In these short projects you will be asked to research a given topic in Physics and present your findings in the form of a poster. The projects are for all SF students in Physics (TR071), Nanoscience Physics and Chemistry of Advanced Materials, Theoretical Physics, and Chemistry with Molecular Modelling. They will begin on the first day of Michaelmas term, Monday 24th September, and continue for five weeks.

You are being allocated to a group of three or four students. Each group is being given a project topic in some area of Physics and the name of a member of the Physics staff acting as a mentor (see attached lists). The group should immediately contact the mentor to arrange meetings. You should arrange four or five meetings with your mentor, one in each of the first four weeks of the term, and one if needed in the fifth week. It is anticipated that each student will spend about 20 hours in all on project work.

The aims of the project include helping you to develop your skills in library and internet research, effective reading, time management, team work and presentation of results.

Each group will present an A0-sized poster on Friday afternoon 26th October from 2 until 4 p.m. in the SNIAM ground floor conference / lecture room. For display space reasons, portrait rather than landscape format should be used. At this poster session you should be prepared to answer questions and respond to comments on your work. An attendance register will be taken at the session.

You should use PowerPoint to prepare the poster (if you wish to use another application, ask me first). The poster should include

(a) the names of all group members and the name of your mentor
(b) the statement '© School of Physics, Trinity College Dublin'
(c) the heraldic arms of the College.

Email Una Dowling at dowlingu@tcd.ie for a A0 poster template containing (b) and (c). The School of Physics A0 poster printer may be used to produce the poster. For this you will need to see the School’s senior technical officer, Alan O’Meara (ALOMEARA@tcd.ie), not later than Friday 19th October in order to book a time. You will be given one free attempt at printing. Subsequent attempts will be charged for – so you should make a trial A4 print before printing the A0 poster. Gillian will also keep a copy of your poster on her computer.

The marking criteria for the posters will include the understanding shown of the topic, evidence of additional reading, poster content and poster presentation (use of language, proof-reading, legibility / readability / interest, appropriate use of illustrations, tables etc, correct referencing of sources).

The mentor will allocate the same mark for the poster to each student in a group. This will contribute 50% of the total mark for the project. The remaining 50% will be contributed by the mentor assessing each member of the group on the basis of attendance at meetings, ideas and suggestions offered, understanding of the area, ability to work as a member of a team, feedback from other team members, etc. Your mark will count towards your total in Physics for the year.

The School offers prizes for the best posters. Some of last year’s posters are currently on display in the JF and SF labs.

We hope that you enjoy the work, and we will value any general comments that you may have.

H. Z. Zhang, School of Physics, Trinity College Dublin. September 2012
Group Study Poster Project Mentors and Titles 2012-2013

TP: Theoretical Physics
NS: Natural Sciences
NPCAM: Physics and Chemistry of Advanced Materials

Professor Werner Blau
(whelau@tcd.ie)
A – Space Elevators – Where Physics meets Nanomaterials
Jakub Jadwiszczak, Maeve O'neill, Daniel Kelly (all NPCAM)

Professor John Donegan
(jdonegan@tcd.ie)
B – Communicating with single photons
Livingstone Opwonya, Niamh Coppinger, Jack Hodkinson (all NS)

Professor Plamen Stamenov
(stamenop@tcd.ie)
C – Energy Storage in 'Permanent' Magnets
Hannah Dunne, Niamh Byrne, Ashley Poole, Jack Lyons (all NS)

Professor Johnny Coleman
(colemaj@tcd.ie)
D – TBD
John Hughes, Evan Sheridan, Sebastian Harenbrock (all TP)

Professor Graham Cross
(graham.cross@tcd.ie)
E – Artificial muscle – a chemical engine
Michael Tierney, Fintan Hughes, Alice Gillen (all NS)

Professor James Lunney
(jlunney@tcd.ie)
F – Biophysics of a virus
Diarmuid Neville, Conor Cullen, Colin Fives, J B Boland (all NPCAM)

Professor Paul Eastham
(easthamp@tcd.ie)
G – New states of matter
Frank Chambers, Megan Guthrie, Mark Mcgrath, Thomas Power (all TP)

Professor Brian Espey
(espeyb@tcd.ie)
H – 40 Years Since The Last People Reached the Moon: What Have We Learned?
James Mcquade, Aoife Ryan, Samuel Green (all NS)

Professor Mauro Ferreira
(ferreirm@tcd.ie)
I – The Physics of musical instruments
Darragh Monnin, Kamil Salabun, Hugh O'sullivan, Michael Birt (all TP)

Professor Shane Bergin
(berginsd@tcd.ie)
J – A Dart of Physics
Philip Corkery, Niall Robertson, Ruairi Brett, Michael Happ (all TP)

Professor Peter Gallagher
(peter.gallagher@tcd.ie)
K – The Butterfly Effect
Dúalta O’Fionnagain, Daniel Bryan, John Carpenter (all NS)

Dr Graham Harper
(harperge@tcd.ie)
L – Squeezed light may help detect Gravitational Waves
James Runswick, Emily Cannon, Matthew Roche, Tadhg Garton (all NS)

Professor Martin Hegner
(martin.hegner@tcd.ie)
M – Electromagnetic Induction Switches in Daily Traffic
Muireann Montague, Stephen O'Brien, Conor Byrne (all NS)
Professor Vojislav Krstic  
(krsticv@tcd.ie)  
Anthony Bourached, Christopher Kervick, Cillian Dickson, Killian Tattan (all TP)

Professor Shane Bergin  
(berginsd@tcd.ie)  
Eoin Casey-Hann, Jeffrey McHugh, Jun Rong Li, Fintan O'Sullivan (all NPCAM)

Professor Eithne McCabe  
(eithme.mccabe@tcd.ie)  
Sean Higgins, Rhonda Flynn, Niall Redmond, Conor Deegan (all NS)

Professor John McGilp  
(jmcgilp@tcd.ie)  
Lara Belton, Adam Hagan, Stephen Fitzmaurice (all NS)

Professor Stefan Hutzler  
(Stefan.hutzler@tcd.ie)  
Liam Kelly, John Geary, Stephen Burke, Killian Walshe (all TP)

Professor Cormac McGuinness  
(Cormac.McGuinness@tcd.ie)  
Emmet Barry, Conor Larkin, Patrick Gallagher (all TP)

Professor Matthias Möbius  
(mobiusm@tcd.ie)  
Eamon Conway, Darragh Mcgrath, Eamonn O'shea, Manya Sahni (all TP)

Professor Charles Patterson  
(cptrgrson@tcd.ie)  
Oisin Benson, Stephen Deeney, Peter Mcgrady, Liam Hallinan (all TP)

Professor Valeria Nicolosi  
(nicolov@tcd.ie)  
Thomas Hannigan, Ryan Kirwan, Liam Wrigley (all NPCAM)

Professor Ignatius McGovern  
(imcgvrn@tcd.ie)  
Alin Tudor, David Mccormack, Michael Coonan (all NPCAM)

Professor Plamen Stamenov  
(stamenop@tcd.ie)  
Brian Flynn, Kevin Noel Mooney, James Fagan, Sean O'gorman (all TP)

Professor Werner Blau  
(wblau@tcd.ie)  
Jamie Coyle, Nathan Marx, Kyle Beggs (all TP)

Professor Hongzhou Zhang  
(hongzhou.zhang@tcd.ie)  
Rebecca Mason, Aoife Plunkett, Stephen White (all NS)