



European Space Agency  
Agence spatiale européenne



# 13th ESA/JRC INTERNATIONAL SUMMERSCHOOL ON GNSS

Vila Nova de Cerveira, Portugal, 15.-26. July 2019

Local Organiser:



Supported  
by:



Stanford  
University



# ESA-JRC INTERNATIONAL SUMMERSCHOOL ON GNSS 2019

Organised by ESA and the Joint Research Centre of the European Commission

## Cooperating Universities

- *Stanford University*
- *Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), Toulouse*
- *Graz University of Technology, Austria*
- *University FAF Munich, Germany*

## Host of the 2019 summer school

*Faculty of Science, Astronomic Observatory  
University of Porto*

**Dates:** July 15-26 in Vila Nova de Cerveira, Portugal.

# ESA-JRC INTERNATIONAL SUMMERSCHOOL ON GNSS 2019

- **Students profile**: The program is open to graduate students (recent graduates), Ph.D. candidates, early-stage researchers and young professionals willing to broaden their knowledge. Available seats (~ 50) are given on a first-come, first-served basis.
- The **mission** of the ESA-JRC International Summer School on GNSS is to provide the attendees with a **comprehensive overview of satellite navigation**. Extensive lab work is also provided to the attendees with hands-on learning opportunities.

**54 participants/22 nationalities**

| Country                       | Number    |
|-------------------------------|-----------|
| Austria                       | 2         |
| Belgium                       | 1         |
| Brazil                        | 1         |
| China                         | 2         |
| Czech Republic                | 1         |
| France                        | 2         |
| Germany                       | 7         |
| Greece                        | 1         |
| India                         | 2         |
| Iran                          | 1         |
| Italy                         | 11        |
| Libanese                      | 1         |
| Malaysia                      | 1         |
| Norway                        | 1         |
| The Netherlands               | 2         |
| Poland                        | 1         |
| Portugal                      | 2         |
| Romania                       | 2         |
| Spain                         | 3         |
| Sudan                         | 1         |
| Sweden                        | 1         |
| United Kingdom                | 8         |
| <b>Number of participants</b> | <b>54</b> |

**40 company  
registrations (nealy  
75%)**

**17 lecturer from 9 countries**

| Country                   | Number    |
|---------------------------|-----------|
| Austria                   | 2         |
| Canada                    | 1         |
| France                    | 2         |
| Germany                   | 1         |
| Italy                     | 2         |
| Portugal                  | 1         |
| Spain                     | 1         |
| The Netherlands           | 4         |
| USA                       | 3         |
| <b>Number of lecturer</b> | <b>17</b> |

Internationally renowned scientists  
and specialists give the lectures

- GNSS FUNDAMENTALS
- IONOSPHERE, TROPOSPHERE AND SPACE WEATHER
- GNSS SIGNALS AND RECEIVERS
- GNSS THREATS AND MITIGATIONS
- OVERVIEW OF GNSS SYSTEMS and SBAS SYSTEMS
- RECEIVER AUTONOMOUS INTEGRITY MONITORING (RAIM, ARAIM)
- GNSS APPLICATIONS OVERVIEW
- GNSS SCIENTIFIC APPLICATIONS
- FUNDAMENTALS ON PROGRAMME MANAGEMENT and BUSINESS CASES PREPARATION
- DEDICATED WORKSHOP LABS
- GNSS APPLICATION STUDY CASES BY STUDENT GROUPS

**2 full weeks course**

# OVERALL ASSESSMENT BY STUDENTS IS VERY POSITIVE

- OVERALL EVALUATION:
- 95% EXCELLENT or VERY GOOD
- OVERALL ORGANISATION:
- 99% EXCELLENT or VERY GOOD
- GNSS SCIENTIFIC CONTENT:
- 97% EXCELLENT or VERY GOOD



# SPONSORING ENTITIES

Large number of Sponsors of the ESA/JRC International  
Summerschool on GNSS 2019:



Technology Transfer Office and Education Office

Joint Research Centre (JRC)

Local Partner:



Company Partner:



Book Sponsor:



Media Partner:



# SUMMER SCHOOLS HELD

2007, 2008, 2009 Berchtesgaden, Germany

2010 Slettestrand, Denmark

2011 Berchtesgaden, Germany

2012 Toulouse, France

2013 Davos, Switzerland

2014 Ostrava, Czech Republic

2015 Barcelona, Spain

2016 Ispra, Italy

2017 Longyearbyen, Norway

2018 Loipersdorf, Austria

2019 Vila Nova de Cerveira, Portugal

**2020 Gdansk, Poland**

- 2007-2010 Forerunner: Munich Satellite Navigation Summerschool
- 2011-2012 ESA Satellite Navigation Summerschool
- Since 2013 in cooperation with the Joint Research Centre (JRC, EC), Ispra



# 2020 GNSS SUMMERSCHOOL

## ESA/JRC International Summerschool on GNSS 2020

**July 20 - 31, 2020**

**Krakow, Poland**

Registration will be open by end of 2019 - In case of further inquiries please mail [here](#).

**Registration is planned to be open by the end of Dec 2019**