

## PROGRAM WINTER SCHOOL 2021

| DAY                      | TIME        | talking time | TOPIC   | OVERALL TOPIC   | SPEAKER            | CHAIRMAN     |
|--------------------------|-------------|--------------|---|---|--------------------|--------------|
| Monday,<br>January 18th  | 13:00-13:15 | 15 Min.      | Welcome (Introduction of faculty, virtual meeting, etc.)          | Basic Sciences  | D. Weber, T. Lomax | T. Lomax     |
|                          | 13:15-13:35 | 20 Min.      | A short historical overview of proton therapy                     |   | D. Weber           |              |
|                          | 13:35-14:10 | 35 Min.      | Basic physics of proton radiation                                 |   | M. Schippers       |              |
|                          | 14:10-15:00 | 50 Min.      | Accelerators and beam production techniques for proton therapy    |   | M Schippers        |              |
|                          | 15:00-15:10 | 10 Min.      | Coffee-Break  |   |                    |              |
|                          | 15:10-15:50 | 40 Min.      | Basic radiation biology of photons and protons                    | Biology   | M. Pruschy         | T. Lomax     |
|                          | 15:50-16:30 | 40 Min.      | How significant are RBE variations in proton therapy?             |   | H. Paganetti       |              |
|                          | 16:30-17:00 | 30 Min.      | Second malignancies   |   | U. Schneider       |              |
|                          | 17:00-17:10 | 10 Min.      | Coffee-Break  |   |                    |              |
|                          | 17:10-17:50 | 40 Min.      | Tumors of the skull base and spine chordoma and chondrosarcoma    | Clinical outcomes I   | D. Weber           | D. Weber     |
|                          | 17:50-18:30 | 40 Min.      | Proton therapy for pediatric & AYA patients                       |   | A. Mahajan         |              |
| DAY                      | TIME        |              | TOPIC   | OVERALL TOPIC   | SPEAKER            | CHAIRMAN     |
| Tuesday,<br>January 19th | 13:00-13:40 | 40 Min.      | Active scanning beam 1: Modulating delivery                       | Generating, modulating, controlling and checking proton therapy | D. Meer            | M. Schippers |
|                          | 13:40-14:05 | 25 Min.      | Active scanning beam 2: Controlling delivery                      |   | M. Grossmann       |              |
|                          | 14:05-14:45 | 40 Min.      | Active scanning beam 3: Checking delivery/dosimetry               |   | S. Safai           |              |
|                          | 14:45-15:10 | 25 Min.      | Coffee-Break  |   |                    |              |
|                          | 15:10-16:05 | 55 Min.      | Treatment planning for pencil beam scanning and IMPT              | Treatment Planning  | T. Lomax           | A. Borsi     |
|                          | 16:05-16:45 | 40 Min.      | Proton therapy Workflow   |   | J. Hrbacek         |              |
|                          | 16:45-17:10 | 25 Min.      | Coffee-Break  |   |                    |              |
|                          | 17:10-17:50 | 40 Min.      | Advancing proton therapy in lung cancer: Beyond proton bragg peak | Clinical outcomes II  | J.Y. Chang         | D. Weber     |
|                          | 17:50-18:30 | 40 Min.      | GI and proton therapy   |   | P. Fossati         |              |

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| Wednesday,<br>January 20th | 13:00-13:40 | 40 Min. | Commissioning a new facility: Specifications                             | Clinical operation                  | H. Nyström                            | S. Safai     |
|                            | 13:40-14:20 | 40 Min. | Commissioning a new facility: Clinical                                   |                                     | A Fredh                               |              |
|                            | 14:20-14:50 | 30 Min. | Ocular Proton treatment  |                                     | J. Hrbacek                            |              |
|                            | 14:50-15:20 | 30 Min. | Coffee-Break and PSI virtual Tour  |                                     |                                       | M. Grossmann |
|                            | 15:20-16:00 | 40 Min. | Delivery uncertainties and their consequences                            | Treatment Planning                  | F. Albertini                          | S. Safai     |
|                            | 16:00-16:40 | 40 Min. | Motion / motion mitigation   |                                     | G. Fattori                            |              |
|                            | 16:40-17:00 | 20 Min. | Coffee-Break   |                                     |                                       |              |
|                            | 17:00-17:30 | 30 Min. | Workshop 1 to 4 in parallel - participants splitted up in smaller groups | 1. Clinical Case Presentation       | B. Bachtiary, D. Leiser, N. Bizzocchi |              |
|                            | 17:30-18:00 | 30 Min. | Workshop 1 to 4 in parallel  | 2. Treatment planning               | T. Lomax                              |              |
|                            | 18:00-18:30 | 30 Min. | Workshop 1 to 4 in parallel  | 3. Treatment QA and Clinical Issues | A. Borsi, S. Safai                    |              |
| DAY                        | TIME        |         | TOPIC  | OVERALL TOPIC                       | SPEAKER                               | CHAIRMAN     |
| Thursday,<br>January 21th  | 13:00-13:30 | 30 Min. | Workshop 1 to 4 in parallel  | 4. Delivery hardware                | D. Meer, C. Bula                      | B. Bachtiary |
|                            | 13:30-14:10 | 40 Min. | Proton therapy for CNS adult tumors                                      | Clinical outcomes III               | D. Weber                              |              |
|                            | 14:10-14:50 | 40 Min. | Head & neck cancers  |                                     | H. Langendijk                         |              |
|                            | 14:50-15:30 | 40 Min. | Validation methodologies for the clinical benefit of proton therapy      |                                     | H. Langendijk                         |              |
|                            | 15:30-16:00 | 30 Min. | Coffee-Break and PSI virtual Tour (Replay)                               |                                     |                                       | M. Grossmann |
|                            | 16:00-16:40 | 40 Min. | Technological innovation: Delivery                                       | Innovations                         | D. Meer                               | D. Meer      |
|                            | 16:40-17:20 | 40 Min. | Technological innovation: Imaging  |                                     | G. Fattori                            |              |
|                            | 17:20-17:50 | 30 Min. | Protons versus "the competition"   |                                     | T. Lomax                              |              |
|                            | 17:50-18:00 | 10 Min. | Closing remarks  |                                     | T. Lomax                              |              |