

T2.6 Workshop Model-based data analysis for clinical applications

Online 2024 January 8-10,

Onsite in Winterthur 2024 February 14

and **2nd Consortium Meeting / Hyperboost Annual Meeting**

Onsite in Winterthur 2024 February 15-16

Organizer: ZHAW School of Engineering, IAMP, Zurich University of Applied Sciences, CH 8401 Winterthur, Switzerland



Workshop Model-based Data Analysis for Clinical Applications - Programme

Day 1 (Mon., **January 8**; Online MS Teams)

09:00-09:20: Welcome, Organisation of Workshop (S. Scheidegger)

09:20-10:00: **L1.** Modelling and Biological Systems 1 (S. Scheidegger)

10:00-10:20: Coffee Break

10:20-11:00: **L1.** Modelling and Biological Systems 2 (S. Scheidegger)

11:00-11:10: Short Break

11:10-12:00: **L2.** Multiscale Modelling in Epidemiology (R. Fuchsli)

12:00-13:20: Lunch Break

13:20-14:00: **L3.** Using Graphical Model Editors (S. Scheidegger)

14:00-14:10: Short Break

14:00-14:50: **L4.** Using Python for model fitting (M. Weyland)

14:50-15:00: Short Break

15:00-17:00: **Lab1.** Using Python for dynamic model fitting (M. Weyland)

Day 2 (Tue., **January 9**; Online MS Teams)

09:00-09:20: Q&A Session Lab1 (M. Weyland)

09:20-10:00: L1. Cognitive Computing in Life Sciences Part 1 (Yulia Sandamirskaya)

10:00-10:20: Coffee Break

10:20-11:00: L1. Cognitive Computing in Life Sciences Part 2 (Yulia Sandamirskaya)

11:00-11:10: Short Break

11:10-12:00: L2. Biokinetic / Biodynamic Modelling Part 1 (S. Scheidegger)

12:00-13:20: Lunch Break

13:20-14:00: L2. Biokinetic / Biodynamic Modelling Part 2 - Input Lab2 (S. Scheidegger)

14:00-14:10: Short Break

14:10-16:00: Lab2. Model-based Data Analysis of PET Images (M. Weyland)

16:00-16:10: Short Break

16:10-17:00: Q&A Session Lab 2 (M. Weyland, S. Scheidegger)

Day 3 (Wed., **January 10**; Online MS Teams)

09:00-10:00: L1. Advanced Fitting Methods (R. Fuchsli, M. Weyland)

10:00-10:20: Coffee Break

10:20-11:00: L2. Radiobiological Models 1 (S. Scheidegger)

11:00-11:10: Short Break

11:10-12:00: L2. Radiobiological Models 2 (S. Scheidegger)

12:00-13:20: Lunch Break

13:20-15:00: L2. Radiobiological Models 3: Fitting LQ Model and TCP (S. Scheidegger, M. Weyland)

15:20-17:00: Problem Statement for Home Work (S. Scheidegger, M. Weyland)

January 10 – Feb 11: Home Work, Submission of commented model code by 11th of February 2024

Day 4 (Wed., **February 14** Onsite ZHAW Winterthur)

09:00-10:00: L1. Ethical Aspects of Computational Modelling (R. Fuchsli)

10:00-10:20: Coffee Break

10:20-10:50: Discussion of Results and QA Session (S. Scheidegger, M. Weyland)

10:50-11:10: Feedback, Closing (S. Scheidegger, R. Fuchsli, M. Weyland)

Afternoon Program: Visit Proton Therapy Center, PSI, Villigen (special programme)

Afternoon Program: Visit Proton Therapy Center, PSI, Villigen

11:30 Bus departure Technikumstrasse (in front of TH building) to KSA, Aarau

13:00-15:00 Lunch / short presentations ESR (with recording): Same order as on Feb.15/16, 3' per ESR plus 2' change of speakers

15:20 Bus transfer to PSI guided tour, Paul Scherrer Institute, Villigen

16:00 Introduction to PSI

16:30 Visitor Center

17:00 Experimental Hall (PSI West)

17:45 Centre for Protonentherapy (as possible, depending on patient treatments)

18:30 End of Visit and Transfer to the Habsburg Castle

19:00 Excursion Dinner (Habsburg Castle)

22:00 Bus transfer to Winterthur (around 22:00)



Hyperboost Consortium Meeting - Programme

Thu., 15th of February

8:30-9:10 Welcome and introduction by Hans Crezee (current status of the Hyperboost network's progress and achievements)

9:10- 10:00 Presentations per WP
(20' presentation, 5' questions; more time during the general sessions)

WP3

9:10- 9:35 Fernando Lobo (ESR1)

9:35- 10:00 Priyanshu Sinha (ESR2)

10:00-10:30 Coffee/tea break

10:30- 12:10 Presentations per WP – continued

10:30- 10:55 Folefac Charlemagne Asonganyi (ESR3)

10:55- 11:20 Azzaya Sengedorj (ESR4)

11:20- 12:10 General WP3 Discussion

12:10- 13:30 Lunch

13:30- 15:20 Presentations per WP - continued

WP4

13:30- 13:55 Sergio Mingo Barba (ESR5)

13:55- 14:20 Timoteo Herrera (ESR6)

14:20- 14:55 Spyridon Karkavitsas (ESR7)

14:55- 15:20 Artemis Kontogoula (ESR8)

15:20- 15:50 Coffee/tea break

15:50-16:50 General WP4 Discussion

16:50-17:15 Wrap up and closing of the day

1800-2200: Meeting Dinner (Winterthur, Location tbd)

Fri., 16th of February

8:30- 9:00 General assembly, to discuss general things in the project, perhaps also with ESRs?

Presentations per WP

(20' presentation, 5' questions; more time during the general sessions)

WP5

9:00- 9:25 Mattia De Lazzari (ESR9)

9:25- 9:50 Carolina Seabra (ESR10)

9:50-10:20 Coffee/tea break

10:20- 10:35 Rupali Khatun (ESR11)

10:35- 11:00 Faezeh Rahimi (ESR12)

11:00- 11:25 Paraskevi Danai Veltsista (ESR13)

11:25-11:50 Adela Ademaj (ESR14)

11:50- 12:40 General WP5 discussion

12:40- 12:45 Closure and summary

12:45-Lunch and farewell