Machine Learning for Advanced Control Techniques

- Online workshop of g2net's Workgroup 3
- G2net COST action → https://www.g2net.eu
- Workshop page → https://indico.ego-gw.it/event/172/
- Program all times CET
 - - Module 1 --> Monday 9-11:30
 - - Module 2 --> Monday 13-14:15
 - Module 3 --> Monday 16-18
 - - Module 4 --> Tuesday 9-11:15
 - Module 5 --> Tuesday 15-17
- Speakers
 - Diego Bersanetti
 - Francesca Badaracco
 - Rob Walet
 - Gabriele Vajente
 - Fiodor Sorrentino
 - Marco Cavaglia



Monday March 22.3.2021 Programme

1. **Diego Bersanetti** --> Interferometer Cavities: locking strategies and improvement possibilities

• Diego's talk: <u>9:15-10</u>

coffee break: 10-10:30

 Roundtable discussion on ML for cavity locking, led by Diego: <u>10:30-11:30</u>

2. Workshop contributions

- Surrogate Wiener filtering for the prediction and optimised cancellation of Newtonian noise at Virgo --> Francesca Badaracco: 13-13:30
- The experiment of the table top interferometer --> Rob Walet: 13:30-14:15
- 3. Gabriele Vajente --> Non stationary noise removal from LIGO data

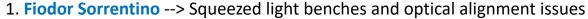
Gabriele's talk: 16-16:45

• coffee break: 16:45-17

Roundtable discussion on ML for noise removal, led by Gabriele:
17-18



Tuesday March 23.3.2021 Programme



• Fiodor's talk: <u>9-9:45</u>

coffee break: 9:45-10:15

 Roundtable discussion on ML for squeezed light benches, led by Fiodor: 10:15-11:15

2. Marco Cavaglia --> Glitch removal in ground-based gravitational-wave interferometric detectors

Marco's talk: 15-15:45

coffee break: 15:45-16

• Roundtable discussion on ML for glitch removal, led by Marco: 16-17

3. **Closing words**: <u>17-17:15</u>

Training school in June 2021

