



Infoguide

Volume one



— 2022 —

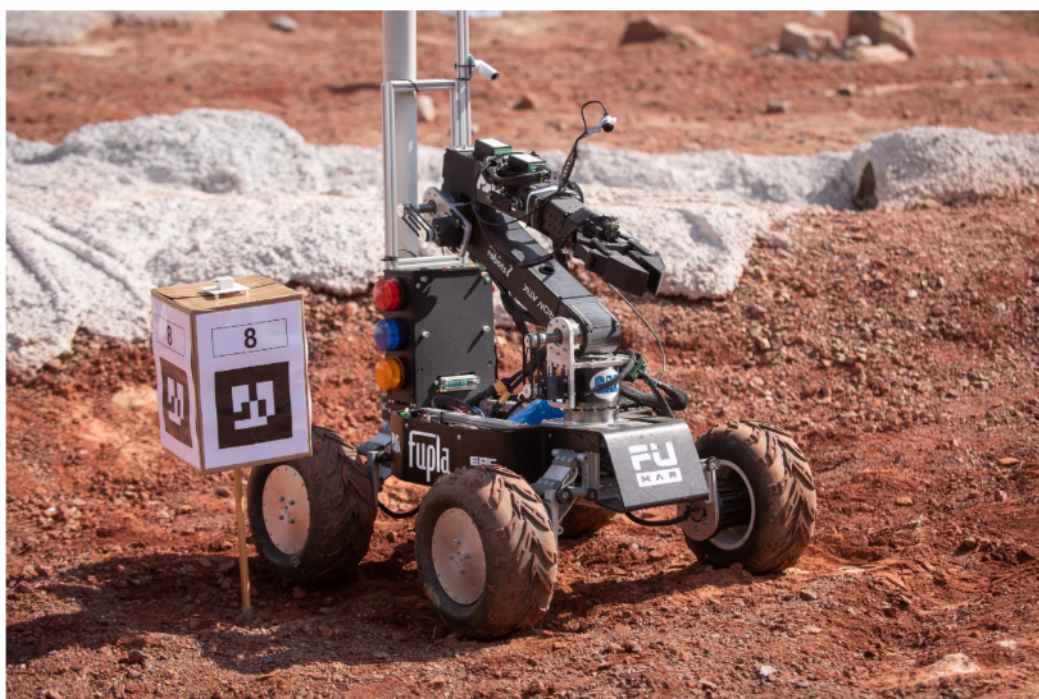
European Rover Challenge

IX Edition

9–11th of September 2022

Kielce University of Technology [University Campus]
Kielce, Poland

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ABOUT THE ERC

The European Rover Challenge is an international space & robotics event combining competition of Mars rovers with scientific and technological shows.

Guided by the slogan “we inspire a new generation”, we have been bringing the cosmos closer to the general public and making people aware of the growing role of modern technologies in our lives since 2014. The ERC is also a meeting place for representatives of the European world of science and business interested in the use of space and robotic technologies.

Among the special guests of previous ERC editions, you could meet, among others Steve Jurczyk – former Associate Administrator of NASA, Robert Cabana – NASA Associate Administrator, Robert Zubrin – founder of The Mars Society, Harrison Schmitt – NASA astronaut and member of the legendary Apollo 17 mission, or Tim Peake – an astronaut of the European Space Agency, who ran the London Marathon during his stay on the International Space Station.

The main part of the project is an international robotics competition, where academic teams from around the world present their mobile robot designs, competing in competitions based on real ESA and NASA missions. The competition takes place on the world’s largest artificial Martian track, that is directly derived from the surface of the Red Planet. Since 2021, the competition is held in both formulas: ON-SITE (teams compete with self-constructed robots on MarsYard in Poland) and REMOTE (competitors from several continents will remotely control the robot, physically moving along a track located in Poland, on the campus of the Kielce University of Technology).



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A FEW WORDS FROM LUKASZ WILCZYNSKI – MISSION DIRECTOR

Dear ERC Friends and Community!

I hope that you are well and like us, you can't wait for ERC 2022.

The last edition was a big success for everyone involved - organizers, partners, guests, and of course - both OnSite and Remote teams. I think this was the best edition to date which was confirmed by feedback we received after the event. Although the opinions we received were mostly positive, there were still some things pointed out as examples of what we can do better. The "challenge" is not only for competitors - but we also treat the organization as a challenge and considering what I stated above this year will be an even bigger task for us to prepare for an even better event. It should not be a surprise - the term 'challenge' is engraved in the nature of competition and its name.

We're already busy making our ideas a reality and as always, we want to be on par with what's happening in the space industry. Although I'm not going to share everything here, I already have a first surprise - as the industry is focusing on going back to the moon, we decided to design a part of Marsyard as... yes, Moonyard! This is only an appearance change, so it won't affect the rules or tasks. I hope you're excited about this as we are!

That's all for today. Good luck with your qualification and I hope we will meet in Kielce!

Lukasz Wilczynski, Mission Director



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REGISTRATION FOR EUROPEAN ROVER CHALLENGE

On-site

You can find ERC On-Site Rulebook and templates for you to use here:

[Link](#)

Registration schedule:

Event	Date (2022)
Rules publication	5 th February
Registration start	5 th February 00:00 CET
Registration end	15 th March 23:59 CET
Update of the Rules (e.g. Scoring) / Update Report #1	2nd April
Preliminary Report Delivery	30 th May
Qualification	20th June

Schedule for a whole year in a rulebook.

Remote

You can find ERC Remote rulebook including information how to register here:

[Link](#)

This folder will contain all the files needed in the future and you can access it anytime if you'll lose something. If needed you can access this repo through our website:

[Link](#)

Registration deadline:

Milestone	Date (2022)
Rules publication	2 nd February
Registration start	3 rd February 00:00 CET
Registration end	13 th March 23:59 CET
Delivery of an official list of registered teams	15 th March 23:59 CET

Schedule for a whole year in a rulebook.

