



### 6th OpenIFS User Meeting, 22nd - 26th May 2023

# Venue

Barcelona Supercomputing Center Plaça Eusebi Güell, 1-3 08034 Barcelona (Spain)

Tel. (+34) 93 413 77 16 Click to see the Map



Beside the main entrance there is an entrance from the park, if you come following the green arrow on the map (be ready for a small uphill climb!).













#### **Public Transport**



Bus: 7, 33



**Metro: Stop Palau Reial** 

# Access to the building

To enter the BSC premises you will be given a badge upon registration. This badge will allow you to go in and out of the building and to access different spaces.

# **Important:**

- ❖ At the end of every day the badge must be left at the reception and will be recovered the next day at the registration desk.
- ❖ We kindly ask do not take pictures of MareNostrum 5.



### Food

BSC will bear the costs for coffee and lunch breaks for each of the attendees. Therefore, attendees agree to renounce the corresponding per diem expenses.

### Coffee Breaks

Terrace 1st Floor

#### Lunch

Foyer (Girona Building)

#### Dinner

The dinner will be organised on Wednesday 24<sup>th</sup> of May at Fiskebar restaurant at the port of Barcelona (20.30h)

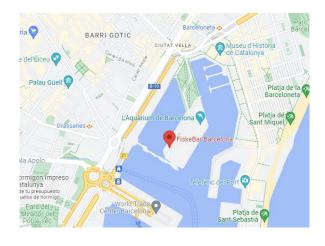


**Address:** 

Passeig d'Itaca, 3 08039 Barcelona Tel: 936 09 36 92

**MAP** 

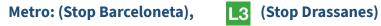






#### **Public Transport**





Monday 22<sup>nd</sup> of May Social Icebreaker will take place at Foyer at **BSC** (17.00-19.00h)

# MareNostrum Visit:

Thursday 25<sup>th</sup> of May from 12.45h to 13.30h

We wish you a pleasant stay!





# MONDAY 22<sup>nd</sup> May – Introduction Day

| 08.30 - 09.00                  | Registration  | Reception                     |
|--------------------------------|---|-------------------------------|
| 09.00 - 09:15                  | ECMWF Welcome by Marcus Koehler and Adrian Hill Local Welcome by Mario Acosta, BSC  | Auditorium                    |
| 09.15 - 09.30                  | Welcome by Francisco Doblas Reyes Director of Earth Sciences, BSC Welcome by Stephen English Deputy Director of Research, ECMWF | Auditorium                    |
|                                | Morning Topic: Intro to OpenIFS for new users, current developments   | (Talks)                       |
|                                |   |                               |
| 09.30 - 10.30                  | Marcus Koehl and Adrian Hill, ECMWF Overview of OpenIFS: What is OpenIFS?   | Auditorium                    |
| 09.30 - 10.30<br>10.30 - 11.00 | ,   | Auditorium  1st Floor Terrace |
|                                | Overview of OpenIFS: What is OpenIFS?   |                               |
| 10.30 – 11.00                  | Overview of OpenIFS: What is OpenIFS?  Coffee  Richard Forbes, ECMWF  Physical processes in the IFS/OpenIFS covering            | 1 <sup>st</sup> Floor Terrace |





#### **Intro to using OpenIFS (Computer Practicals)**

| 14.00 – 15.30 | How to run OpenIFS and control model behaviour with name lists          | Auditorium                    |
|---------------|---|-------------------------------|
| 15.30 – 16.00 | Coffee  | 1 <sup>st</sup> Floor Terrace |
| 16.00 – 17.00 | Next steps: control run.  Setting up a forecast experiment with OpenIFS | Auditorium                    |
| 17.00 – 19:00 | Welcome drinks  | 1 <sup>st</sup> Floor Terrace |

