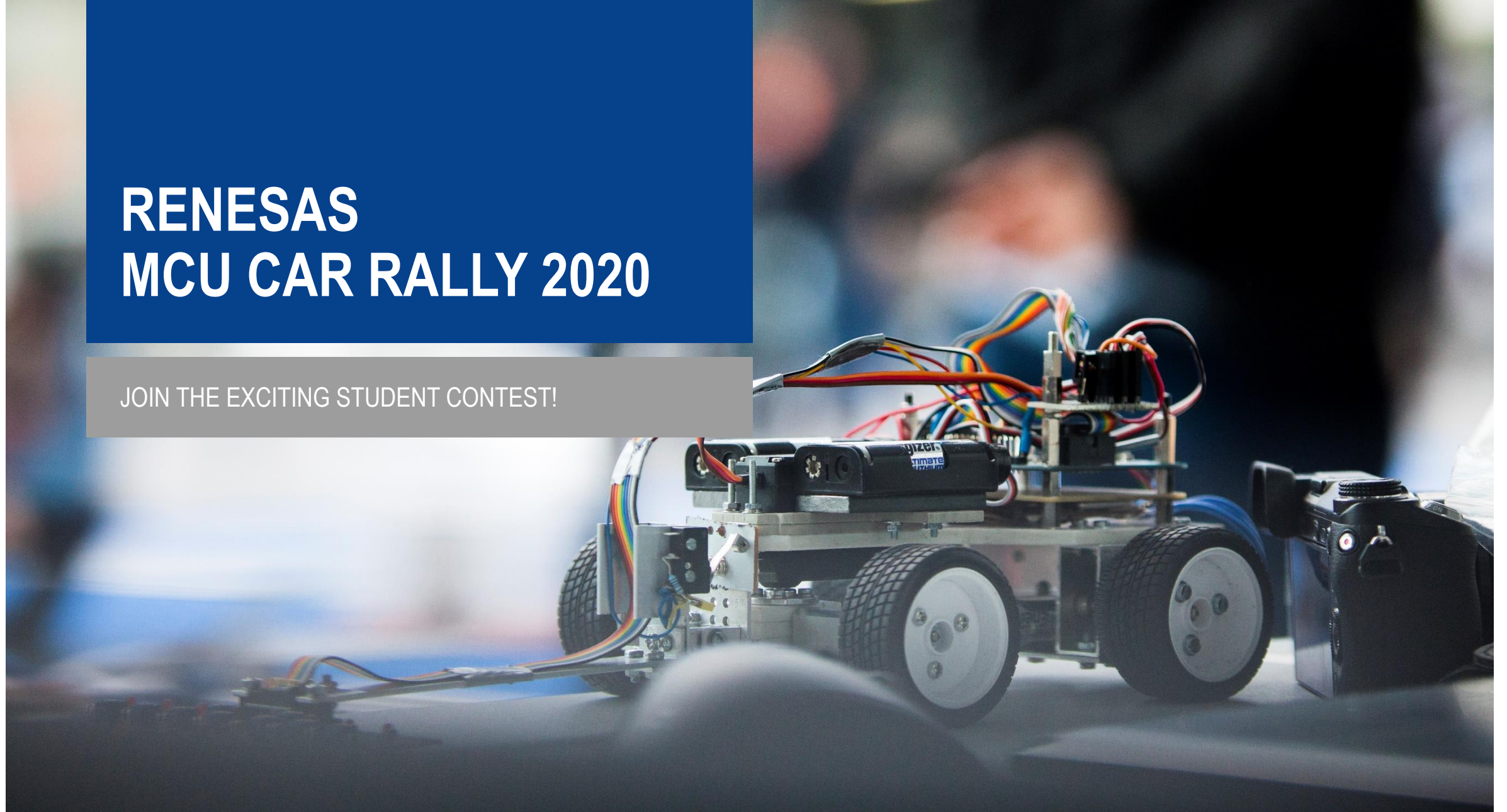


# RENESAS MCU CAR RALLY 2020

