

International Conference on 3D dosimetry (IC3DDose)

Aarhus, Denmark - 17-19 June 2024

Sunday 16 June – venue: Danish Centre for Particle Therapy, Palle Juul-Jensens Blvd. 25, 8200 Aarhus N		
17:00 – 20:00: Ice breaker reception, registration for prepaid participants, and optional tour of the facility		
Monday 17 June – venue: Dept. of Physics and Astr., Aarhus University, Ny Munkegade 120, 8000 Aarhus C		
8:00 – 9:00: Registration for prepaid participants (in front of Physics Auditorium, 3 rd floor building 1523)		
9:00 – 10:00: Opening address – Chairs: Peter Balling + Brian Julsgaard (Physics Auditorium, 3 rd floor building 1523)		
	9:00-9:15	Welcome from the organizers
	9:15-10:00	(Opening address) Sofie Ceberg: “Three-dimensional dosimetry – where are we now, and what is coming up?”
10:00 – 10:30: Coffee/tea in the Physics Canteen (7 th floor, building 1520)		
10:30 – 12:00: Session 1 – Clinical applications of 3D dosimetry – Chairs: Andrew Jirasek + Ludvig Muren (Physics Auditorium)		
	10:30-11:00 (O1.1)	(Invited) Justus Adamson: “Broadening availability of 3D dosimetry via on-board kV-CBCT readout and analysis in a commercial software”
	11:00-11:15 (O1.2)	P. J. Guadarrama-Huerta: “Use of 3D MAGIC polymer gel dosimetry for patient-specific quality assurance in SBRT Treatments”
	11:15-11:30 (O1.3)	Thi Guldhill: “3D polymer gel dosimetry for verification of stereotactic multi-target radiosurgery”
	11:30-11:45 (O1.4)	Lia Valdetaro: “Measuring dose degradations around gold markers in spot-scanning proton therapy using 3D dosimetry”
	11:45-12:00 (O1.5)	Justus Adamson: “Monte Carlo Validation and Clinical Applications of a fully integrated 3D dosimetry system”
12:00 – 13:00: Lunch in the Physics Canteen (7 th floor, building 1520)		
13:00 – 14:15: Session 2 – Basics and new developments in 3D (and 4D) dosimetry – Chairs: Yves De Deene + Sofie Ceberg (Physics Auditorium)		
	13:00-13:30 (O2.1)	(Invited) Marek Kozicki: “Multiphase 3D dosimeters for radiotherapy”
	13:30-13:45 (O2.2)	Ryosuke Narita: “A characterization of LCV micelle gel dosimeters for boron neutron capture therapy”
	13:45-14:00 (O2.3)	Morten B. Jensen: “On the validity of using spectrophotometry of cuvettes to provide a dose-response calibration for three-dimensional optical computed tomography dosimetry”
	14:00-14:15 (O2.4)	Louis Archambaud: “Mapping 3D doses in water with a cable robot equipped with plastic scintillator”
14:15 – 14:45: Coffee/tea in the Physics Canteen (7 th floor, building 1520)		
14:45 – 15:45: Session 3 – LET measurements – Chairs: Sven Bäck + Niels Bassler (Physics Auditorium)		
	14:45-15:15 (O3.1)	(Invited) Eduardo Yukihara: “Recent Progress on Optically Stimulated Luminescence Dosimetry Applied to FLASH and Ion Beam Therapy”

