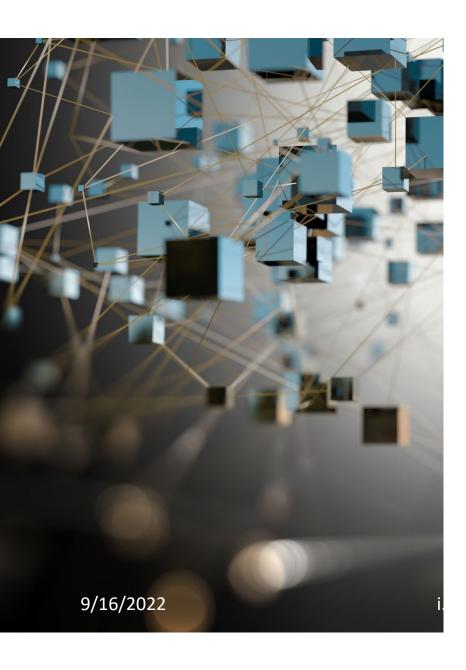
MDSE - Specialization



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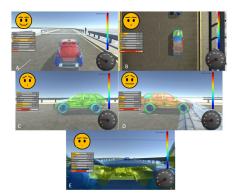
- We focus in particular on design and analysis methods of software systems:
  - · Algorithms and Visualization
  - Information Systems
  - Model Driven Software Engineering
    - Digital Twins Technology
  - Security and Embedded Networked Systems

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- Model Driven System Engineering
  - Automotive
  - Automotive Standards
- Functional Safety
- AUTOSAR
- Digital Twin
  - HIL, SIL, MIL
- CarE-Model
  - A vehicle framework based on emotion and awareness
  - Vehicle Personality
  - Integration in the Smart Cities



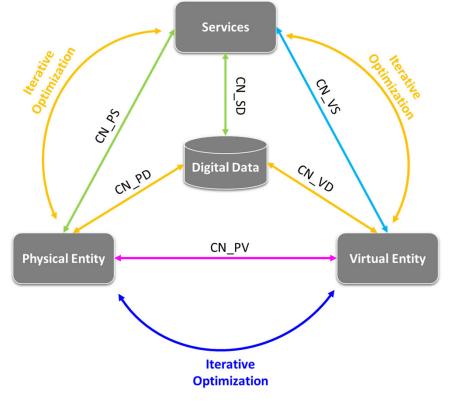






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i.barosan@tue.nl - SET



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#### You get an "All Inclusive package"

#### **Holistic Approach**

## **Model Driven Systems Engineering**

- 1. Understanding the big picture
- 2. Structured approach to system development
- 3. Design Patterns
- 4. Tools CASE
- 5. Methodologies



#### **Content**

- 1. Relevant and Applied Curriculum
- 2. Climate for Creativity and Innovation
- 3. Develop New Skills
  - Collaboration, Heuristic Problem Solving



#### **Pedagogy**

- 1. Be Responsible
- 2. Establish great goals for your career/life
- 3. Be Tolerant
- 4. Be Courageous
- 5. Be Joyful
- 6. Be Ambitious (Will Power)
- 7. Learn to Smile



echnische Universite
Eindhoven
University of Technolo

## Uhj kwhu

- Fill in the form for MDSE Graduation
- Select the courses for Graduation

Automated reasoning

Algorithms for model checking

Hardware verification

Capita Selecta FSA

Architecture of Distributed Systems

Internet of things

Real-Time Systems

System Design Engineering

Seminar software engineering and technology

Software specification and architecture

Capita Selecta software engineering and technology

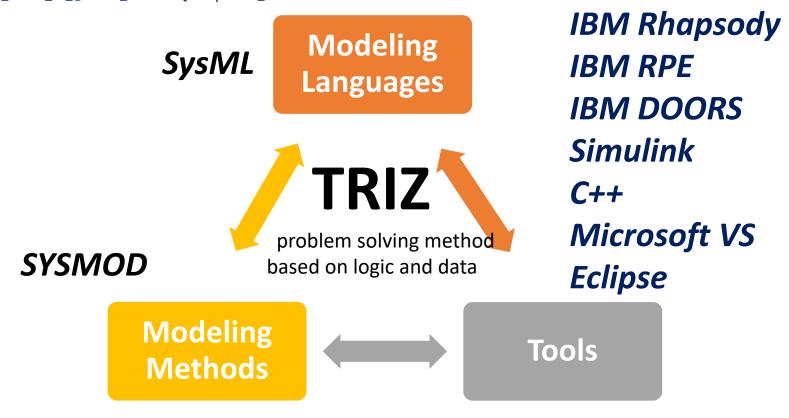
**Programming** 



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#### Project Management - Scrum

#### **Document Generation / View Generation**

Verification and Validation – Raspberry PI 3 & AES Truck Lab

Creativity and Problem Solving tools – TRIZ, System Design Patterns

Model Driven Methodology – SYSMOD, IBM Rhapsody

Simulation and Analysis – SysML, IBM Rhapsody, Simulink, Unity Game Engine

System Modeling – SysML – IBM Rhapsody

Requirements Management – IBM Rhapsody

Mechanical
Modeling

4AT000 Vehicle
Dynamics

Electrical Modeling

4AT010 Powertrains Software Modeling

2IN70 Real-time Software System Engineering Human Factors
Modeling

0HM310 Automotive Human Factors







MDSE - Specialization Meeting

Date: 19.09.2002

Time: 15:00

Location: MF6.131

Contact: i.barosan@tue.nl