



## The 4<sup>th</sup> European Radiation Protection Week

Stockholm, Sweden

14-18 October 2019

### PROGRAM

version 2019 10 12

The ERPW2019 is jointly organised by radiation protection researchers from the Nordic countries in collaboration with the European platforms and programs



The venue of ERPW 2019 is the Stockholm University



Stockholms  
universitet

# Committees

## The organising committee

Chair:	Lovisa Lundholm	Stockholm University
Members:	Alicja Jaworska	Norwegian Radiation and Nuclear Safety Authority
	Charlotta Fred	Swedish Radiation Safety Authority
	Deborah Oughton	Norwegian University of Life Sciences
	Mikael Jensen	Danish University of Technology
	Sigurdur Magnusson	Icelandic Radiation Safety Authority
	Sisko Salomaa	Radiation and Nuclear Safety Authority, Finland and University of Eastern Finland

## The scientific committee

Chair:	Andrzej Wojcik	Stockholm University
Members:	Catrinel Turcanu	Belgian Nuclear Research Centre - representing NERIS
	John Damilakis	Crete University - representing EURAMED
	Karolina Stark	Swedish Radiation Safety Authority - representing ALLIANCE
	Nick Beresford	Lancaster Environment Centre - representing ALLIANCE
	Pedro Vaz	Lisbon University - representing ERPW 2020
	Simon Bouffler	Public Health England - representing MELODI
	Thomas Jung	Federal Office for Radiation Protection - representing CONCERT
	Ulrike Kulka	Federal Office for Radiation Protection - representing RENEB
	Pawel Olko	Institute of Nuclear Physics, Poland - representing EURADOS
	Wolfgang Raskob	Karlsruhe Institute of Technology - representing NERIS
	Hans Rabus	Physikalisch-Technische Bundesanstalt, Germany – representing EURADOS

## The local organising committee

Chair:	Milagrosa Lopez Riego	Stockholm University
Members:	Ali Pour Khavari	Stockholm University
	Tomas Palmqvist	Stockholm University
	Traimate Sangsuwan	Stockholm University
	Filippo Schiavo	Stockholm University

## The early career researcher committee

Chair:	Giorgio Baiocco	University of Pavia
Members:	Pamela Akuwudike	Stockholm University
	Erica Maremonti	Norwegian University of Life Sciences

## Sponsors



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# ERPW 2019

## Programme overview

hours	14 October Monday	15 October 2019 Tuesday	16 October 2019 Wednesday	17 October 2019 Thursday	18 October Friday	hours
08:00-09:00						
09:00-10:00		<b>Welcome and expectations of platforms</b>		MELODI: MELODI SRA and 10th Anniversary	ALLIANCE: Effects of radiation on wildlife in the field and laboratory	
10:00-11:00		<b>Coffee break (Early career researcher welcome coffee)</b> Plenary lecture - what is risk and how to teach about it	NERIS: Threat of a radiological terrorist act	<b>Coffee break</b>	<b>Coffee break</b>	
11:00-12:00		EURADOS: unwanted doses in modern radiotherapy - their significance for future epidemiological data	<b>Coffee break</b>	MELODI lecture: Low dose ionising radiation expands p53 mutant clones in vivo		
12:00-13:00	Business meeting by invitation Rooms on 5th floor of	<b>Lunch</b>	<b>Lunch</b>	<b>Lunch</b>	Business meetings by invitation Rooms on 5th floor of	
13:00-14:00		MELODI: What are the likely future contributions of radiology and epidemiology to quantitative risk.	CONCERT: Education and Training	Poster session		
14:00-15:00		EURADOS: Strategic Research Agenda - where do we go ?	EURADOS: Dosimetric intercomparisons in Europe	EURADOS: Dosimetric phantoms		
15:00-16:00		<b>Coffee break</b>	<b>Coffee break</b>	CONCERT: SHAMISEN SINGS and CONFIDENCE		
16:00-17:00		EURAMED: clinical dosimetry in modern radiation medicine. Current needs and future prospects	ALLIANCE: Chernobyl Observatory (45 min)	<b>Coffee break</b>		
17:00-18:00	16:00 - 20:00 5 K run and reception for runners	Open discussion: Quo vadis platforms & European Joint Program (EJP)	Plenary lecture: Open Access - challenges and possibilities (60 min)	NERIS: Citizen Science and engagement in radiation protection		
18:00-19:00		18:00 MELODI young scientist award	Time to go to the City Hall reception (75 min)	<b>Closing ceremony</b>		
19:00-20:00		<b>18:30 Welcome reception in Aula Magna</b>				
20:00-21:00			<b>19:00 Reception in City Hall</b>			
21:00-22:00						

## Business meetings by invitation

Please see maps at the end of this file for location details. Rooms Polstjärnan, Mimer, Kungsteningen, Bergsmannen and Spelbomskan are in the Aula Magna building on floor 7. Vivi Täckholm (Q211) and E211 are in the building of the Arrhenius laboratories.

### Monday 14 October

Polstjärnan	Kungsteningen	Vivi Täckholm Q211	Catering
09:30 – 13:00 RENE B	09:00 -11:00 CONFIDENCE WP7	13:00 – 17:00 CONCERT Management Board	10:00 – 10:30 coffee
15:00 – 17:30 SHAMISEN SINGS	13:00 – 17:00 ALLIANCE Marine Working Group		12:00-13:00 lunch
	17:00 – 19:00 MELODI Executive Council		15:00 – 15:30 coffee
			17:00 sandwiches

Catering will be served in the Gallery of Aula Magna and outside Vivi Täckholm.

