



Team Rovernauts #254

Nasa Roverchallenge 2025

Huntsville program & NASA-fieldtrip to Washington DC and Cape Canaveral
by Jesco von Puttkamer School Leipzig as part of
International Space Education Institute (registered non-profit non-gov association)
Wurzner Str. 4, 04315 Leipzig/Germany



#Rovernauts (Insta, FB)
International.Space.Education.Institute (FB)
www.spaceeducation.de

'Rovernauts

US-program 2025

- 05.04.2025 arrival in Huntsville Alabama, UA 5538, 19:46 h
- 06.04.2025 roundtrip in Huntsville, start workshop and assembly
- 07.04.2025 assembly rover day 1
- 08.04.2025 assembly rover day 2, finish
- 09.04.2025 finetuning Rover, visit at **University Huntsville, Puttkamer House, Maple Hill Cemetery of german rocket scientists** (Apollo time),
Cosma Birthday party at Buffet 88
- 10.04.2025 transport to Space Center, registration of team, pit box assembly, safety
- 11.04.2025 **Raceday 1 with inspection** and jury interviews
- 12.04.2025 **Raceday 2 with Award Ceremony**, dinner after race
- 13.04.2025 recovery, freetime until 1pm, clear the hotel, luggages, start late night

- 14.04.2025 travel to Washington DC, by car, 18 hours, 15:00h **Udvar Hazy Museum**
- 15.04.2025 **city tour Washington DC with Moonbuggy, NASA-HQ, National Air & Space Museum, Lincoln Memorial,**
- 16.04.2025 **12:00 McKinley Highschool, meeting there friends of JvPuttkamer**
Dr Alotta Taylor, William Gerstenmaier
Astronaut Roger Crouch, Astronaut Bill Readdy

- 17.04.2025 travel to south by car, destination **Embry Riddle University** Daytona
- 18.04.2025 freetime in Cocoa Beach, **birthday of Ralf on Pier or Rusty´s Seafood**
- 19.04.2015 **KSC-VC-Tour with Astronaut Memorial Foundation** and Moonbuggy
- 20.04.2025 freetime, visit friends (**Felix Schlang, WAI**), Moonbuggy at Atlantic Ave
- 21.04.2025 **visit launch Falcon 9 Block 5 | CRS SpX-32**, cargomission to ISS, LC-39A,
4:00 AM ET (10:00 AM GMT +2), then travel to Huntsville by car
- 22.04.2025 disassemble rover, pack luggages, clean workshop, prepare travel
- 23.04.2025 travel home, UA 5409 14:35h

- 25.04.2025 arrival in Leipzig/Germany, UA 9115 18:00h
Easter Break, homework
- 05.05.2025 (NET 1st of May) Press-conference

20 Years of the International Space Education Institute

18 Years of International Teams at NASA

Rovernauts from Leipzig compete in the NASA Rover Challenge for the Final Time

April 2nd, 2025 Leipzig/Huntsville, Alabama (ISEI) Cosma Heckel is the pilot of the Rovernauts, preparing herself and her team for the NASA Rover Challenge on April 12th, 2025, and is now 18 years young. Her team includes Leander (15) from Grimma, Luiza (18) from Rio de Janeiro, Hazel (18) from Washington, DC, and the young engineer Jesco (11) from Leipzig. Never before has a team represented so much multinationality. Boundaries are blurring.

At the age of 3 months, Cosma was there for the first time when the first international junior team participated in a NASA competition. It was arranged by her parents, Yvonne and Ralf Heckel, together with Leipzig-born NASA scientist Prof. Dr. Jesco von Puttkamer, who served as Director of the International Space Station (ISS) from 1998 to 2012, said: "If we as humanity want to land on Mars, we must train young people in international cooperation. And that's why I'm committed to ensuring that international teams can participate in this competition. Don't let me hang here!"

Team Germany from the International Space Education Institute in Leipzig, led by Thommy Knabe (then 15, now head of HAFLE- Plastics technology Reichenbach), was the first international team and has already won prizes in Huntsville in April 2007. It was the experiences and reports of these and their subsequent participants that triggered an avalanche of enthusiasm. First 2, then 4, then 8, then 32, but today this competition consists of half international teams, all of whom have their origins in Leipzig's summer camps and their exchange programs around the globe.

