ECRTS 2024 - Industrial Challenge

Lille, 2024-07-11

Co-Chairs:

- Andrea Bastoni (TUM)
- Paolo Burgio (Unimore)

https://www.ecrts.org/industrial-challenge/

https://www.ecrts.org/wp-content/uploads/2023/08/sources.txt

Industrial Challenge

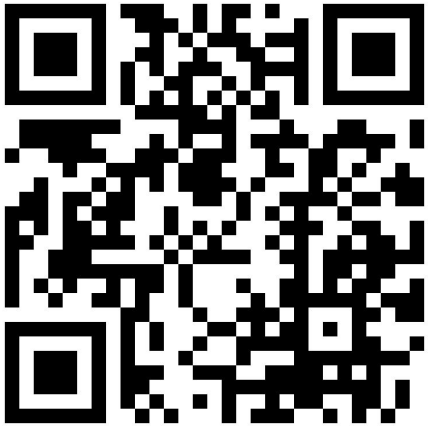
- Improve collaborations between Academia and Industry
- Relevant real-time, challenging problems for the Industry
- Share ideas, experiences, use-cases, solutions

- Previously satellite events of WATERS Workshop
- Now integrated within ECRTS Conference
- Same objectives!

Collaboration and Information Platforms

- Website: https://www.ecrts.org/industrial-challenge/
- Mailing List: https://groups.google.com/g/ecrts-industrial-challenge
  - Q&A
  - Availability of previous replies and suggestions
- GitHub: https://github.com/ecrtsorg
  - Additional information, code, solutions, etc.

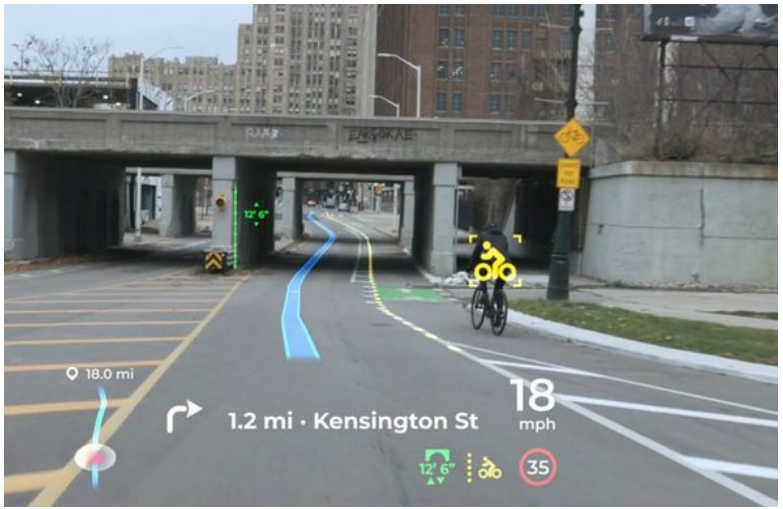
- Contribute solutions:
  - Full solutions possibly focusing only on selected aspects of the challenge
  - Early stage proposals that present preliminary results
- When:
  - At any time during the year!



Current Challenge

Current Challenge

- Arm: Augmented Reality Heads-Up-Display
- Presented during ECRTS 22



For more information:
https://www.ecrts.org/industrial-challenge-current-challenge/

Preview 2025: Two Challenges

1) Arm Challenge
   - Current Challenge (2022 - 2024)
   - Andreozzi et al. “Industrial Challenge 2022: A High-Performance Real-Time Case Study on Arm”. ECRTS 2022
   - Information and solutions are available on the github page

2) ONERA/DTIS + Thales R&T Challenge
   - Challenge will be presented today: Marc Boyer, Rafik Henia. “Industrial challenge: Embedded reconfiguration of TSN.”
   - Paper available (https://hal.science/hal-04630862) and linked from github and ECRTS IC website
   - Will be added to the ECRTS proceedings in ECRTS 2025

Both challenges awaits your contributions throughout the year!

Today Session

- Arm: A High-Performance Real-Time Case Study on Arm
  - Speaker: Adrian Herrera
  - Status and update on simulator and contribution availability: “Introduction to MPAM cache partitioning in the virtual platform”

- Industrial Challenge Early Stage Solution:
  - Speaker: Marion Sudvarg
  - Marion Sudvarg, Ao Li, Chris Gill and Ning Zhang, “Elastic Scheduling for ARM AR HUD”

- ONERA/Thales: Embedded reconfiguration of TSN
  - Speakers: Marc Boyer, Rafil Henia
  - Overview of the challenge

Questions?