

SCHEDULE

MONDAY

- 09:30 - 10:00 Welcome Meeting
- MORNING STUDENT PRESENTATIONS
- 10:00 - 10:25 **Phattara Wangrungrun**
Semi-autonomous object tracking navigation for drones with cameras and simple elementary motions
Supervisor: Michael Weir
- 10:25 - 10:50 **Milena Dyle**
From UML behavioral diagrams to PROMELA and back
Supervisor: Dr Juliana Bowles
- 10:50 - 11:25 COFFEE BREAK
- 11:25 - 11:50 **Worakarn Isaratham**
Procedural Generation of Tactical RPG Battle Systems
Supervisor: Ian Miguel
- 11:50 - 12:15 **Junyi Zhang**
Automated Library System with Image Recognition for Local Primary Schools
Supervisor: Thomas Naughton
- 12:15 - 12:40 **Ahmed Abdelghany**
A Software Tool for Assessing the Humanitarian Preparedness of Regions in OpenStreetMap
Supervisor: Dr Peter Mooney
- 12:40 - 14:00 LUNCH
- AFTERNOON
- 14:00 - 14:30 **Juliana Bowles**, St Andrew's University
Making a difference: applications of formal methods in healthcare
- 14:30 - 15:30 **Inthraporn Aranyanak**, Burapha University
Computation and Neuroscience: synergies and inter-dependencies
- 15:30 - 16:00 COFFEE BREAK
- 16:00 - 16:30 **Didier Galmiche**, Universite de Lorraine
An Epistemic Separation Logic
- 16:30 - 17:00 **Brian Smyth, SQS**

SCHEDULE

TUESDAY

MORNING

STUDENT PRESENTATIONS

09:00 - 9:25

Suhyun Cha

Project title: From Clinical Pathways to Event Structures for Formal Verification

Supervisor: Dr Juliana Bowles

09:25 - 9:50

Sebastian Duque

Project title: Verification of programs written in Elixir

Supervisor: Dr Juliana Bowles

9:50 - 10:15

Devrim Gunyel

Project title: Identifying Signs of Diabetic Retinopathy Using Deep Learning

Supervisor: Prof Barak Pearlmutter

10:15 - 10:45

COFFEE BREAK

10:45 - 11:10

Rohit Sharma

Project title: Learning to Forgetting: Incorporating Biology Inspired Forgetting Mechanisms into Machine Learning Algorithms

Supervisor: Dr. Ognjen Arandjelović

11:10 - 11:35

Leonardo Pais Cardoso

Project title: An intelligent Air Quality Data Alert Monitoring Tool

Supervisor: Dr Peter Mooney

11:35 - 12:00

Hager Ali

Project title: Near Analogy and Text Similarity with Dr Inventor

Supervisors: Dr Y Abgaz, Dr D O'Donoghue & Dr D Hurley

12:00 - 12:45

LUNCH

AFTERNOON

12:45 - 17:00

Field Trip to SAP

SCHEDULE

WEDNESDAY

MORNING STUDENT PRESENTATIONS

09:30 - 09:55

Mahmoud Abulebdeh

Project title: Software system to gather, fuse and integrate geo-referenced data from different Social Media Newtorks

Supervisor: Dr Peter Mooney

09:55 - 10:20

Anders Candasamy

Project title: Model-based development of a Hemodialysis Machine

Supervisor: Prof Dominique Méry

10:20 - 10:45

Andrea Balogh

Project title: Computational analysis of games that require computational thinking

Supervisor: Dr Tom Naughton

10:45 - 11:15

COFFEE BREAK

11:15 - 11:40

Keylor Chaves

Project title: NavWell: Experimental software for studying spatial navigation abilities in healthy people and patients.

Supervisor: Joe Duffin

11:40 - 12:05

Fady Zaki

Project title: Specifying Software Architectures in Java

Supervisor: Dr Dharini Balasubramaniam

12:05 - 12:30

Weichung Shaw

Project title: Formal Verification of Raft

Supervisor: Stephan Merz

12:30 - 14:00

LUNCH

SCHEDULE

AFTERNOON GUEST SPEAKERS

14:00 - 15:00 **Prof Ait Ameur**

Ontologies as formal models to make explicit domain knowledge. Application to model annotation.

15:00 - 15:15 COFFEE BREAK

15:15 - 16:45 **Dr Stephen Brown**, Maynooth University
Java Instrumentation

THURSDAY

MORNING

STUDENT PRESENTATIONS

09:00 - 9:25

Juan Karsten

Project title: Accurate and Automatic Localization of Human vertebrae from X-ray Computed Tomography Scans.

Supervisor: Dr Ognjen Arandjelović

09:25 - 09:50

Dmitry Smorodinnikow

Project title: Evaluation of “Subject-Verb-Object” Inferences in Blended Spaces

Supervisors: Dr Y Abgaz, Dr D O’Donoghue & Dr D Hurley

09:50 - 10:15

Akulina Lyapunova

Project title: A Plugin for refactoring Event-B Models

Supervisor: Dr James Power

10:15 - 10:40

Guillermo Reyes Guzman

Project title: A system for camera tracking in indoor environments

Supervisor: Dr John McDonald

10:40 - 11:00

COFFEE BREAK

11:00 - 11:25

Rodrigo Rodrigues de Carvalho

Project title: Visualizing and Analyzing Software Artefacts and their Relationships.

Supervisor: Dr Dharini Balasubramaniam

11:25 - 11:55

Gokberk Kocak

Project title: Decade Analysis of an Audio Database using Deep Learning Techniques

Supervisor: Dr Joe Timoney

12:00 - 12:45

LUNCH

AFTERNOON

Cultural Trip to Glendalough and social evening at Leopardstown racecourse

FRIDAY

MORNING

09:30 - 11:00 **Summer School Questionnaire Completion**
Exit Interviews for 2nd Year Students.
Poster Set up

11:00 - 11:30 COFFEE BREAK

INDUSTRY SPEAKERS

11:30 - 12:00 **Dave Cleary**, Huawei Research

12:00 - 12:30 **SAP**

PAST PUPIL

12:30 - 13:00 **Juan Jose Mendoza**

On the verification of UML models using NLP

AFTERNOON

13:00 - 14:00 Poster Session and Lunch

14:00 - 14:30 Prize Giving/Speeches

15:00 - 16:00 Russell Library Tour, NUIM