Verification of Safe and Secure Systems using Formal Specification Virtual Kick-Off

Maireád Meagher
email: mmeagher@wit.ie

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Waterford Institute *of* Technology
INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

OSTBAYERISCHE
TECHNISCHE HOCHSCHULE
REGENSBURG

- Good Evening
- Guten Abend zusammen
- Dia is Muire dhaoibh

Introduction to Module

- Why do we need Safe and Secure Systems?
- Lifecycle of the 'formal' approach
- Formal Specification - how we describe these systems

Ethos of Module

We will

- Look at theory and apply it to 'real-life' systems
- Apply mathematical models to specifications in a formal way
- Learn by doing - we look at theory, understand the theory, apply it

How the module will be assessed

This module will be assessed in two ways:

- 70% for a specification of a system / sub-system using the Z notation (Z-Spec)
  - Idea of system
  - Refined idea of system
  - Work on system in workshops towards the end of module
  - Remote support before June and mini-workshop at beginning of June (on-site)
- 30% is for an in-class written test (beginning of June)

Time Frame of module

- March 20 - Virtual kick-off
- Saturday, 8th April $\rightarrow$ Friday 21st April - class
- Saturday 22nd April $\rightarrow$ June - Remote support
- Week of June 5th,(dates to be confirmed) Class test
- Friday 30th June - Final hand up of Z-Spec.

Why should you take this module?

- If you are interested in why it has become more important that software is safe and secure
- If you want to see how the care needed to develop these critical systems will be applied, especially to the specification process
- If you are interested in data modelling and distilling a simple, elegant data model from a 'busier' model.
- If you are interested in applying mathematics to real-life scenarios.

Any questions?

Irgendwelche Fragen?

Aon céisteanna?

Thank You.

Vielen Dank für's Zuhören.

Auf Wiedersehen

Go raibh míle maith agaibh.