - **Assign.2** April 26 (week 4): 6 problems from Exercises 1-12 on page 9-10
  - **Assign.3** May 3 (week 5): 5 problems from Exercises 1-10 on page 14
  - **Assign.4** May 10(week 6): 4 problems from Exercises 1-8 on pages 20-21
  - **Assign.5** May 17 (week 7): 4 problems from Exercises 1-8 on page 24
  - **Assign.6** May 24 (week 8): 5 problems from Exercises 1-9 on pages 30-31
  - **Assign.7** May 31 (week 9): 4 problems from Exercises 1-7 on page 34
  - **Assign.8** June 6 (week 10): 6 problems from Exercises 1-11 on pages 40-41

  4 units In addition to the above problems, you will have a term project which consists of reading (with my help) and reporting on a research paper (or part of another text, possibly Chapter 3 of Humphreys), according to the following deadlines (A grace period of a few days will apply to each deadline):
  - April 26 (week 4) Outline of your project
  - May 24 (week 8) Preliminary report on your progress
  - June 15 (end of week 11—finals week) Project due.

  - Another possibility for a project is to do a total of any 12 problems of your choice, which you haven't already done, from the Final Exam Problems from 199A and 199B. If you choose this option, three problems will be due on April 26 and on May 24, and six will be due on June 15.