

## PROGRAM WINTER SCHOOL 2020

| DAY                     | TIME        | TOPIC  | OVERALL TOPIC       | SPEAKER            | CHAIRMAN     |
|-------------------------|-------------|--|---------------------|--------------------|--------------|
| Sunday,<br>January 19th | 17:00-19:00 | Registration   |                     |                    |              |
|                         | 18:00-21:00 | Welcome Apéro - Fingerfood and Drinks  |                     |                    |              |
| Monday,<br>January 20th | 09:00-09:30 | Welcome (Introduction of faculty, logistics etc.)                                  | Basic Sciences      | D. Weber, T. Lomax | T. Lomax     |
|                         | 09:30-10:00 | A short historical overview of proton therapy                                      |                     | D. Weber           |              |
|                         | 10:00-10:30 | Basic physics of proton radiation  |                     | M. Schippers       | D. Weber     |
|                         | 10:30-11:00 | Coffee break   |                     |                    |              |
|                         | 11:00-11:45 | Basic radiation biology of photons and protons                                     |                     | M. Pruschy         |              |
|                         | 11:45-12:30 | Proton therapy for CNS adult tumors  |                     | D. Weber           | T. Lomax     |
|                         | 12:30-14:00 | Lunch  |                     |                    |              |
|                         | 14:00-14:45 | Accelerators and beam production techniques for proton therapy                     | Clinical outcomes I | M. Schippers       | B. Bachtiary |
|                         | 14:45-15:30 | Tumors of the skull base and spine chordoma and chondrosarcoma                     |                     | R. Malyapa         |              |
|                         | 15:30-16:00 | Coffee break   |                     |                    |              |
|                         | 16:00-16:45 | Advancing proton therapy in lung cancer: Beyond proton bragg peak                  |                     | J.Y. Chang         | R. Malyapa   |
|                         | 16:45-17:30 | GI and proton therapy  |                     | P. Fossati         |              |
|                         | 18:00       | Dinner at Parkhotel for participants   |                     |                    |              |
|                         | 18:00       | Dinner for faculty members only - Meeting point at 18.00 in front of the Parkhotel |                     |                    |              |

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|--------------------------|--------------|---|---|--------------|--------------|
| Tuesday,<br>January 21st | 09:00-09:45  | Active scanning beam 1: Modulating delivery                         | Generating, modulating, controlling and checking proton therapy | D. Meer      | T. Lomax     |
|                          | 09:45-10:15  | Active scanning beam 2: Controlling delivery                        |   | M. Grossmann |              |
|                          | 10:15-10:45  | Coffee break  |   |              |              |
|                          | 10:45-11:30  | Active scanning beam 3: Checking delivery/dosimetry                 |   | S. Safai     |              |
|                          | 11:30-12:15  | Proton therapy workflow   | Treatment Planning  | J. Hrbacek   |              |
|                          | 12:15-13:45  | Lunch   |   |              |              |
|                          | 13:45-14:45  | Treatment planning for pencil beam scanning and IMPT                | Treatment Planning  | T. Lomax     | H. Paganetti |
|                          | 14:45-15:30  | Delivery uncertainties and their consequences                       |   | F. Albertini |              |
|                          | 15:30-16:00  | Coffee break  |   |              |              |
|                          | 16:00-16:45  | Motion / motion mitigation  |   | A. Knopf     |              |
|                          | 16:45-17:15  | Ocular proton therapy   |   | J. Hrbacek   |              |
|                          | 17.45        | Bus to social event place - Meeting point in front of the Parkhotel |   |              |              |
| 18:15-22:00              | Social event |   |   |              |              |

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|----------------------------|-------------|---|-------------------------------------|-------------------------------------|--------------|
| Wednesday,<br>January 22nd | 08.45       | Day at PSI: Departure to Paul Scherrer Institut - Meeting point in front of the Parkhotel |                                     |                                     |              |
|                            | 09:15-10:00 | How significant are RBE variations in proton therapy?                                     | Biology                             | H. Paganetti                        | M. Schippers |
|                            | 10:00-10:30 | Second malignancies   |                                     | U. Schneider                        |              |
|                            | 10:30-11:00 | Coffee break  | 4 seminars, about 10 students each: |                                     |              |
|                            | 11:15-12:15 | Workshop 1  | 1. Clinical Case Presentation       | R. Malyapa, D. Leiser, N. Bizzocchi |              |
|                            | 12:15-13:15 | Workshop 2  | 2. Treatment planning               | T. Lomax                            |              |
|                            | 13.30-14:30 | Lunch at "Auditorium"   |                                     |                                     |              |
|                            | 14:45-15:45 | Workshop 3  | 3. Treatment QA and Clinical Issues | A. Bolsi, S. Safai                  |              |
|                            | 15:45-16:45 | Workshop 4  | 4. Delivery hardware                | D. Meer, C. Bula                    |              |
|                            | 16:45-17:15 | Coffee break at "Time Out"  |                                     |                                     |              |
|                            | 17:15-18:15 | Site tour   |                                     |                                     |              |
|                            | 18:30       | Departure to Parkhotel, PSI gate west   |                                     |                                     |              |
|                            | 19:00       | Dinner at Parkhotel   |                                     |                                     |              |

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| Thursday,<br>January 23rd | 08:30-09:15   | Pencil beam scanning proton therapy for tumors of head & neck cancers involving the skull base | Clinical outcomes II             | R. Malyapa    | <b>B. Bachtiary</b> |
|                           | 09:15-10:00   | Proton therapy for pediatric & AYA patients  |                                  | A. Mahajan    |                     |
|                           | 10:00-10:30   | Coffee break   |                                  |               |                     |
|                           | 10:30-11:15   | Validation methodologies for the clinical benefit of proton therapy                            | Clinical operation               | H. Langendijk |                     |
|                           | 11:15-12:00   | Commissioning a new facility: Specifications   |                                  | H. Nyström    |                     |
|                           | 12:00-13:15   | Lunch (plus group picture)   |                                  |               |                     |
|                           | 13:30-14:15   | Commissioning a new facility: Clinical   | Clinical operation & innovations | J. Rottmann   | <b>M. Schippers</b> |
|                           | 14:15-15:00   | Technological innovation: Delivery   |                                  | D. Meer       |                     |
|                           | 15:00-15:30   | Coffee break   |                                  |               |                     |
|                           | 15:30-16:15   | Technological innovation: Imaging  | Innovations                      | G. Fattori    | <b>D. Meer</b>      |
|                           | 16:15-16:45   | Protons versus "the competition"   |                                  | T. Lomax      |                     |
|                           | 16:45-17:00   | Closing remarks  |                                  | T. Lomax      |                     |
|                           |               |  |                                  |               |                     |
| Friday,<br>January 24th   | 07:30 - 16:00 | Skiing day optional  |                                  |               |                     |