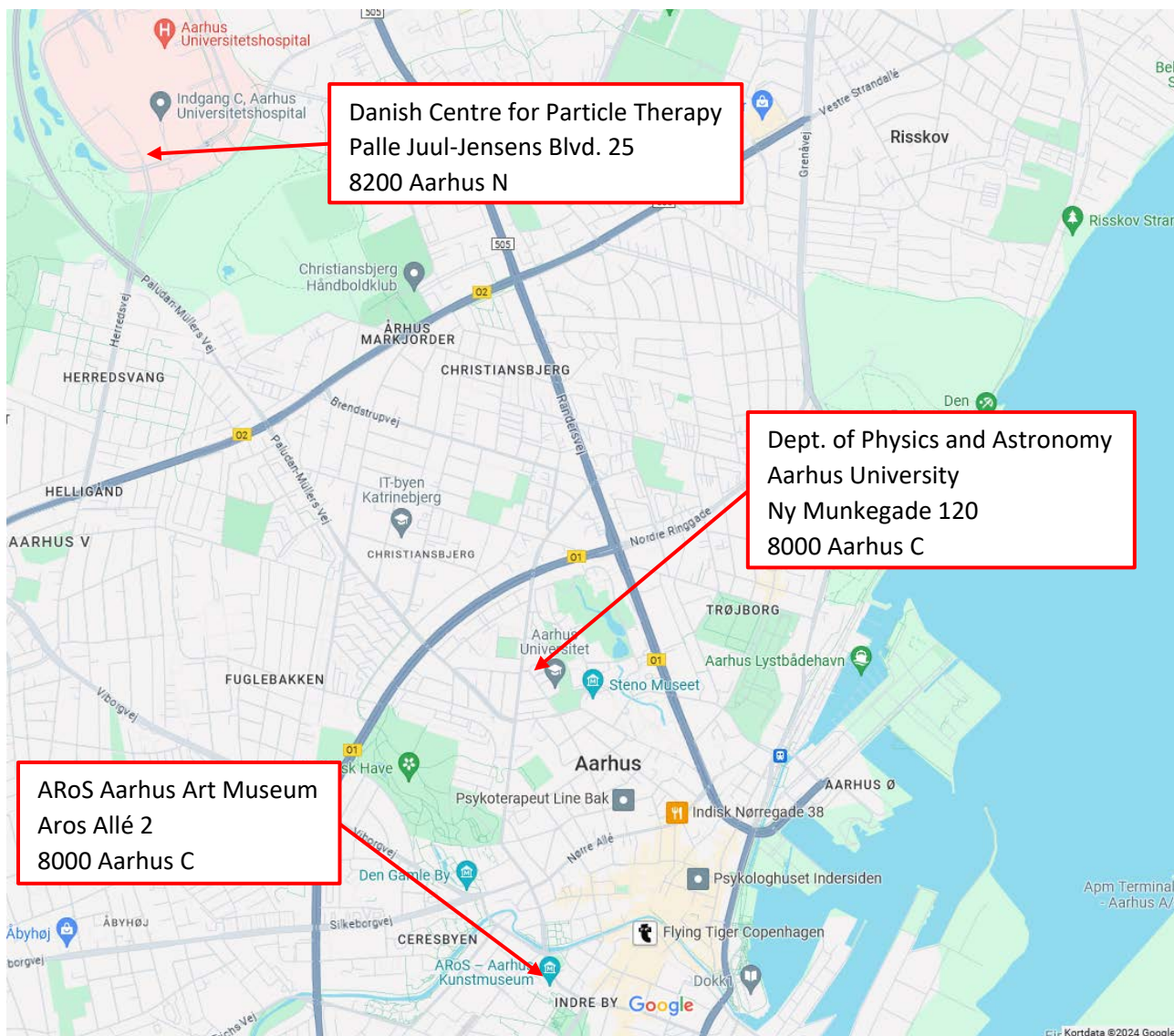
	15:15-15:30 (O3.2)	Jakub Czubek: "Feasibility Study of 3D Imaging of LET Distributions in Tissue-Equivalent Polymer Gel Dosimeters by Laser-Transmission CT"
	15:30-15:45 (O3.3)	Jeppe Brage Christensen: "Mapping dose and LET in light ion beams with optically simulated luminescence detectors"
15:45 – 16:00: Poster flash talks – Chair: Peter Balling (Physics Auditorium)		
	15:45-16:00	One-minute poster flash talks
16:00 – 17:15: Poster session – meet the speakers of the day – refreshments in the Physics Canteen		
Evening free to explore the city of Aarhus		
Tuesday 18 June – venue: Dept. of Physics and Astr., Aarhus University, Ny Munkegade 120, 8000 Aarhus C		
8:30 – 9:00: Registration for prepaid participants (in front of Physics Auditorium, 3 rd floor building 1523)		
9:00 – 10:00: Session 4 – Cherenkov imaging – Chairs: Geoffrey Ibbott + Rosana Turtos (Physics Auditorium)		
	9:00-9:30 (O4.1)	(Invited) Emily Cloutier: "Polarization Imaging: Applications for Conventional and FLASH Cherenkov Measurements"
	9:30-10:00 (O4.2)	(Invited) Brian Pogue: "Cherenkov surface guidance and temporal dosimetry in Conventional and FLASH RT"
10:00 – 10:30: Coffee/tea in the Physics Canteen (7 th floor, building 1520)		
10:30 – 12:00: Session 5 – New materials and readout methods for advanced and 3D dosimetry – Chairs: Simon Doran + Claus Andersen (Physics Auditorium)		
	10:30-11:00 (O5.1)	(Invited) Mads L. Jensen: "Three-dimensional dose measurements using optically stimulated luminescence"
	11:00-11:15 (O5.2)	Fernanda R. Rodrigues-Machado: "An optical microcavity hydrated electron sensor for in vivo radiation dosimetry"
	11:15-11:30 (O5.3)	Audran Poher: "Effects of signal source to camera distance in Cherenkov dosimetry using polarized imaging"
	11:30-11:45 (O5.4)	Rosana Turtos: "OSL in copper-doped LiF nanoparticles: luminescence mechanism and yield requirements for next generation 3D dosimeters"
	11:45-12:00 (O5.5)	Karen Tozzi: "Feasibility of using machine learning to predict the gel dosimetry calibration curves"
12:00 – 13:00: Lunch in the Physics Canteen (7 th floor, building 1520)		
13:00 – 14:45: Session 6 – Novel dosimetry for the clinic – Chairs: Sam Beddar + Peter Skyt (Physics Auditorium)		
	13:00-13:30 (O6.1)	(Invited) Katia Parodi: "Commissioning a novel radiation research platform for precision image-guided proton therapy"
	13:30-14:00 (O6.2)	(Invited) Megan Clark: "3D Scintillation Imaging as Versatile Tool for Validation of UHDR Treatment Plans Across Modalities"
	14:00-14:15 (O6.3)	Cloé Giguère: "Real-time Plastic Scintillation Dosimetry of Ultra-High Dose Rate Very High Energy Electrons (VHEE) at CERN CLEAR Facility"
	14:15-14:30 (O6.4)	Claus E. Andersen: "On the use of Al ₂ O ₃ :C and plastic scintillators for small-field dosimetry in MR-linacs"
	14:30-14:45 (O6.5)	Sarah J. G. Clausen: "Reusable optically stimulated luminescence dosimetry films for 2D dose verification of proton therapy"

