

Scientific Program

Wednesday, October 21

9:00 – 10:00 Registration and Coffee

10:00 **Opening ceremony**
Peter Manser, SSRMP President

Session 1 : Radioprotection (*Buchauer K. and Pempler P.*)

10:15 – 12:00

10:15 **Linac activation of radioisotopes and underground gammaspectroscopic analyses**
P. Weber, G. Guibert, C. Tamburella

10:30 **Measurement and Monte Carlo Calculation of Organ Doses for Digital Volumetric Tomography**
M. Ernst, M. K. Fix, P. Manser, K. Dula

10:45 **Standardized Quality Assessment Protocol for Implementation of Art.74 in Nuclear Medicine.**
G. Di Domenicantonio, S. Gnesin, T. Lima

11:00 **Optimization of the planning CT-scans in radiation oncology: An image quality based approach**
N. Ryckx, N. Ruiz Lopez, R. Moeckli, F. R. Verdun

11:15 **Dose Optimization and Radiation Protection in Interventional Radiology using Real-Time Dosimetry**
J. Binder, N. Icken, T. V. M. Lima, I. Özden, G. Lutters

11:30 **Evaluation of Patients Dose in PET Studies from CT Contrast Agents**
T.V.M. Lima, J. Binder, I. Oezden, K. Strobel, S. Matijasevic, A. Bopp, E. Nitzsche, G. Lutters

11:45 **The Use of Dose Length Product DLP, Signal-to-Noise Ratio SNR and Difference Detail Curve DDC for CT Protocol Characterization and Optimization**
I. Oezden, C. Sommer, G. Lutters, S. Scheidegger

Lunch break sponsored by Varian

12:00 – 13:15

Industrial exhibition

12:30 – 13:15

Session 2: Advanced Imaging (*Miéville F. and Vetterli D.*)

13:15 – 14:45

- 13:15** **New trends in biomedical imaging using atomic magnetometers**
Invited speaker : Antoine Weis, University of Fribourg
- 14:00** **Numerical simulation of X-ray grating interferometry imaging using Monte Carlo methods**
S. Peter, M. K. Fix, P. Manser, M. Stampanoni
- 14:15** **Task-based assessment of a the novel ADMIRE algorithm**
J. G. Ott, A. Ba, D. Racine, N. Ryckx, F. O. Bochud, F. R. Verdun
- 14:30** **Texture analysis of CT perfusion maps – stability study**
M. Nesteruk, R. Bundschuh, O. Riesterer, P. Veit-Haibach, G. Studer, S. Stieb, S. Glatz, H. Hemmatazad, G. Huber, M. Pruschy, M. Guckenberger, S. Lang

Session 3: Motion management (*Fix, M. and Moeckli R.*)

14:45-16:00

- 14:45** **Intra- and interfraction motions assessed with Cone-Beam CT and fluoroscopy for lung SBRT**
C. Castella, T. Breuneval, P. Tsoutsou
- 15:00** **Modeling of a Robotic Treatment Table to improve the Control Performance**
M. Stäubli, A. Jöhl, M. Schmid Daners, M. Meboldt, S. Klöck, M. Guckenberger, S. Lang
- 15:15** **A comparison of different respiratory motion management techniques**
S. Ehrbar, R. Perrin, M. Peroni, K. Bernatowicz, T. Parkel, D. Ch. Weber, A. Lomax, I. Pytko, S. Klöck, M. Guckenberger, S. Lang
- 15:30** **Dosimetric Impact of Geometric Uncertainties in Navigated HDR-Brachytherapy for Liver Tumors**
L. Witthauer, S. Weber, D. Terribilini, M.K. Fix
- 15:45** **Feasibility study of using a radiofrequency tracking system for intra-fractional monitoring during radiosurgery**
I. Pytko, A. Stüssi, S. Lang, S. Klöck, M. Guckenberger

16:00 – 16:30 Coffee break and poster session

16:30 – 18:00 General Assembly SSRMP

18:00 – 19:15 Apéro sponsored by Elekta and Raysearch Inc.

19:30 **Conference dinner**

Thursday, October 22

Session 4: Radiotherapy I (*Thengumpallil S. and Castella C.*)

8:30-10:00

8:30 A dosimetric comparison of MERT and mixed beam therapy for selected head and neck tumors

A. Joosten, S. Müller, D. Henzen, W. Volken, D. Frei, D.M. Aebersold, P. Manser, M.K. Fix

8:45 Knowledge based planning model assessment for breast VMAT planning

A.Fogliata, C.Bourgier, F.DeRose, P.Fenoglietto, F.Lobefalo, P. Mancosu, S.Tomatis, M.Scorsetti, L.Cozzi

9:00 A clinical distance measure for evaluating radiotherapy treatment plan quality difference with Pareto fronts

K. Petersson, A. Kyroudi, J. Bourhis, F. Bochud, and R. Moeckli

9:15 Monte Carlo Based Analysis of Dose Rate Distributions in Volumetric Modulated Arc Therapy

P.-H. Mackeprang, W. Volken, D. Terribilini, D. Frauchiger, K. Zaugg, D.M. Aebersold, M.K. Fix, P. Manser

