Go for 2020!

# **Next Decade - Next Generation**

Where do we stand, where are we going? (updated 12/16/2019)

Dates: 10/20/2019 - 10/01/2020

Countries: USA, Mexico, Dominican Republic, Brazil, Spain, Germany,

India, Russia, Morocco

Host: Jesco von Puttkamer Society

Keynote speaker: Ralf Heckel



Artemis generation and the international division is ready for launch

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download this program here (16-pages PDF, 6 MB): http://www.spaceeducation.de/container/pdf/2019/JvP-Tourprogramm2019.pdf

#### 1. Abstract

20 years ago the new director of the ISS (International Space Station), Prof. Dr. Jesco von Puttkamer (NASA-HQ), and the current director of the ISEI (International Space Education Institute), Ralf Heckel (Germany, active role during the fall of the iron curtain), started an amazing project: The accessibility of Space Education and International contests for everyone on the planet.

The main goal 10 years after the cold war was: "Multi-nationality: learn, design, work and live together, create a future - like on board the International Space Station and beyond".

This goal was never lost. Both opened the doors for many international teams at national US, German and Russian space competitions. This work is financially and politically independent, non-profit and non-government. It continues to grow with more locations, more activities and into more countries worldwide.

The Space Education Readings Tour Program 2019 collects all multinational experiences from the past until the 50th year of landing on the Moon and gives a look into the future of the next decade. What Prof. Dr. von Puttkamer (Apollo, Skylab, Space Shuttle and ISS) called "anti-cyclic", will be present as a VISION for a way of life for everyone who wants to make a future between 2020 and 2030.

This reading also involves the current global development such as: Climate Change, Pollution, Populism or Fridays for Future and gives visions for a new orientation with Space as a smart and possible solution.



multinational design discussion in Leipzig, JvP-summercamp 2012

## 2. The Tourprogram overview

10/21/2019 70<sup>th</sup> IAC. Washington DC (USA) 10/21/2019 German American Heritage Foundation, Washington DC (USA) 10/22/2019 McKinley Highschool, Washington DC (USA) 10/23/2019 Team-UDC, University Washington DC, Washington DC (USA) 10/25/2019 NASA-HQ, Washington DC (USA) 10/25/2019 Gala Dinner at National Air & Space Mueum, Udvar Hazy, Dulls Airport 10/26/2019 First Robotic Challenge, Haymarket VA (USA) 10/27/2019 Team Tecnologico de Monterrey, 4 days, TEC-Cuernavaca (Mexico) 11/01/2019 Teotihuacan Pyramides (Mecico) 11/03/2019 ROCH-Team, UNAQ, 2 days, Queretaro (Mexico) 11/06/2019 Orlando and Cape Canaveral (USA) 11/07/2019 Team Apolo 27, INTEC, Santo Domingo (Dominican Rep) 11/09/2019 Highschool-Team, Colegio Cientifico, Salcedo (Dominican Rep) 11/10/2019 Panama City and Panama-channel (Panama) 11/11/2019 Rio de Janeiro, 9 days (Brazil) 11/13/2019 The Myths, UFF, Niteroi (Brazil) 11/14/2019 Colegio Santa Terezinha, 5 events, Sao Gonzeles (Brazil) 11/16/2019 Spacetroopers Brazil, Sao Gonzeles (Brazil) 11/18/2019 Team Saguarema, B.M.G.I, Niteroi (Brazil) 11/20/2019 High School Ramón y Caja, Madrid (Spain) 11/20/2019 Oscars Logix5 Solutions, Madrid (Spain) 11/22/2019 pressconference, Berlin (Germany) 12/06/2019 Team Rovernauts, 3 days, Leipzig (Germany) 12/24/2019 Akshardham Temple Lasershow, Delhi (India) 12/27/2019 Youth Space Talk - ISTC, CSIR-CSIO, Chandigarh (India) 12/28/2019 Youth Space Conference - 2019, NITTTR, Chandigarh (India) 12/29/2019 PEC - College of Kalpana Chawla, Chandigarh (India) 12/30/2019 Team Moon Yaan, 3 days, Kurukshetra (India) 12/31/2019 Youth Space Talk - Panorama, Kurukshetra (India) 01/02/2020 German Embassy New Delhi (India) 01/10/2020 Team Rovernauts, 3 weeks, Leipzig (Germany) 01/27/2020 Korolev Meeting, Moscow (Russia) 01/30/2020 Youth-science Readings S.P. Korolev, 7 days, Troitsk (Russia) 02/08/2020 Winterworkshop for JvP-Teams in Leipzig, 3 weeks (Germany) guestland Morocco 02/01/2020 Team Rovernauts, 3 weeks, Leipzig (Germany) 03/30/2020 Space Foundation, Colorado Springs (USA) 04/11/2020 Assembly workshop international Teams, 5 days, Huntsville/AL (USA) 04/16/2020 NASA-Roverchallenge, 3 days, Huntsville/AL (USA) 04/17/2020 International Team Convent, EFT-Auditotium, Huntsville/AL (USA) NASA-Headquarters, Washington DC (USA) 04/21/2020