14:45 – 15:45: Poster session – meet the speakers of the day – coffee/tea in the Physics Canteen		
16:00 – 21:00: Social program		
	16:00-17:30	Visit to the ARoS art museum and <i>Your Rainbow Panorama</i>
	17:30-17:45	Conference photo – location weather dependent – T.B.A.
	18:00-21:00	Conference dinner at ARoS Restaurant (ARoS level 8)
Wednesday 19 June – venue: Dept. of Physics and Astr., Aarhus University, Ny Munkegade 120, 8000 Aarhus C		
8:30 – 9:00: Registration for prepaid participants (in front of Physics Auditorium, 3 rd floor building 1523)		
9:00 – 10:00: Session 7 – New knowledge from new detectors – Chairs: Louis Archambault + Brian Julsgaard (Physics Auditorium)		
	9:00-9:30 (O7.1)	(Invited) Consuelo Guardiola: “First experimental microdosimetry 2D-maps in proton therapy based on new microdetector arrays”
	9:30-10:00 (O7.2)	(Invited) Patrick Pittet: “Use of tomographic approaches and semiconductor QDots for innovation in mini and microbeam radiotherapy dosimetry”
10:00 – 10:30: Coffee/tea in the Physics Canteen (7 th floor, building 1520)		
10:30 – 11:45: Session 8 – Real-time 3D dose imaging incl. scintillation and Cherenkov – Chairs: Boyd McCurdy + Per Poulsen (Physics Auditorium)		
	10:30-11:00 (O8.1)	(Invited) Anne-Marie Frelin: “Development of a new 3-dimensional scintillating detector for patient treatment quality control in pencil beam scanning proton therapy”
	11:00-11:15 (O8.2)	Roman Vasylytsiv: “Fast Imaging of a Novel Conformal Scintillator Array for In Vivo Monitoring and Verification During UHDR PBS Proton Therapy”
	11:15-11:30 (O8.3)	Petr Bruza: “Opportunities and Challenges in Real-Time Optical Imaging Dosimetry”
	11:30-11:45 (O8.4)	Sajjad Ahmad Khan: “A 2D Scintillator Detector Coupled with Optic Fiber”
11:45 – 12:45: Lunch in the Physics Canteen (7 th floor, building 1520)		
12:45 – 13:30: Session 9 – Advanced dosimetry developments for brachytherapy – Chairs: Luc Beaulieu + Jacob Johansen (Physics Auditorium)		
	12:45-13:15 (O9.1)	(Invited) Ryan L Smith: “Clinical Implementation of Treatment Verification in High Dose Rate Brachytherapy”
	13:15-13:30 (O9.2)	Jordan Wallace: “Dosimetric Evaluation of an Adaptive Planning Strategy for Implant Shift in HDR Brachytherapy”
13:30 – 14:00: Coffee/tea in the Physics Canteen (7 th floor, building 1520)		
14:00 – 15:30: Session 10 – Panel discussion and closing remarks – Chairs: Peter Balling + Jacob Johansen (Physics Auditorium)		
	14:00-15:00	Panel debate: Bringing results from the lab to the clinic – commercialization how?
	15:00-15:30	Awards: Poster prize + Young-investigator award Presentation of candidates for next IC3DDose conference locations
15:30 – 17:00: Meet the speakers of the day – farewell – refreshments in the Physics Canteen		