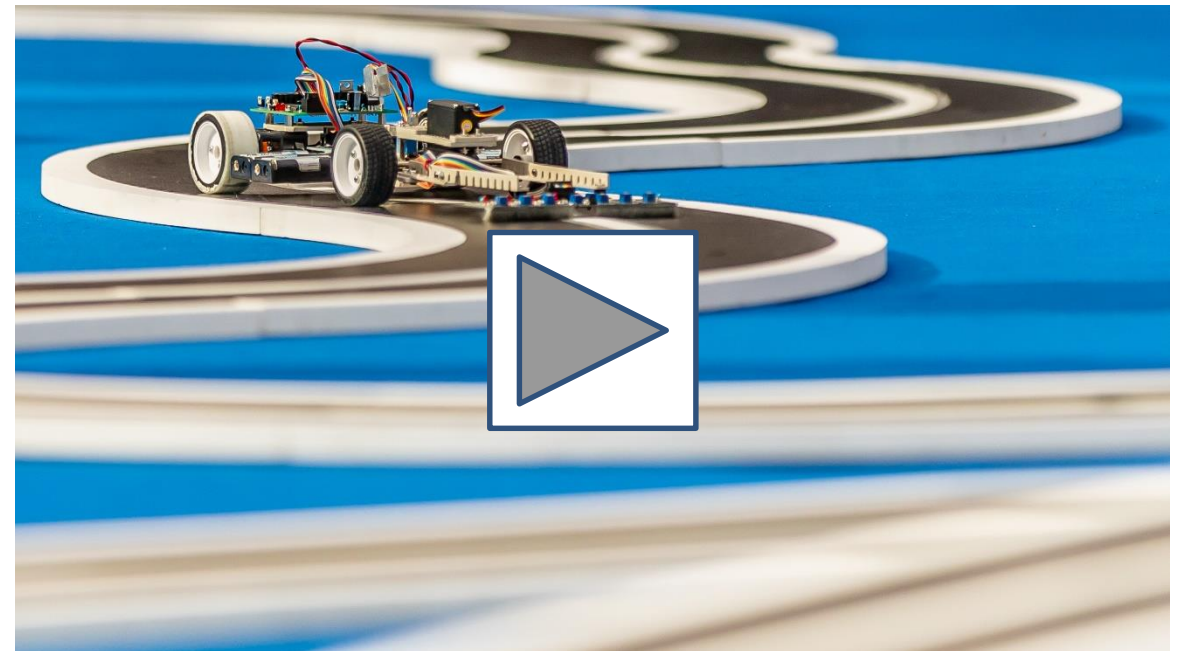
JOIN THE EXCITING STUDENT CONTEST!