04/22/2020 Fieldtrip to Greenbelt, Wallops Island or Hampton VA

05/09/2020 Leipzig (Germany)

06/13/2020 JvP Summerworkshop Germany

09/01/2020 JvP Internships for college students in Germany

09/25/2020 Birthday celebration for Prof. Dr. Jesco von Puttkamer

10/01/2020 Exibition in Leipzig Expocenter (one week)



# "Go for 2020!" download this activity-calendar here, for XXL-prints:

PDF, 100x67 cm, 20 MB

http://www.spaceeducation.de/container/pdf/2019/Calendar2020.pdf

JPG, 60x40 cm, 10 MB

http://www.spaceeducation.de/container/pdf/2019/Calendar2020.jpg

# 3. The Tourprogram in details

#### Fotodocumentation:

https://www.flickr.com/photos/spaceeducation/collections/72157711469232741/

# 10/20/2019 Washington DC (USA)

- 70TH INTERNATIONAL ASTRONAUTICAL CONGRESS (IAC)
- Meeting at Army & Navy Club on Farragut Square, 10/22/19, 10:30h
- Buzz Aldrin presentation at Convention Center
- McKinley High School, Conference, reading, Q&A, registrations
- workshop, hands on, tips
- UDC-Team, reading, Q&A
- NASA-Headqarters, meeting with friends of Jesco von Puttkamer
- First Robotic Challenge, Haymarket VA







# 10/27/2019 Cuernavaca (Mexico)

Tecnológico de Monterrey, Campus Cuernavaca,

- one week program with the Roverchallenge Team TEC
- readings, workshop-support, task-training,
- cultural event "El Dia de Muertos"







#### 11/02/2019 Teotihuacan Pyramids (Mexico)







# 11/04/2019 **Quaretaro (Mexico)**

- Roch-Teams der Universidad Aeronautica in Quaretaro (UNAQ)
- Tour, director meeting
- workshop, reading, Q&A, registrations
- 2 days with Valeria Vasquez Zafra (Teamleader)







# 11/06/2019 - Orlando, Cape Canaveral, Cocoa Beach, KSC-VC, Blue Origin







# 11/07/2019 - Santo Domingo (Dominican Rep)

- Instituto Tecnológico de Santo Domingo, INTEC Team Apolo 27
- Liceo Cientifico Salcedo, Highschool Roverteam
- workshop, reading, Q&A, registrations
- 3 days







#### 11/10/2019 Panama City, Panama Canal, Miraflores (Panama)



#### 11/11/2019 Rio de Janeiro (Brazil)

- City of Rio de Janeiro, Niteroi, City tour and photopoints
- University Fulminese Federal (UFF), Niteroi/Brazil
- COLÉGIO SANTA TEREZINHA
- Space Day from kindergarden, primary school to highschool
- reading, Q&A, registrations
- support in Spacetroopers-workshop
- 9 days







#### 11/20/2019 Madrid (Spain)

- presentation in highschool Ramón y Cajal
- partner meeting Oscars warehouse for Logix5 Smart Solutions
- discussion for future international robotic youth programs







# 11/21/2019 Berlin (Germany)

- press conference, students- and partner meetings
- The Weinmeister Hotel, Weinmeisterstraße 2, 10178 Berlin Tel: 030 7556670 https://goo.gl/maps/3dAyxyLzvhR3ay1f6







# 12/07/2019 Leipzig (Germany)

- Jesco von Puttkamer School
- annual sponsors- and students event (christmas celebration)
- Conference, reading, Q&A, registrations







