### 2025 IEEE RAS Summer School on Multi-Robot Systems PROGRAM Final simplified version

The program is scheduled in the CEST time zone.

### **30.7.2025 Wednesday**

Venue: Technicka 2, Praha - Dejvice

| 08:15 - 09:00<br>09:00 - 09:45 | Registration (for later coming possible during the day)  Martin Saska - Welcome and Organizational Details; MRS Group Introduction |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 09:45 - 10:15                  | Coffee Break                                                                                                                       |
| 10:15 - 11:45<br>11:45 - 12:00 | Martin Saska - Research of Groups of Aerial Robots at CTU in Prague Grouping & Leader Briefing                                     |
| 12:00 - 13:00                  | Lunch                                                                                                                              |
| 13:00 - 14:15                  | Tomáš Báča - Introduction into MRS System in ROS Tim Lakemann, Swati Dantu, Martin Jiroušek - Practical Seminar Task Introduction  |
| 14:15 - 15:45                  | Sabine Hauert - Breaking Swarm Stereotypes: Towards Making Swarms for People                                                       |
| 15:45 - 16:15                  | Coffee Break                                                                                                                       |
| 16:15 - 17:45                  | Bruno Siciliano: From Dynamic Manipulation to Legged Robotics                                                                      |
| 17:45 - 19:30                  | Workshop (discussion and networking in topic-oriented subgroups)                                                                   |
| 19:30 - 22:00                  | Social program: Welcome Party                                                                                                      |



#### 31.7. Thursday

Venue: Technicka 2, Praha - Dejvice

| 08:30 - 08:45<br>08:45 - 09:30 | Registration ( <i>for later coming</i> ) <b>Johannes Betz</b> - Interactive Motion Planning for Multi-Robot Autonomous Racing Systems Part I                                                  |                |  |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--|
| 09:30 - 10:00                  | Coffee Break                                                                                                                                                                                  |                |  |
| 10:00 - 11:00                  | Johannes Betz - Interactive Motion Planning for Multi-Robot Autonomous Racing Systems Part II                                                                                                 |                |  |
| GROUP I                        | 11:00 - 12:00                                                                                                                                                                                 | king with Beer |  |
| GROUP II                       | 11:00 - 13:00                                                                                                                                                                                 | king with Beer |  |
| 15:30 - 16:30                  | <b>Dusan Stipanovic</b> - Multi-Objective Control with Guaranteed Collision Avoidance for Multi-Vehicle Systems                                                                               |                |  |
| 16:30 - 17:00                  | Coffee break                                                                                                                                                                                  |                |  |
| 17:00 - 18:00                  | <b>Dusan Stipanovic</b> - Multi-Objective Control with Guaranteed Collision Avoidance for Multi-Vehicle Systems                                                                               |                |  |
| 19:00-21:00 -                  | Gala Dinner & Testbed Tour  Location: CIIRC CTU (Jugoslávských partyzánů 1580/3, Prague)  Join us for a gala dinner accompanied by a guided tour of the unique Testbed for Industry 4.0 – the |                |  |

Join us for a gala dinner accompanied by a guided tour of the unique Testbed for Industry 4.0 – the largest research and experimental facility of its kind in Central and Eastern Europe. Discover cutting-edge technologies for smart manufacturing and fully integrated industrial processes developed within the RICAIP Centre of Excellence.

#### 1.8. Friday

Venue: Technicka 2, Praha - Dejvice

| 08:45 - 09:00<br>09:00 - 10:00 | Registration (for later coming)  lain Couzin - Geometric Principles for Highly-Effective Decision-Making in Animals and Robots Part I                                                                                                                      |  |  |  |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| 10:00 - 10:30                  | Coffee break                                                                                                                                                                                                                                               |  |  |  |
| 10:30 - 11:30                  | lain Couzin - Geometric Principles for Highly-Effective Decision-Making in Animals and Robots Part II                                                                                                                                                      |  |  |  |
| GROUP I                        | 11:30 - 12:15       Lunch         12:15 - 13:00       Free Time & Networking with Beer         13:00 - 14:30       Practical in PC lab                                                                                                                     |  |  |  |
| GROUP II                       | 11:30 - 13:00                                                                                                                                                                                                                                              |  |  |  |
| 14:30 - 15:30<br>15:30 - 16:30 | Daniel Heřt, Jan Bednář - TBD  Alessandro Farinelli - Decentralized Coordination for Multi-Robot Systems                                                                                                                                                   |  |  |  |
| 16:30 - 17:00                  | Coffee Break                                                                                                                                                                                                                                               |  |  |  |
| 17:00 - 18:00                  | Alessandro Farinelli - Decentralized Coordination for Multi-Robot Systems                                                                                                                                                                                  |  |  |  |
| 19:00 - 21:00                  | Evening Activity: Guided Tour / Beer Tour Choose between a guided walk through Prague's top sights (e.g. Charles Bridge, Prague Castle) with a professional guide, or a casual Czech Beer Tour with local hosts (MRS CTU / Fly4Future) - includes 2 beers. |  |  |  |

### 4.8. Monday

Venue: Karlovo namesti 13, Praha 2, Building E

| 08:45 - 09:00 | Registration (for later coming)                                                |                     |  |
|---------------|--------------------------------------------------------------------------------|---------------------|--|
| GROUP I       | 09:00 - 11:00                                                                  | Lab Tour            |  |
|               | 10:30 - 11:00                                                                  | Coffee Break        |  |
|               | 11:00 - 13:00                                                                  | Practical in PC Lab |  |
| GROUP II      | 09:00 - 11:00                                                                  | Practical in PC Lab |  |
|               | 10:30 - 11:00                                                                  | Coffee Break        |  |
|               | 11:00 - 13:00                                                                  | Lab Tourl           |  |
|               |                                                                                |                     |  |
| 13:00 - 13:45 | Lunch                                                                          |                     |  |
| 13:45 - 15:45 | Students Presentations                                                         |                     |  |
|               |                                                                                |                     |  |
| 15:45 - 16:15 | Coffee Break                                                                   |                     |  |
| 16:15 - 17:15 | Briefing on the Experimental Part, Organisational Details, Safety Instructions |                     |  |
| 17:30 - 18:30 | Site Visit (Optional): Fly4Future & Eagle.One                                  |                     |  |

### 5.8. Tuesday

Venue: Císařský ostrov, GPS coordinates: 50.111541, 14.418615

| 09:00-17:00 | Outdoor Experiments with Awards Announcement                                                                    |
|-------------|-----------------------------------------------------------------------------------------------------------------|
| 11:00-15:00 | Outdoor Lunch Lunch will be served continuously between 11:00 and 15:00 in an outdoor setting. Drop by anytime! |