

# MSCA DN-JD TRACES Training School (September 23<sup>rd</sup> - 27<sup>th</sup>, 2024)

| Time CET | September, 23rd, 2024<br>MONDAY                                                                                      | September, 24th, 2024<br>TUESDAY                  | September, 25th, 2024<br>WEDNESDAY                                             | September, 26th, 2024<br>THURSDAY                  | September, 27th, 2024<br>FRIDAY   |
|----------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------|
| 9:00 AM  |                                                                                                                      | DCE Presentation                                  | Uncertainty quantification and Robust Design<br>(Pietro Congedo - INRIA/ECOLP) | Experimental Lab 3                                 | Visit to DLR facilities           |
| 9:30 AM  | Welcome                                                                                                              |                                                   |                                                                                |                                                    |                                   |
| 10:00 AM | Assessing model fidelity for predicting aerodynamic penalties for in-flight icing<br>(Alessandro Donizetti - POLIMI) |                                                   | Ice protection and Ice Detection system design<br>(DLR + SAFRAN Aerosystems)   |                                                    |                                   |
| 10:30 AM |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 11:00 AM | Coffee break                                                                                                         | Coffee break                                      | Coffee break                                                                   |                                                    |                                   |
| 11:30 AM | Numerical analysis of convective heat transfer on realistic ice roughness<br>(Denis Sotomayor Zakharov - TUBS)       | DR Poster session and discussion                  | Testing of UAV icing in TerraXcube<br>(Riccardo Parin - EURAC)                 |                                                    |                                   |
| 12:00 PM | Numerical simulation of ice accretion on engines<br>(Clement Venuat - SAFRAN)                                        |                                                   | Testing of engine in icing conditions<br>(GE)                                  |                                                    |                                   |
| 12:30 PM |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 1:00 PM  | Lunch                                                                                                                | Lunch                                             | Lunch                                                                          | Lunch                                              | Lunch                             |
| 2:00 PM  |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 2:30 PM  | Experimental Lab 1                                                                                                   | DRs Poster session and discussion                 | Experimental Lab 2                                                             | Training on Research Data Management<br>(GradTUBS) | Social activities in Braunschweig |
| 3:00 PM  |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 3:30 PM  |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 4:00 PM  |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 4:30 PM  |                                                                                                                      | Coffee break                                      |                                                                                | Coffee break                                       |                                   |
| 5:00 PM  |                                                                                                                      | DRs Poster session and discussion                 |                                                                                | Lab Numerical Tools                                |                                   |
| 5:30 PM  |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 6:00 PM  |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 6:30 PM  |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 7:00 PM  |                                                                                                                      | Dinner together<br>(Mutterhabenicht Braunschweig) |                                                                                |                                                    | TRACES DRs night out              |
| 7:30 PM  |                                                                                                                      |                                                   |                                                                                |                                                    |                                   |
| 8:00 PM  |                                                                                                                      |                                                   |                                                                                | Pizza/Pasta Night at ISM                           |                                   |

### Legend for Attendance

- Online public event, in presence for TRACES members only
- Mandatory for PhD supervisors (hybrid in presence/online)
- Experimental and Numerical Labs
- Design & Certify Exercise PWGs presentations

| <b>Monday</b><br><b>23<sup>rd</sup></b> | Room Hs003, Institute of Fluid Mechanics, Hermann-Blenk-Straße 37, 38106 Braunschweig                                                                                                                                                                                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 09.30 - 10.00                           | Welcome                                                                                                                                                                                                                                                                                                                                                     |
| 10.00 - 11.00                           | Assessing model fidelity for predicting aerodynamic penalties for in-flight icing<br>Presenter: Alessandro Donizetti (POLIMI)<br>Link:<br><a href="https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=mea3df0f53ca1c709d1331c59d40b90a6">https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=mea3df0f53ca1c709d1331c59d40b90a6</a> |
| 11.00 - 11.30                           | Coffee break                                                                                                                                                                                                                                                                                                                                                |
| 11.30 - 12.15                           | Numerical analysis of convective heat transfer on realistic ice roughness<br>Presenter: Denis Sotomayor Zakharov (TUBS)<br>Link:<br><a href="https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m2155ae2e60f5e21da2425315589b3129">https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m2155ae2e60f5e21da2425315589b3129</a>       |
| 12.15 - 13.00                           | Numerical simulation of ice accretion on engines<br>Presenter: Clement Venuat (SAFRAN)<br>Link: <a href="https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m2155ae2e60f5e21da2425315589b3129">https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m2155ae2e60f5e21da2425315589b3129</a>                                           |
| 13.00 - 14.00                           | Lunch                                                                                                                                                                                                                                                                                                                                                       |