Poster presentations:

P01	Optimisation of the chemical composition of a bone-imitating dosimeter as a potential component of multiphase dosimeters	M. Jaszczak-Kuligowska, <u>M. Kozicki</u> , and P. Maras
P02	Preliminary study on a bifunctional, elastic NBT–PVA radiochromic gel acting as a bolus and dosimeter in radiotherapy	M. Jaszczak-Kuligowska, P. Maras, and <u>M. Kozicki</u>
P03	Sorbitol as a component of Fricke-XO-Gelatine to reduce Fe diffusion and obtain a gel dosimeter of enhanced resistance to elongation – a bolus dosimeter	M. Piotrowski, P. Maras, and <u>M. Kozicki</u>
P04	Simultaneous comparison of two independent dosimetry verification systems for VMAT irradiation in assessing 4D dose distribution	<u>A. Krauleidis</u> and D. Adliene
P05	A heterogeneous-cavity model for miniaturized detectors of orthovoltage X-rays	<u>F. Thevenet</u> , K. Sarvenaz, M. Moussaoui, B. Huffs Schmidt, J. Esteves, G.-N. Lu, J.-F. Adam, and P. Pittet
P06	On the Implementation of CBCT Polymer Gel Dosimetry Protocol at the Thomayer University Hospital in Prague, Czech Republic	<u>M. Despotović</u> , K. Pilarova, and T. Hanusova
P07	Polymer gel dosimetry of added High-Z elements in radiation fields of electrons and photons with low and high photon energy	K. Buchner, M. Gober, and <u>A. Berg</u>
P08	Factors of radiochromic response of a reusable polymer gel dosimeter and its simplified on-site synthesis by the user	<u>M. Marszewska</u> , J. Czubek, M. Sugier, M. Ziółkowska, P. Pakuła, B. Mielewska, E. Park, M. Vila, A. Kassae, S. Avery, D. Mihailidis, and M. Maryanski
P09	a-Si EPID used as a measurement device for general water-equivalent 2D and 3D dosimetry applications in radiotherapy – initial results	I. Kutuzov, R. Rivest, E. Van Uytven, and <u>B. McCurdy</u>
P10	Development of a 3D cubic electronic detector array for radiotherapy QA	<u>Mirko Alva-Sánchez</u> , Dante E. Roa, Alberto E. Gonzales-Coscco, Oliver Paucar, Claudia Pauyac, Brayan B. Perez, Erick Paniagua, Miguel Risco-Castillo, C. Sandra Guzman, Andres M. Gonzales, Modesto Montoya, Renzo Romero Enzo Aucca, Renzo Ocampo, Jimmy Hernandez-Bello, Alexandre Bonatto, and William de Souza Santos
P11	Dose and setup verification based on in vivo dosimetry for PBS proton RBE mice studies	<u>Jacob G Johansen</u> , Esben T Jensen, Eleni Kanouta, Cathrine Overgaard, Brita S Sørensen, Per R Poulsen

Conference venues:



Local transport:

Buses and light rail: Tickets are most easily purchased using the Midttrafik App; download using the QR code to the right.

Finding the best connection: Either use Google Maps or the dedicated Danish search engine “Rejseplanen”:

<https://www.rejseplanen.dk/webapp/?language=en> EN

