A Model-driven development framework for highly Parallel and EneRgy-Efficient computation supporting multi-criteria optimisation

Fully exploit the benefits of performance-demanding emerging technologies such as artificial intelligence or big data analytics.

Provide a system design ecosystem optimised for Cyber-Physical Systems.

Provide a computer software ecosystem capable of efficiently exploiting advanced energy-efficient and parallel heterogeneous platforms.

Integrate AMPERE software solutions into two relevant industrial markets, i.e., automotive and railway

From Lab to Market: Use-cases

BOSCH
Invented for life

THALES

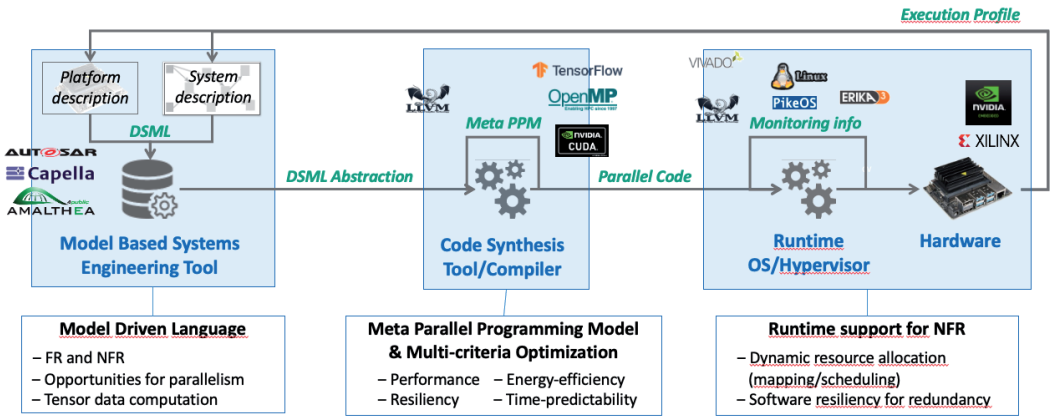
Predictive Cruise Control

- **Extends Adaptive Cruise Control** with data from the electronic horizon to improve fuel efficiency
- Showcases the increased composition and integration capabilities of the AMPERE framework

Obstacle Detection an Avoidance System (ODAS)

- **ADAS functionalities** (i.e. obstacle detection and collision avoidance) based on data fusion coming from tram vehicle sensors and AI analytics

Project overview



Developing a new generation of software programming environments for low-energy and highly parallel and heterogeneous computing architectures that are capable of implementing correct-by-construction advanced Cyber Physical Systems (CPS).

AMPERE helps system developers to leverage low-energy and highly-parallel and heterogeneous computation in their development process, while fulfilling the non-functional requirements inherited from the cyber-physical interaction.

PARTNERS

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ETH zürich
Sant'Anna – School of Advanced Studies – Pisa
EVIDENCE
BOSCH – Invented for life
THALES – Building a future we can all trust
SYSGO – EMBEDDING INNOVATIONS

Scan here for more information on the project and to see the technology in action

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