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|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.30 - 18.30                              | Experimental Lab 1                                                                                                                                                                                                                                                                                                    |
| <b>Tuesday</b><br><b>24<sup>th</sup></b>   | Room Hs003, Institute of Fluid Mechanics, Hermann-Blenk-Straße 37, 38106 Braunschweig                                                                                                                                                                                                                                 |
| 9.00 - 11.00                               | DCE Presentation Slot                                                                                                                                                                                                                                                                                                 |
| 11.00 - 11.30                              | Coffee break                                                                                                                                                                                                                                                                                                          |
| 11.30 - 13.00                              | DR's Poster Session and Discussion                                                                                                                                                                                                                                                                                    |
| 13.00 - 14.30                              | Lunch                                                                                                                                                                                                                                                                                                                 |
| 14.30 - 16.30                              | DR's Poster Session and Discussion                                                                                                                                                                                                                                                                                    |
| 16.30 - 17:00                              | Coffee break                                                                                                                                                                                                                                                                                                          |
| 17.00 - 18.30                              | DR's Poster Session and Discussion                                                                                                                                                                                                                                                                                    |
| 18.30 - 20.00                              | Joint Dinner<br>Mutterhabenicht (Papenstieg 3, 38100 Braunschweig)                                                                                                                                                                                                                                                    |
| <b>Wednesday</b><br><b>25<sup>th</sup></b> | Room Hs003, Institute of Fluid Mechanics, Hermann-Blenk-Straße 37, 38106 Braunschweig                                                                                                                                                                                                                                 |
| 9.00 - 10.00                               | Uncertainty Quantification and Robust Design<br>Presenter: Pietro Congedo (INRIA/ECOLP)<br>Link:<br><a href="https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m7d266ffb4161d34432789801a5fea4cb">https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m7d266ffb4161d34432789801a5fea4cb</a> |
| 10.00 - 11.00                              | Ice Protection and Ice Detection System Design<br>Presenter: (DLR + SAFRAN AeroSystems)<br>Link:<br><a href="https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m7d266ffb4161d34432789801a5fea4cb">https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m7d266ffb4161d34432789801a5fea4cb</a> |
| 11.00 - 11.30                              | Coffee break                                                                                                                                                                                                                                                                                                          |
| 11.30 - 12.15                              | Testing of UAV Icing in TerraXcube<br>Presenter: Riccardo Parin (EURAC)<br>Link:<br><a href="https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m09d8babdc0fcdf31ccd8eff90e6fdce">https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m09d8babdc0fcdf31ccd8eff90e6fdce</a>                   |
| 12.15 - 13.00                              | Testing of Engine in Icing Conditions<br>Presenter: (GE)<br>Link:<br><a href="https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m09d8babdc0fcdf31ccd8eff90e6fdce">https://tu-braunschweig.webex.com/tu-braunschweig-en/j.php?MTID=m09d8babdc0fcdf31ccd8eff90e6fdce</a>                                  |
| 13.00 - 14.30                              | Lunch                                                                                                                                                                                                                                                                                                                 |

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|-------------------------------------|---------------------------------------------------------------------------------------|
| 14.30 -<br>18.30                    | Experimental Lab 2                                                                    |
| <b>Thursday<br/>26<sup>th</sup></b> | Room Hs003, Institute of Fluid Mechanics, Hermann-Blenk-Straße 37, 38106 Braunschweig |
| 9.00 - 13.00                        | Experimental Lab 3                                                                    |
| 14.30 -<br>16.30                    | Training on Research Data Management (GradTUBS)                                       |
| 16.30 -<br>17.00                    | Coffee break                                                                          |
| 17.00 -<br>20.00                    | Lab Numerical Tools                                                                   |
| 20.00 -<br>21.00                    | Pizza/Pasta Night at ISM                                                              |
| <b>Friday 27<sup>th</sup></b>       | Room Hs003, Institute of Fluid Mechanics, Hermann-Blenk-Straße 37, 38106 Braunschweig |
| 9.00 - 13.00                        | Visit to DLR                                                                          |
| 14.30 -<br>18.30                    | Social activities in Braunschweig                                                     |
| 18.30 -<br>20.00                    | TRACES DR's night out                                                                 |
|                                     | End                                                                                   |