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MEET THE JURY!

Marcin Wgachiewicz – Head of the Jury Board

- Project Manager at SENER Poland
- President of the Board of the Polish Space Professionals Association
- Master's Degree in Automaton and Robotics (AGH University of Science and Technology) as well as in Digital Signal and Image Processing (Cranfield University)



I have been working at SENER Poland since 2015. Previously, I worked as a Design Engineer for one of the leading manufacturers of turbine components for the Oil & Gas and aviation industry. Then I worked as YGT in the Mechanism Section of the European Space Agency in ESTEC, Netherlands.

At SENER Poland, I am responsible, among others, for development of deployment mechanisms and hold-down and release mechanism (ATHENA, PROBA-3, SAOCOM) and the clamping mechanism (e.Deorbit).

This is the fifth edition of the European Rover Challenge during which I am involved in judging the competition as well as evaluating presentations and documentations provided by teams.

Szymon Dzwonczyk – Head of the Remote ERC

I'm a cofounder of Leo Rover, a mobile robot used by the teams in the Remote edition. I came a full circle from being a coordinator of Project Scorpio team (Wrocław University of Technology) who won the first ERC and didn't win twice in URC, then being a judge and commenter in two ERCs, running a company in mobile robotics and ended up coming back as a partner and coorganizer of the competition. I've been on both sides of the Challenge and can honestly say: It's great to be back!



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10 TIPS FOR A BETTER START IN THE ERC!

So, your team decided to join the challenge. That's great! We're always happy to see the community grow, and we can't wait to meet you.

As much as we'd like to, we cannot fit all teams that apply each year into the competition schedule. That's why the first step is qualification. We understand that you may feel intimidated by so many more experienced teams, but have no fear! We prepared this guide with tips to help you make a perfect entry!

Please read full article at our website here:

[A foolproof way to secure more points in qualification, check if you use them all!](#)

RESOURCES

Through the years we recorded a few of our workshops which were prepared for the teams. Feel free to watch them as they may contain lots of valuable knowledge!

- Management of Space Projects (M. Szwajewski, Astronika/PSPA)
- Space Environment's Impact on Design of Electromechanical Components (M. Wygachiewicz, SENER/PSPA; Tadeusz Kocman, SYDERAL/PSPA)

[Link to YT here](#)

- Best Practices in Technical Projects based on the previous editions of ERC (K. Grassmann, Minebest; M. Wygachiewicz, SENER/PSPA)
- Best Practices in RF based on the previous editions of ERC (G. Gajoch, KP LABS/AGH; Mateusz Zapart, AGH)

[Link to YT here](#)

- Science Workshops by Anna Łosiak and the Science Team:
- Introduction to Mars Science and exploration
- Explanation how planetary geologic maps are made
- Introduction to the scientific method

[Link to YT here](#)



ERC INSPIRATION BOOK

Grasp the essence of the European Rover Challenge with the first edition of the Inspiration Book ever published. This free publication includes many inspiring articles written by people associated with the ERC, among others:

- Dr. Anna Losiak (Polish Academy of Sciences),
- Dr. Gernot Groemer (Austrian Space Forum),
- M.A. Artemis Westenberg (Explore Mars Europe),
- Lukasz Wilczynski (European Space Foundation),
- Dr. Krzysztof Walas (Poznan University of Technology).

It also gathers some of the best video presentations given by the ERC'21 guests and speakers, and gives a bit of insight on the competition from the ERC'21 contestants. You may experience the ERC on your own, once again!

[Link](#)



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ERC LOGO & VISUAL ASSETS

You may find some of our assets useful for your team's promotional activities.

[LINK](#)

COMMUNICATION CHANNELS

Be sure to check all other ways you can interact with us:

a) For questions regarding specific rules or any doubts about them, please use Mattermost, where you can ask questions directly to the jury. You can also share your experiences with other teams. Remember to use open channels (unless you want to ask about something specific to your design which you prefer to keep secret – then don't hesitate to write to the jury directly or to Konrad Lippert (team coordinator), who will guide you).

[Link](#)

Use this link to register to Mattermost and then join all channels you're interested in. If this link is not working, try it in Google Chrome or manually copy and paste it to your browser. In our experience, it solves most of the problems.

b) Check our Facebook group: "[European Rover Challenge – Community](#)". We're trying to post some cool stuff less officially there. Also, you'll find reminders about deadlines and other helpful information about the competition. You're also more than welcome to share something yourself, but please remember to use English.

c) For any other queries, always contact the team coordinator at teams@roverchallenge.eu. If you have any doubts, this is where you should seek help.

Let us repeat one more thing: although we will post reminders via several communication channels (including the official ERC Facebook page), **official news from us will always come by email.**



CONSENT TO THE PROCESSING OF PERSONAL DATA – Why do we need you to sign the documents?

Because you asked a lot of questions about GDPR documents and why you need to sign them, here you will find the “post-factum” explanation.

After 25 May 2018, when the European Union regulation started to be adopted in the national laws in EU countries, in order to process personal data (such as name, surname, contact details, university affiliation, etc.) each subject needs to have the consent. Thus, to be able to save your proposals and further documentation and keep your contact details (to inform you about the following stages of the competition) we needed to collect the consents to the processing of personal data from all of you (everyone mentioned in the documentation). IT IS OBLIGATORY.

Do not worry: we are not sharing your personal data with others (even the event partners). We need the consents to be able to work with all the documentation you have sent us. You can find more information about GDPR regulation here:

[LINK](#)

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