Cosma has participated every year, even traveling the world with her father and chairman, explaining the Moonbuggy in several languages. At the age of 7, she was already driving it around Leipzig and helping every team wherever she could. Today, with 15 years of participation (the competition was suspended during the pandemic), she is by far the longest-serving participant/pilot in the NASA Roverchallenge. Their teams can look back on 7 podium finishes, 3 world championship titles, 26 participations and a total of 46 vehicles – that alone is a first.

Cosma represents her generation in the Leipzig Youth Parliament, the Youth Council of the US Consulate General in Leipzig, and as a training ambassador for skilled trades at HANDWERK (handcraft). Cosma is a prospective industrial mechanic with a high school diploma from 1st Mould in Pirna. Her teammates from previous years are already studying space-engineering or training to become astronauts.

On April 5th, she will fly to the USA for the last time as a competition participant. She wants to be the first all-girl team on the rover, at least for a complete run. This was a last wish from Jesco von Puttkamer. After that, there are exams, studies, and careers.

The ISEI also sees its mission fulfilled after 18 years of this competition. "We have achieved everything, made the world aware of it, helped shape it, and produced brilliant young scientists. No team can compete with us on this competition course. We're too well-rehearsed for that, and the design has evolved too far over the years of its own evolution. We want to move on, and unfortunately, that's no longer possible here."

ISEI is taking a preliminary farewell tour of several NASA centers with the NASA Rover Challenge team 2025. The young people will once again encounter US and international teams and have the opportunity to prove themselves, meet with astronauts and colleagues of Prof. von Puttkamer in Washington, D.C., and once again, a new generation of students will see a rocket launch at Cape Canaveral. This will be the 12th launch experience in 20 years.

But what's next?

President Ralf Heckel says: "We're celebrating our 20th anniversary this summer. It's time to print these experiences in book form for future generations, to thank our sponsors, and to show that there are no limits and that anything can be achieved when everyone pulls together on one rope."

"We will establish a "Hall of Fame" for the 46 successful Leipzig Moonbuggies and produce with our past drawings a series of electric-powered kits for schools and training workshops around the world, thus launching a new competition in Europe. This is missing here.

We will also leverage our experience and construct inclusion-tandems for Leipzig and Europe, exchange international students, and launch a commercial series for sports, health, and youth. Micromobility has a future not only in space, but especially here on Earth. If it brings even more young people and ideas together, it's worth it."

The International Space Education Institute operates the 2000 sqm Puttkamer Campus in the heart of Leipzig with workshops, laboratories and overnight accommodation for international exchange students.

In 20 years, ISEI produced over 3000 press articles in total 30 countries, 500 TV reports and has an archive of around 300,000 photos documenting this extraordinary work.

www.SpaceEducation.de

The Team



Cosma Heckel (18), GER
teamleader, pilot, CAD, mechanic
industrial mechanic in training



Leander Dürwald (15), GER
1st co-pilot, mechanic, safety
highschool student



Hazel Jeffords (18), US
2nd co-pilot, trainer, reports
highschool senior



Jesco Heckel (11), GER
mechanic, CAD, camera, supply
highschool student

Luiza Carvalho Finnhani De Souza (18), Brazil
social media, paperwork, reports
highschool student

Previous Awards with NASA and international

26 own teams with students from 30 countries since 2007 first international competitor (door opener for the international competition at NASA) designed and modified 46 rover in 18 years

7 winning teams between 2010 and 2019:

2010 1st prize
2013 2nd prize
2014 3rd prize
2015 1st prize and 2nd prize
2018 2nd prize
2019 1st prize

1. Rookie Award (2007)
2. Best Design Award (2007)
3. System Safety Award (2008)
5. Most Improved Award (2009)
6. International Team Award (2009)
7. International Team Award (2012)
8. Best Design Award (2012)
9. Telemetry Award (2012)
10. Best Design Award (2013)
11. Jesco von Puttkamer International Team Award (2014)
12. Jesco von Puttkamer International Team Award (2016)
13. System Safety Award (2018)
14. Most Improved Award (2019)
15. Most Improved Award (2024)

Never got:

Crash & Burn Award (because all races were successful finished)
Social Media Award (despite 2000 pages of press coverage worldwide and although all of today's international teams followed our student reports and then compete)
Team Spirit Award (because we were too busy for other things except engineering)

Special Award:

2017 10 years International Space Education Award (from Todd May, MSFC director)

Awards with India

Since 2008 we support Indian students for NASA. The first exchange started in 2011. 2012 Sahib and Harshmeet drove a Leipzig-Rover at NASA with the best all-India-result as a team. Since 2015 indian teammembers became a constantly part of an indo-german exchange. Since 2017 our institution, speaker and students are also travelling to India.