## 12/23/2019 Delhi (India)

- 12/24/2019 Akshardham Temple Lasershow, Delhi (India)
- 12/25/2019 Christmas Party with students at JvP-depandance, Kurukshetra (India)
- 12/26/2019 Brahma Sarovar, Kurukshetra (India)
- 12/27/2019 Youth Space Talk ISTC, CSIR-CSIO, Chandigarh (India)
- 12/28/2019 Youth Space Conference 2019, NITTTR, Chandigarh (India)
- 12/29/2019 PEC College of Kalpana Chawla, Chandigarh (India)
- 12/30/2019 Team Moon Yaan, 3 days, Kurukshetra (India)
- 12/31/2019 Youth Space Talk Panorama, Kurukshetra (India)
- 01/02/2020 German Embassy New Delhi (India)





# 01/10/2020 Leipzig (Germany)

- start of the exchange- and designers season
- workshops, readings, Q&A, registrations

#### 01/30/2020 Moscow (Russia)

- Korolev Youth- & Science Readings in Troitsk (7 days)
- Moscow City Tour
- Meeting family Korolev
- Space-Museum-Tour
- Moscow Aviation Institute / IMBP, tour, readings, Q&A, registrations







#### 02/08/2020 Winterworkshop Leipzig/Germany

- designing nonpneumatic wheels
- telemetry
- task-training
- guestland Morocco

#### 03/30/2020 Colorado Springs (USA)

- 36th Space Symposium
- conference, readings, discussions, contracting

#### 04/11/2020 Assembly workshop international Teams, 5 days, Huntsville/AL (USA)

#### 04/16/2020 NASA-Roverchallenge, 3 days, Huntsville/AL (USA)

- All International Team Photo, 04/16/2020, 3pm (parking lot next to Davidson Center)

#### 04/17/2020 International Team Convent, EFT-Auditotium, Huntsville/AL (USA)

- EFT-Auditorium of MSFC, after 1st day NASA Roverchallenge
- 5pm-9pm conference, readings, Q&A, Pizza-Party

#### 04/18/2020 Birthday Party Ralf Heckel (04/18/2020, after Award Ceremony)

#### 04/20/2020 Washington DC (USA)

- VIP-Tours to two space-museums,
- meeting with collegues of Jesco von Puttkamer at NASA-HQ
- German Consulate Washington, German-American Heritage Museum
- exchange visits with McKinley High School or UDC
- Tour to Mid Atlatic Regional Spaceport at Wallops Island
- Tour to NASA Goddard Space Center or Langley Reserach Center

### 05/09/2020 Leipzig (Germany)

- 05/09/2020 Award Ceremony and press conference for Rovernauts
- 05/10/2020 Prix de Tagot (after race competition, qualifying and fun)

# 06/13/2020 JvP Summerworkshop Germany

- 5 weeks education program for international teams (end 07/17/2020)
- loddging at Space Hotel Leipzig
- work on the JvP-Campus Leipzig
- designing a JvP-hamradio-telemetry
- excursions, rovertraining, designing, units, cultural events
- special for highschool student teams, teamleaders and its schools

#### 09/01/2020 JvP Internships for college students in Germany

- 3 month duration by tourist visa
- sholarship for 4-6 students at International Space Education Institute
- invitation after application and integrity

# 09/25/2020 Birthday celebration for Prof. Dr. Jesco von Puttkamer

#### 10/01/2020 Exibition in Leipzig Expocenter (one week)

- NASA-Rovers at science festival
- international teams invited
- 1st pre-contest for "World-Roverchallenge"



We are one team - worldwide range-monitoring via telemetry!

# 4. The people

# 4.1. The namesgiver Prof. Dr. Jesco von Puttkamer



Prof. Dr. Jesco von Puttkamer at the Award Ceremony 2011

Prof. Dr. Jesco von Puttkamer (\*1933 Leipzig/Germany - & 2012 Alexandia/VA) worked 50 years as strategic employee at NASA (Apollo, Skylab, Space Shuttle Program, International Space Station). As an employee of NASA-Headquarters at Space Operation Mission Directorate (SOMD) he was director of the International Space Station (ISS). See under NASA.gov. Also he was a visionary, author and advisor for Star Trek.

Von Puttkamer received numerous awards during his 50 years at NASA. Among those honors was NASA's prestigious Exceptional Service Medal in 2004. In 2007, he received a NASA Honor Award for successful initiatives of advancing American-Russian cooperation in spaceflight. In December 2008, the U.S.-wide German-American Heritage Foundation in Philadelphia honored von Puttkamer with its "Distinguished German-American of the Year" award. In 2011 the Jet Propulsion Laboratory (JPL) gave his name to the asteroid "266725 Vonputtkamer".