9:30 A comparison of 6 planning RT techniques for breast treatments

M.Zeverino, N. Ruiz Lopez, M. Marguet, W. Jeanneret Sozzi, J. Bourhis, F. Bochud, R. Moeckli

9:45 A clinical protocol for Simultaneous Integrated Boost for proton treatment

MF Belosi, R Malyapa (MD), A Bolsi, AJ Lomax, DC Weber (MD)

10:00 – 10:30 Coffe break and posters session

Special session : (*Tercier P.-A.*)

10:30 Importance of a quality management system in a department of radiation oncology

Invited speaker, Alain Najjar

Lunch break sponsored by Accuray

11:30-12:45

Industrial exhibition

12:00-12:45

Session 5 : Radiotherapy II (*Seiler R. and Moeckli R.*)

12:45-14:45

- 12:45** **Improving lateral penumbra using contour scanned proton therapy**
Gabriel Meier, Dominic Leiser, Rico Besson, Alexandre Mayor, Sairos Safai, Damien Charles Weber, Antony John Lomax
- 13:00** **TransitQA – Concept of transit dosimetry for Tomotherapy treatments**
O. Pisaturo, F. Miéville, P-A. Tercier, A.S. Allal
- 13:15** **A general model of stray dose calculation of static and intensity-modulated photon radiation beams**
P.Hauri, Roger A. Hälgl, J.Besserer, and Uwe Schneider
- 13:30** **A novel approach to the reference dosimetry of proton pencil beams based on dose-area product**
C. Gomà, B. Hofstetter-Boillat, S. Safai, S. Vörös
- 13:45** **Comparison of various dosimeters at high dose-rate**
M. Jaccard, K. Petersson, C. Bailat, T. Buchillier, J. Bourhis, R. Moeckli, F. Bochud
- 14:00** **3d printed dose compensation body to remove dose artifacts of a HDR Brachytherapy surface applicator of the vertical type.**
K. Buchauer, L. Plasswilm, H. Schiefer
- 14:15** **Research Activities at the Bern Medical Cyclotron**
M.Auger, S.Braccini, T.S.Carzaniga, A. Ereditato, K. Nesteruk, P. Scampoli
- 14:30-15:00** **Coffee break and posters session**
- Session 5 : Radiotherapy III (Bulling S. and Manser P.)**
- 15:00-16:30**
- 15:00** **Changing from ITV to MidV concept – Do we have to increase the prescribed dose?**
A. Tartas, S. Ehrbar, L. S. Stark, M. Guckenberger, S. Klöck, S. Lang
- 15:15** **Proton radiography for the clinical commissioning of the new Gantry2 head support at PSI**
L. Placidi, S. König, R. van der Meer, F. Gagnon-Moisan, A. J. Lomax, D. C. Weber, A. Bolsi
- 15:45** **StereoPHAN™, an end-to end phantom for SBRT**
F. Hasenbalg, T. Buchsbaum, C. Erckes, K. Haller and P. Pemler
- 16:00** **A Novel Approach of Customized Shielding in Superficial and Orthovoltage Radiotherapy**
M. Baumgartl, A. Dietschy, K.S. Bertapelle, Dr. S. Hemm-Ode, A. Pfäfflin, Dr. G. Kohler
- 16:15** **Evaluation of Machine Performance Check**
M. Zamburlini, I. Pytko, A. Stüssi, T. Rudolf, S. Klöck, S. Lang
- 16:30** **Closing**

Posters

List of posters presentation

- (P01) **Variability of PET image noise as function of acquisition and reconstruction parameters and its usefulness for quantifying tumor hypoxia**
R. Kueng , P. Manser , M. Fix , H. Keller
- (P02) **MC Simulation of Electron Transport in Homogeneous Magnetic Fields: Dosimetric Effects for MeV Electron Beams**
S. Höfel, D. Frei, P. Manser, M.K. Fix
- (P03) **On the RapidArc commissioning tests by Ling et al. 2008: the IOSI experience with old and new tests.**
G. Nicolini, A. Clivio, E. Vanetti
- (P04) **The Current Status of the Implementation of Clinical Audits in Switzerland**
M. Gasser, R. Treier, Ph. R. Trueb
- (P05) **An adequate Quality Assurance technique for superficial hyperthermia equipment**
G. vanStam, D. Marder, M. Capstick, O. Timm, G. Lutters
- (P06) **A method for pre-treatment verification of hyperthermia treatment plans**
D.Marder, N.Brändli, G.vanStam and G.Lutters
- (P07) **Comparison of Image Quality and Radiation Exposure between Dental Volume Tomography DVT and Conventional CT by Using a Novel Skull – DLP Phantom**
C. Sommer, I. Oezden, G. Lutters, A. Cornelius, S. Scheidegger
- (P08) **Comparative patient dosimetric estimates for different radiological facilities when performing maxillofacial examinations**
Marta Sans-Merce, Jérôme Damet, Minerva Becker
- (P09) **Verification and validation of a cylindrical 3D water scanner**
T. Götzfried, A. von Deschwanden