Our association is honored member of the “World Space Council” of India and with it education partner of IRSO.

- 2017 International Keynote Speaker (on the Science Exploration Programme)
- 2018 Founder Award (for the JvP-Cup in Noida)
- 2019 5 years Indo-German Collaboration
- 2019 International Keynote Speaker (of Youth Space Conference 2019)
- 2020 Indo German Collaboration Award (for Space Education)
- 2023 Student Exchange Award
- 2025 International Keynote Speaker (of Youth Space Conference 2025)

Awards with Russia

Between 2003 and 2022 we received numerous certificates, Awards and Gramota´s, include the Gagarin-Orden, for intensive annual educational work between Germany, Russia and USA. The german ambassador in Moscow, the director of Roscosmos, the Moscow Aviation Institute, the Duma-member Vitali Sevastianov, the Korolev Readings and the family Korolev were supported this unique engagement, what was always not easy.

But then the war against Ukraine destroyed all bridges and abuses also our students for military use. Some we got out of the country, other not. Today these fascinating 20 years are a rare historical book for international bridgebuilding.

All we have left are a few quiet but prominent friends, knowing that we will always have an open door once this nightmare with war is over.

Awards with Brazil

Liceo Santa Terezinha, 2019, 2024

Contacts/responsible for program:

Ralf Heckel, director

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International Space Education Institute e.V., VR 4401

Wurzner Str. 4, 04315 Leipzig/Germany

About the person: Ralf Heckel has been promoting and supporting international space projects with pupils and students since 2000. Together with his wife Yvonne, he organized hundreds of international educational trips to competitions, rocket launches and space centers. He initiated the international participation in the NASA Roverchallenge. Today, his students work in such managerial professions.

temporaly accommodations in US:

Boswell Bungalow-Large Yard-Pets-Wifi

3202 Boswell Drive Northwest, Huntsville, 35811, USA

Motel 6 Washington DC

Motel 6 Cocoa Beach FL, Atlantic Ave

Meeting points:

US Space & Rocket Center, 1 Tranquility Base, Huntsville, AL 35805, United States

Moonbuggy-Workshop, 3224 NE S HI-LO Cir, Huntsville, AL 35811, USA

Maple Hill Cemetery, 202 Maple Hill St SE, Huntsville, AL 35801, United States

Puttkamer House, 420 Monte Sano Blvd SE, Huntsville, AL 35801, USA

Steven F. Udvar-Hazy Center, 14390 Air and Space Museum Pkwy, Chantilly, VA 20151

National Air & Space Museum. 600 Independence Ave SW, Washington, DC 20560

NASA Headquarters, 300 E St SW, Washington, DC 20546

Lincoln Memorial , 2 Lincoln Memorial Cir NW, Washington, DC 20002

McKinley Technology High School, 151 T St NE, Washington, DC 20002

Ivy Hill Cemetery, 2823 King St, Alexandria, VA 22302

Embry Riddle University, 1 Aerospace Blvd, Daytona Beach, FL 32114

KSC-VC, Space Commerce Way, Merritt Island, FL 32953

Astronaut Memorial Foundation, 405 Nasa Pkwy W, Merritt Island, FL 32953

Cocoa Beach Pier, 401 Meade Ave, Cocoa Beach, FL 32931

Rusty ´s Seafood, 628 Glen Cheek Dr, Cape Canaveral, FL 32920

Meeting friends of Jesco von Puttkamer

The link between International Space Education Institute in Leipzig and NASA is Prof. Dr. Jesco von Puttkamer (1933-2012). He was born in Leipzig/Germany 1933, moved to Huntsville/Alabama in 1962 and worked 50 years for NASA.

In Huntsville he worked together under Wernher von Braun on the Apollo-program, especially for a reusable Saturn V rocket stage 1 and to calculate the trajectory of Apollo in the moon-orbit. Later he was part of the rescue mission for Skylab and involved into Soyuz-Apollo.