# JOIN THE 6TH RENESAS MCU CAR RALLY @ EMBEDDED WORLD IN NUREMBERG ON 26TH AND 27TH FEBRUARY 2020

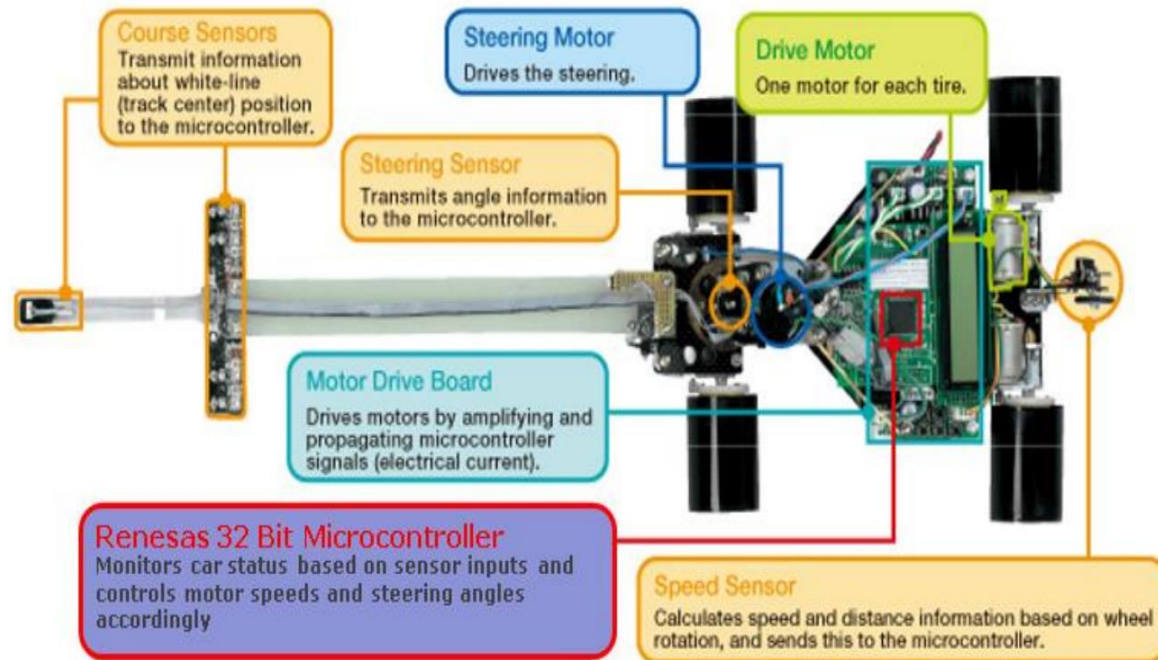
|            |   |
|------------|---|
| THE TASK   | <ul style="list-style-type: none"><li>• Build a self-guided model car.</li><li>• Optimize the HW and SW algorithms that auto drive the car along the track.</li><li>• Follow the given rule set.</li></ul>  |
| THE CAR    | <ul style="list-style-type: none"><li>• A basic car kit with all components will be supplied by Renesas.</li><li>• Sensors in front of the car are able to detect a white or grey line on the track.</li><li>• Renesas 32-bit RX MCU controls the motor and guides the car.</li></ul> |
| THE WINNER | <ul style="list-style-type: none"><li>• Is the team that builds the fastest and most stable car measured in 3 laps in the heats and 5 laps in the finals.</li></ul>   |
| THE PRIZES | <ul style="list-style-type: none"><li>• Attractive prizes will be awarded to the top 3 teams.</li></ul>   |

Watch the video from 2019:





# CAR KIT AND CAR LAYOUT



As starting point every participating team will be provided with a free-of-charge MCU Car Kit including all components for a functioning car

Teams can add additional HW/SW in line with MCU Car Rally rules and at own cost

Replacement parts and technical support will be provided by Renesas partner  
AND Technology Research

[www.mcurally.com](http://www.mcurally.com)

[info@mcurally.com](mailto:info@mcurally.com)

# BENEFITS FOR STUDENTS

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- Students will be able to gain in-depth knowledge and develop skills in
  - 32-Bit microcontroller hardware and software development
  - Electronic and mechanical hardware design optimization
  - Real-time control theory & related software algorithms
  - Self-guiding sensor systems (track monitoring, motor feedback...)
  - Motor control theory & systems
  - Project management and teamwork
- Can get credit points awarded by educators for their semester project work.

... and meet other students from all over Europe + have fun at an exciting event!



