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FACULDADE DE CIÊNCIAS E TECNOLOGIA
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Modelling and Verification of Consistency of Building Automation Systems Specifications against Low-Carbon Energy-Aware and End-Users Requirements

CENTER FOR INFORMATICS AND INFORMATION TECHNOLOGIES

Dr. Edward Mauricio Alférez-Salinas

- Postdoctoral Fellowship. FCT- MCTES, Portugal. March 2013.
- Ph.D in Computer Science. UNL, Portugal. December, 2012.

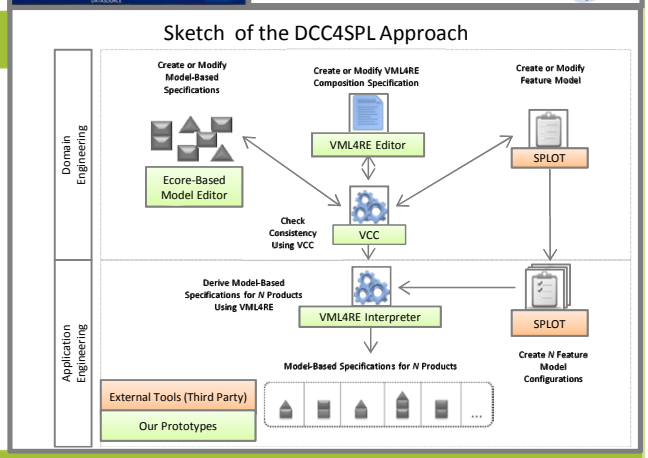
Research Interests

- Low-Carbon Energy-Aware Systems
- Software Verification
- Model-Driven Software Development
- Requirements Engineering
- Software Product Lines
- Domain-Specific Languages Engineering
- Aspect-Oriented Software Development
- Applied Formal Methods

Previous Contributions

Derivation and Consistency Checking of Models in Early Software Product Line Engineering (DCC4SPL)

- Product-specific models derivation using the Variability Modelling Language for Requirements (VML4RE).
  - ✓ Vocabulary familiarity, Derivation Flexibility, Modularity.
- Consistency checking between variability model and other models using Variability Consistency Checker (VCC).
  - ✓ Genericity, Scalability, Multi-Views Awareness.
- Derivation and Consistency Checking for Software Product Lines (DCC4SPL) tool support.
  - ✓ Extensible, Model-Driven, Open source.



Current Research

- Title: Modelling and Verification of Consistency of Building Automation Systems (BAS) Specifications against Low-Carbon Energy-Aware and End-Users Requirements.
- Goal: improve BAS quality (i.e., less number of inconsistent requirements and specifications) and end-user acceptance.
- Main Approaches and Techniques:
  - ✓ Domain Specific Languages Engineering
  - ✓ Model-Driven Development.
  - ✓ Software Verification (Applied Formal Methods).

Advisors:

Dr. Ana Moreira and
Dr. Vasco de Amaral

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