# TUESDAY 23<sup>rd</sup> May – General Meteorology and Chemistry

| 8.55 – 9.00  | Brief introduction of the day  | Auditorium |  |
|--|--|------------|--|
|  | Morning Topic:   |            |  |
| General Meteorology with OpenIFS (Contributed talks) |  |            |  |
| 9.00 – 9.30  | Victoria Sinclair, INAR, University of Helsinki Aqua-planet simulations with OpenIFS to investigate how extra-tropical cyclones may change in the future | Auditorium |  |
| 9.30 – 10.00   | Guokun Dai, Fudam University Influences of stratospheric warming on Ural blocking events in winter.  | Auditorium |  |
| 10.00 – 10.30  | Pirkka Ollinaho, FMI OpenIFS ensembles and a process-level model uncertainty representation in CY43R3, backporting development updates from IFS CY46R1   | Auditorium |  |





| 10.30 – 11.00                  | Coffee  | 1 <sup>st</sup> Floor Terrace |
|--------------------------------|---|-------------------------------|
|                                | Morning Topic:  |                               |
|                                | Atmospheric chemistry in NWP (Talks)  |                               |
| 11.00 – 11.45                  | Johannes Flemming, ECMWF CAMS, Atmospheric composition in NWP (remote)  | Auditorium                    |
|                                | CAMS, Atmospheric composition in two (remote)   |                               |
| 11.45 – 12.30                  | Vincent Huijnen, KNMI   | Auditorium                    |
|                                | Atmospheric composition in OpenIFS  |                               |
| 12.30 – 13.00                  | Marcus Koehler and Adrian Hill, ECMWF   | Auditorium                    |
|                                | Intro to using OpenIFS/AC   |                               |
|                                |   |                               |
| 13.00 – 14.00                  | Lunch   | Foyer                         |
| 13.00 – 14.00                  |   | Foyer                         |
| 13.00 – 14.00                  | Lunch  Afternoon Topic:  Chemistry modelling (Computer Practical)   | Foyer                         |
| 13.00 – 14.00                  | Afternoon Topic:  | Foyer                         |
| 13.00 - 14.00<br>14.00 - 15.30 | Afternoon Topic:  |                               |
|                                | Afternoon Topic: Chemistry modelling (Computer Practical)  Run OpenIFS/AC control case – gas phase chemistry.                                       | Foyer Auditorium              |
|                                | Afternoon Topic: Chemistry modelling (Computer Practical)   |                               |
|                                | Afternoon Topic: Chemistry modelling (Computer Practical)  Run OpenIFS/AC control case – gas phase chemistry.  lain Russell & Sandor Kertesz, ECMWF |                               |

# WEDNESDAY 24th May – Aerosol and NWP

8.55 - 9.00

Brief introduction of the day

**Auditorium** 





# Morning Topic: Modelling of Aerosol (Talks)

| 9.00 - 9.45   | Anthony Jones, Met Office  | Auditorium                    |  |  |
|---------------|--|-------------------------------|--|--|
|               | On the role of aerosol in NWP (remote)   |                               |  |  |
| 9.45 – 10.15  | Lorenzo Silvestri, University of Perugia  Environmental conditions for Saharan dust intrusions and their influence on Medicanes development: testing the case of Medicane Qendresa by using OpenIFS/AC | Auditorium                    |  |  |
| 10.15 – 11.00 | Coffee   | 1 <sup>st</sup> Floor Terrace |  |  |
| 11.00 – 11.45 | Samuel Rémy, Aerosol in OpenIFS/AC and CAMS and NWP (remote)   | Auditorium                    |  |  |
| 11.45 – 12.30 | Tommi Bergmann, FMI  | Auditorium                    |  |  |
| 11140 12100   | Overview of the new M7 aerosol code  |                               |  |  |
|               | Overview of double moment schemes  |                               |  |  |
| 12.30 – 13.00 | Aerosol discussion   | Auditorium                    |  |  |
| 13.00 – 14.00 | Lunch  | Foyer                         |  |  |
|               | Afternoon Topic:   |                               |  |  |
|               | Aerosol modelling in OpenIFS (Computer Practical)  |                               |  |  |
|               |  |                               |  |  |
| 14.00 – 14.45 | Aerosol control and sensitivity  | Auditorium                    |  |  |
|               | Set off run with AER aerosol   |                               |  |  |
| 14.45-15.30   | Marcus Koehler and Adrian Hill, ECMWF  OpenIFS Data Hub and Licensing changes  | Auditorium                    |  |  |
|               | Openii 3 Data Flub and Liberising Changes  |                               |  |  |





| 15.30 – 16.00 | Coffee               | 1st Floor Terrace      |
|---------------|----------------------|------------------------|
| 16.00 – 16.30 | Metview with Aerosol | Auditorium             |
| 20.30         | Social Dinner        | Fiskebar<br>Restaurant |