He was awarded an honorary Doctorate for international youth work in space technologies in 1993. Since 2001 he was engaged together with his aspirant Mr. Ralf Heckel and wife to involve international youth into international space competitions (IAC, ILA, MAKS, NASA). He opened the doors and the Heckel couple and their students tried to make it successful around the globe. After von Puttkamer passed away the society and a school under his name was founded. more: https://www.nasa.gov/topics/people/features/von\_puttkamer\_obit.html

# 4.2. The Keynote Speaker Ralf Heckel



Ralf Heckel at the Amity University Noida (India), 2018

Born before Apollo 11 in 1969 Mr. Ralf Heckel is a moonchild. He grew up in East Germany and was a little inventor and tinkerer during the time in which the Soviet Union launched 8 space stations. By his 12th grade he had entered more than 150 self-made exhibits in a local fair. For him problems are not hurdles, they are challenges. So he also was active at the time of the friendly revolution and the fall of the Berlin Wall. In 1990 Heckel became popular as a trendsetter in Germany and around the globe. Since 2000 he started to manage little space cargo projects and the early private spaceflight. Von Puttkamer met him in 2001 and was able to win Heckel for the idea of global Space Education. Since 2005 both founded the International Space Education Institute (ISEI) a non-political and financially independent institution. As of today ISEI manages more than 300 space educational events per year and has invested 2.5 million Euros into those projects that Heckel leads.

Since 2010 Heckel involves international students in various high-level space and environment-technology competitions. He is the inventor of the International Team Award and the Telemetry Award at NASA. His teams are always in the TOP 10 or better. Today he is replacing Prof. Dr. Jesco von Puttkamer as the motivator for the space youth worldwide.

#### 4.3. The Rovernauts



legendary Team Germany before racing 2019 - now renamed as Rovernauts

The Rovernauts is the former "Team Germany" at the NASA Human Exploration Roverchallenge. They are the actual weinning team for highschool division. The driver are young (15 years) and have a team-experience of 13 years, 25 sucessful competitions and 7 winning awards (1st, 2nd, 3rd places). They are the current Winning Team of 2010/2015/2019 and want to share their experiences. Ask them questions online and visit them at #rovernauts. The older team members are now space engineers, in astronaut training, teachers, scientists and engineering-business-people.

Firine Bugenhagen of the Rovernauts invented, designed and built a data-telemetry (Telerover) for hamradio frequencies what is able to use worldwide with a link into a tracking page in the internet!

#### 5. Modules

#### 5.1 Where do we stand?

- 15 years space education excursions to Russia
- 13 years international participation at the NASA Human Exploration Roverchallenge
- the experiences of the winning team 2019 after 24 participations with 7 titles
- international field trips to 6 different NASA Centers
- space-history and programms in Germany
- Korolev-Readings for youth and space education programs in Russia
- international networking and activities

#### 5.2. Where are we going?

- Back to the moon who is doing what?
- Private spaceflight your ticket into space?
- Planetary mining the smart answer to save our planet?
- International space education activities what is available, what is in preparation?

#### 5.3. Hands-on-activities for students at the tour

- assembly of a differential gear for a NASA Rover (handycraft-educational set)
- build and design a "Minirover" (handycraft-educational set)
- work with a complex 3D-CAD-Drawing (2000 parts, ISEI/NASA Rover)
- "Telerover 2.0"

#### 5.4. Questions, Answers & Tips

You need answers and tips for following questions:

- How to start a design?
- How to improve construction?
- How to collect funds for international competitions?
- How to manage a team?
- How I can join the space industry?

.... and many more? You only need to ask!

### 6. programms & events

## 6.1. "World Roverchallenge - with a Rover to the Moon"

(multinational JvP training-support for national and international teams)

A hamradio-telemetry (Telerover 2.0), assembled at the upcoming JvP-Summerworkshops in Germany is the heart of participating teams. A central computer records all training-activities worldwide and links this with a reporting website. Here all participating teams are able to log their distances, speed-profiles and GPS-profiles. Also they are able to share their photos and reports.

prototype: https://aprs.fi/#!call=a%2FDO4LRV-9&timerange=3600&tail=3600

Every year at end of summer we share prizes for:

- the longest driven distances,
- the most active altitude profile,
- the best reports,
- the best uploaded photos,
- the most crossed national borders
- the best extraenergy concept
- the first who crosses a cumulative circumference of any moon of our solar system
- the first who crosses a cumulative circumference of any planet of our solar system
- the first who crosses a cumulative distance beetween earth and moon

We also invite to a special green-energy challenge with cabondioxidefree- and nuclearfree power. Participating teams may write a 10-pages application with the idea to use exausting- and radiationfree use of energy to power their rover during the recorded trainings (pedelec-technology with humanpower+extraenergy).