In Washington DC Puttkamer worked as strategist for human spaceflight from 1974. Here he was part of the Space Shuttle program and prepared the assembly of the International Space Station. From 1998 until his death in dec 2012 he was director of the ISS at the NASA-Headquarters.

Numerous spaceshuttle astronauts and ISS-crewmembers are remembering him as the “dektop-astronaut”, author, engineer and visionary. The students of ISEI meet some of his colleagues on **April 16th, 2025, at the partner of ISEI, the McKinley Technology High School, 151 T St NE, Washington, DC 20002.**



Alotta E. Taylor, PhD Roger K. Crouch William Ready William Gerstenmaier

Alotta E. Taylor: <https://x.com/NASASpaceOps/status/1775919187237515682>

Roger K. Crouch: https://en.wikipedia.org/wiki/Roger_K._Crouch

William Ready: https://en.wikipedia.org/wiki/William_F._Readdy

William Gerstenmaier: https://en.wikipedia.org/wiki/William_H._Gerstenmaier

Thanks to all sponsors, donors, partners and supporters

A single participation in the NASA Rover Challenge for a Team from Germany costs around 50,000 Euros per year. Part of it is accounted for by travel costs at currently 11,000 Euros. This is borne by donations and can only be provided in money. Furthermore, a new, competitive vehicle contains around 15,000 euros in material and external work, including all rejected test designs. These are mainly provided as donations in kind. For the costs of workshop, logistics, accommodation, excursions and energy costs, about 2,000 € per month must still be spent on the Puttkamer campus. That is a total of 24,000 €. These are not state-funded, but provided by the association's own Space Hotel.

In 18 years of participation, we sent 26 teams to the NASA Rover Challenge with a cumulative effort of about 1.3 million Euros. The care work and preparatory trips are carried out entirely on a voluntary basis. To date, no educational institution in European Union has been able to delegate a single team of its own.

The donating companies

Otto Alte-Teigeler GmbH (OAT), Mädler GmbH, igus® GmbH, HOLL GmbH, Turnery Günter Jakob GmbH & Co.KG, 1st MOULD GmbH, Rohloff GmbH, Solid Works, Doerffer sandabrasion GmbH, FRANK- Vehicle construction, BOSCH-Car Service Scheil, P.J. Prause Durotec GmbH, saddlery Kuebler, Gummi HELD, Althaus Electroplating and powder coating GmbH, ExtraEnergy.org, HASE-Bikes e.K., Hawle plastics and service GmbH, FIBERSAX

The private donators

Currently made up of 6042 supporting members. It is the guests of the Space Hotel who have donated 3 Euros per night per person or some cash-donations in the last 12 months to make this work possible.

The active members of the association

Ralf & Yvonne Heckel, Ralf Winkler, Hardy Pönisch, Andreas Wözel, Henri Schulz, Cosma Heckel, Henning Göpfert-Dürwald, Hannes Neupert, and many more.

National Aeronautics and Space Administration
George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812



February 11, 2025

CS60

Yvonne Heckel
Jesco von Puttkamer School
Leipzig
Germany

Dear Yvonne Heckel:

I am pleased to extend an invitation to Jesco von Puttkamer School who was accepted to participate in the 2025 NASA Human Exploration Rover Challenge (HERC) to be held April 10-12, 2025, in Huntsville, Alabama, U.S. The team will need to arrive in Huntsville, Alabama, before April 10, 2025, for team check in, and return to Germany after April 12, 2025. The invited team members are listed below:

Team Advisor	Ralf Heckel	C84FCPLPX
Student Team Lead	Cosma Victoria Heckel	C84FWP23L
Team Member	Leander Elias Dürwald	CCL8KWK8
Team Member	Luiza Carvalho Finhani De Souza	GJ104373
Supporter	Jesco Sergio Heckel	C84F57RT8
Supporter	Henning Göpfert-Dürwald	CCL8HRRW4

If you have any questions regarding this invitation, you may reach our office via email at herc@mail.nasa.gov.

Sincerely,

A handwritten signature in black ink that reads "Kevin M. McGhaw".

Kevin McGhaw

Director, Southeast Regional Office
NASA Office of STEM Engagement