# THURSDAY 25th May – EC-Earth: Climate and OpenIFS

| 8.55 – 9.00   | Brief introduction of the day                                  | Auditorium                    |
|---------------|--|-------------------------------|
|               | Morning Topic:   |                               |
|               | Climate interactions modelling (Talks)                         |                               |
|               |  |                               |
| 9.00 - 9.45   | Klaus Wyser, SMHI  | Auditorium                    |
|               | Overview of EC-Earth and Plans                                 |                               |
|               |  |                               |
| 9.45 - 10.15  | Montserrat Costa Surós, BSC                                    | Auditorium                    |
|               | Aerosol-sensitive Ice Nucleation Parameterizations in          |                               |
|               | the EC-Earth3: evaluation and climate impacts                  |                               |
|               |  |                               |
| 10.15 – 11.00 | Coffee   | 1 <sup>st</sup> Floor Terrace |
|               |  |                               |
| 11.00 – 11.45 | Carlos Pérez García-Pando, BSC                                 | Auditorium                    |
|               | Overview of BSC research on atmospheric                        |                               |
|               | composition and climate interactions                           |                               |
| 11.45 – 12.30 | Anna Agusti Danarada ECMANIE                                   | A dita vi                     |
| 11.45 – 12.50 | Anna Agusti Panareda, ECMWF                                    | Auditorium                    |
|               | Carbon cycle in the IFS (remote)                               |                               |
|               |  |                               |
| 12.30 – 12.45 | Etienne Touriany, BSC  | Auditorium                    |
| 12.30 – 12.45 | Etienne Tourigny, BSC  BSC activities with IFS/OpenIFS : model | Auditorium                    |

carbon cycle





|               | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECA  | ISTS                          |
|---------------|--|-------------------------------|
| 12.45 - 13.30 | Visit of MareNostrum   |                               |
|               |  |                               |
| 13.00 - 14.00 | Lunch  | Foyer                         |
| 10.00         | Lunch  | royei                         |
|               |  |                               |
| 14.00 – 14.30 | Abhishek Savita, Geomar  | <b>Auditorrium</b>            |
|               | OpenIFS Climate Sensitivity to Horizontal Resolution and Time Step                                 |                               |
|               |  |                               |
| 14.30 – 15.00 | Daniel Köhler, University of Helsinky  | Auditorrium                   |
|               | Using OpenIFS to study the impact on mid-latitude circulation in scenarios of future polar sea ice |                               |
|               |  |                               |
| 15.00 - 15.30 | Coffee   | 1 <sup>st</sup> Floor Terrace |
|               |  |                               |
|               | Afternoon Tenier   |                               |
|               | Afternoon Topic:   |                               |
|               | Future for OpenIFS   |                               |
| 45.00 40.00   | Lindete and the most release Ones IFO 40s4   |                               |
| 15.30 – 16.00 | Update on the next release OpenIFS 48r1  | Auditorrium                   |
|               |  |                               |
| 16.00 - 16.30 | Discussion of future user needs  | Auditorium                    |
|               |  | 7 10001101111                 |
|               |  |                               |

### FRIDAY 26th May - Future for OpenIFS continued

9.15 – 9.30 Brief introduction of the day Auditorium

#### **Morning Topic:**

**Machine Learning applications and Future for OpenIFS** 

| 9.30 - 10.15  | Mihai Alexe, ECMWF  | <b>Auditorium</b>             |
|---------------|---|-------------------------------|
|               | Machine learning for NWP and atmospheric composition: current status and outlook (remote) |                               |
| 10.15 – 11.00 | Coffee  | 1 <sup>st</sup> Floor Terrace |





| 11.00 – 11.30 | Clément Bouvier, University of Helsinki A large ensemble of baroclinic wave simulations generated with OpenIFS@home | Auditorium |
|---------------|---|------------|
| 11.30 – 12.30 | Discussion of <b>OpenIFS future</b> (Part 2), machine learning and composition                                      | Auditorium |
| 12.30 – 13.00 | Summary and close   | Auditorium |