#### 6.2. Korolev-Youth-Science-Readings in Russia 2020

time: 01/30/2020 - 02/03/2020

ages: 8-16

#### 6.3. Space Camp 2020 - JvP-Mission 2

time: 04/12/2020 - 04/17/2020

ages: 12-14

# 6.4. Jesco von Puttkamer International Team Convent @ NASA Roverchallenge 2020

time: Friday 04/17/2020; 05:00 PM include readings and Pizza-Party Thursday 04/16/2020, 03:00 PM: all-international teamphoto

#### 6.5. NASA-Center Fieldtrip 2020 along U.S. east coast

time: 04/20/2020 - 04/27/2020

ages: 12-24

# 6.6. Summercamp Germany 2020

time: 06/15/2020 - 07/19/2020

ages: 12-24

# 6.7. JvP Internships for college students in Germany

(durations max. 3 months, ages 12-24)

- 3 month duration by tourist visa
- sholarship for 4-6 students at International Space Education Institute
- invitation after application and integrity

# 6.8. Space Education Readings Tour program 2020

international science tour, fall 2020



JvP-NASA-fieldtrip, here at Stennis Space Center

# Flight Schedule 1

Berlin Reykjavik	SFX KEF		14:05 FI 529 15:40 FI 529	03:35h (01:10h)	Icelandair
Reykjavik Washington	KEF IAD		16:50 FI 645 19:50 FI 645	06:15h	Icelandair
7 days program in	Washi	ngton DC			

Washington San Salvador	IAD SAL		16:15 AV 583 18:52 AV 583	04:37h (01:04h)	Avianca
San Salvador Mexico	SAL MEX		19:56 AV 432 22:15 AV 432	02:19h	Avianca
9 days program in	Mexico	)			

Mexico Orlando	MEX 11/03/201 MCO 11/03/201		02:18h (07:52h)	Volaris		
Orlando Santo Domingo		9 20:15 NK1049 9 23:49 NK1049	02:43h	Spirit Airlines		
3 days program in Dominican Republic						

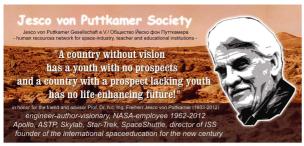
Santo Domingo Panama City		08:33 CM 267 10:12 CM 267	02:39h (05:00h)	Copa
Panama City Rio de Janeiro		15:16 CM 873 00:25 CM 873	07:02h	Сора
9 days program in	Brazil			

Rio de Janeiro Madrid		20:05 IB 6024 10:10 IB 6024	09:05h	Iberia Air
1 day program in	Spain			

Madrid MAI	0 11/21/2019 0	8:40 IB 3676	03:05h	Iberia Air
Berlin MAI	0 11/21/2019 1	1:45 IB 3676	32 days in G	ermany

Leipzig Istanbul	LEJ IST	12/23/2019 12/23/2019	11:25 TK 1338 16:35 TK 1338	03:10h 04:20h	Turkish Airl
Istanbul Delhi	IST DEL	12/23/2019 12/24/2019	20:50 TK 0716 05:15 TK 0716	05:05h 11 days in	Turkish Airl India
Delhi	DEL	01/03/2020	06:55 TK 0717	05:05h	Turkish Airl
Istanbul	IST	01/03/2020	11:30 TK 0717	04:30h	
Istanbul	IST	01/03/2020	16:00 TK 1339	03:10h	Turkish Airl
Leipzig	LEJ	01/03/2020	17:10 TK 1339	26 days in	Germany

#### contacts



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Ralf Heckel

International Space Education Institute

Институт Международного Космического Образование

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harifable free institute to support the study- and occupational orientation in engineer's being and serospace inclustries (registered associ бырственно полезный свободный институт к сорействим осследований и профессиональной ориентации инсименения пень и осижености полети былостительнований слока?

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Winning Teams at NASA Roverchallenge 2010, 2013, 2014, 2015, 2015, 2018, 2019

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Jesco von Puttkamer Schule Campus & Space Hotel

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Mitglied der / member of: Jesco von Puttkamer Society

Sponsor for: Jesco von Puttkamer International Team Award / NASA Roverchallenge

Botschafter / ambassador: US-Space Camp