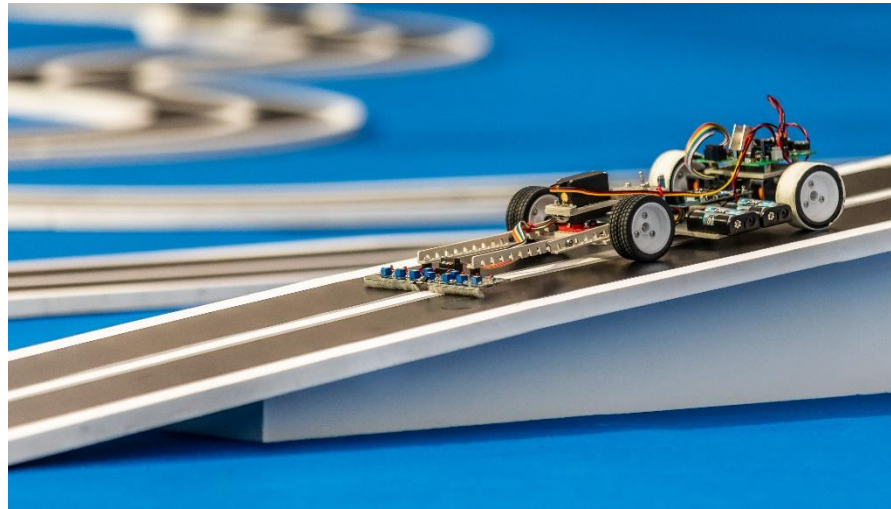
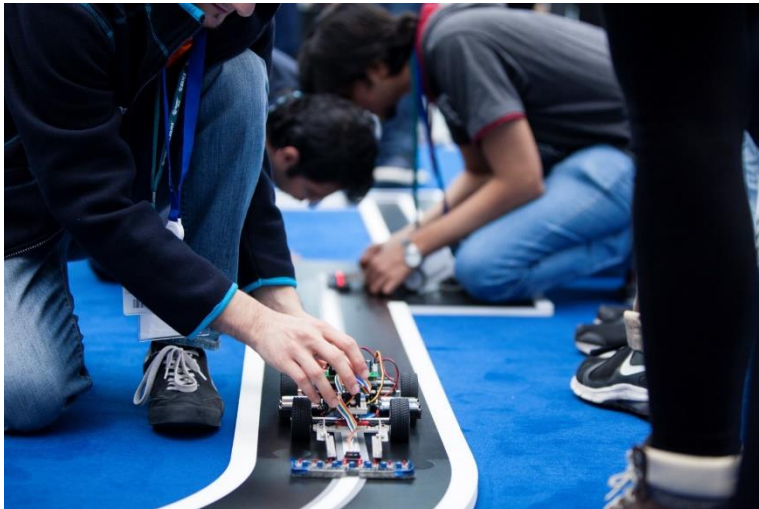
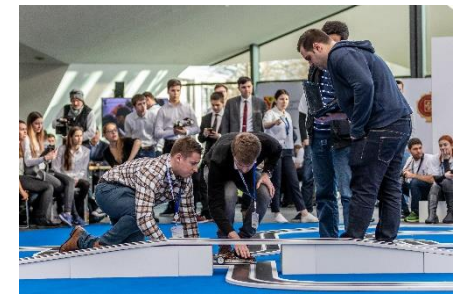
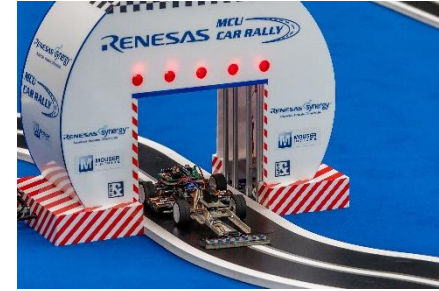
# CONDITIONS FOR JOINING THE COMPETITION

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- Up to two teams per university can participate.
- Each team must comprise a minimum number of 2 and a maximum number of 4 students
- One professor or tutor per university is required to support the team(s).
- The professor or tutor registers on behalf of the students, supports them along the way and is the main point of contact for Renesas.
- Applications must be submitted via the online registration form by 31st July 2019. The total number of teams that can enter the contest is limited – participations will be confirmed after registration has closed.
- Renesas will provide one complete car kit per team.
- Renesas will cover the cost of accommodation in a hostel in Nuremberg. The number of nights will be informed closer to the event.
- Renesas will provide some of the meals during the event.
- All other costs – especially travel costs – have to be covered by the teams.







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[Renesas.com](https://www.renesas.com)