### Tuesday 15 October – no meetings

### Wednesday 16 October

Polstjärnan	Mimer
10:00 – 13:00 CONCERT WP2-WP3	12:00 – 14:00 CONCERT WP6
	14:00 – 16:00 CONFIDENCE WP4

### Thursday 17 October

Polstjärnan	Mimer	Kungsteningen	Bergsmannen	Spelbomskan
17:30 – 19:00 EURAMED Executive Board meeting 1	17:30 – 19:30 NERIS Management Board and R&D	17:30 – 18:30 MELODI Scientific Advisory Board	19:00 – 21:00 MELODI General Assembly	17:30 – 19:30 ALLIANCE General Assembly

Catering will be served in the Gallery of Aula Magna at 17.30.

### Friday 18 October

Polstjärnan	Mimer	Kungsteningen	Spelbomskan	Catering
08:30 – 15:00 EURADOS IM2020 Scientific Committee	08:00 – 09:00 MENEAS	09:00 – 13:00 NERIS management Board and R&R	09:00 – 10:30 EURAMED General Assembly	10:00 – 10:30 coffee
	09:00 – 15:00 ALLIANCE Strategic Research Agenda			12:00-13:00 lunch

Catering will be served in the Gallery of Aula Magna.

09:00 – 16:00 EURADOS WG10 meeting in room E210 (Svante Arrhenius väg 20C) – no catering

# Scientific program 15-18 October

Please see maps at the end of this file for location details. Room Bergsmannen is in the Aula Magna building on floor 7. Aula Magna left and Aula Magna right are on level 4 (street entrance level). Gallery of Aula Magna is on level 5. Vivi Täckholm Q211 is in the building of Arrhenius laboratory, 3-5 min walking from the Aula Magna building.

Asterisks after a name mark early career researchers.

## Tuesday 15 October

### 09:00 – 10:00 Opening ceremony (Aula Magna right)

Chair: *Lovisa Lundholm*

*Lovisa Lundholm* – Stockholm University

*Per Seltborg* - Swedish Radiation Safety Authority

*Sisko Salomaa* - Radiation and Nuclear Safety Authority, Finland

*Alicja Jaworska* - Norwegian Radiation and Nuclear Safety Authority

*Deborah Oughton* - Norwegian University of Life Sciences

*Mikael Jensen* - Danish University of Technology

*Nathalie Impens*, MELODI

*Almudena Real*, ALLIANCE

*Thomas Jung*, CONCERT

*Werner Rühm*, EURADOS

*John Damilakis*, EURAMED

*Thierry Schneider*, NERIS

*Ulrike Kulka*, RENEB

*Yevgeniya Tomkiv*, SHARE

### 10:00 – 10:30 Coffee break (Gallery of Aula Magna) and early researcher welcome coffee (Mezzanine)

### 10:30 – 11:30 ERPW Plenary lecture (Aula Magna right)

Chair: *Andrzej Wojcik*

**S1** What is risk and how to teach about it, *Linda Schenk* (60')

### 11:30 – 12:30 EURADOS Plenary session. Topic: Unwanted doses in modern radiotherapy - their significance for future epidemiological data (Aula Magna right)

Chair: *Pawel Olko*

**S2** Unwanted doses in conventional and hadron therapy *Liliana Stolarczyk* (20')

**S3** Total doses to patients receiving radiotherapy *Roger Harrison* (20')

**S4** Out-of-field dose uncertainties: Bridging epidemiology and modelling *Uwe Schneider* (20')

### 12:30 – 13:30 Lunch (Gallery of Aula Magna)

### 13:30 – 15:00 Parallel sessions 1

MELODI (Aula Magna right)	EURADOS (Vivi Täckholm Q211)	EURAMED (Bergsmannen – Aula Magna level 7)
<p><b>Topic: What are the likely future contributions of radiobiology and epidemiology to quantitative risk assessment?</b></p> <p>Chair: <i>Laurence Roy</i> and <i>Maria Blettner</i></p>	<p><b>Topic: Strategic Research Agenda – where do we go?</b></p> <p>Chair: <i>Pawel Olko</i> &amp; <i>Sara Della Monaco</i></p> <p><b>S10</b> Fundamental Dose Concepts <i>Carmen Villagrasa</i> (22')</p>	<p><b>Topic: Exposure optimization in diagnostic and interventional radiology</b></p> <p>Chair: <i>John Damilakis</i> &amp; <i>Marta Lazzeroni</i></p>

**S5** Integrating epidemiology and biology for radiation risk assessment *Olivier Laurent* (15')

**S6** Inverse exposure rate effect, its potential explanations, and their implications on the risk of low doses *Emese Drozsdik\** (15')

**S7** Risk for lung adenocarcinoma from smoking and radiation arises in different molecular pathways *Jan Kaiser* (15')

**S8** Whole genome sequencing of British nuclear test veterans and their families *Alex Moorhouse\** (15')

**S9** Studying biomarkers reflecting the adverse outcome pathways from exposures to diseases using molecular epidemiology: example of the molecular epidemiology protocol developed as part of the Concerted Uranium Research in Europe (CURE) project *Maria Gomolka & Laurent Oliver* (15')

**S11** Dosimetry for radiation epidemiology and risk estimates *Vadim Chumak* (22')

**S12** Efficient dose assessment for radiological emergencies *Paola Fattibene* (22')

**S13** Update of the EURADOS Strategic Research Agenda – Challenges for Dosimetry of Ionising Radiation in Medical Applications *Filip Vanhavere* (22')

**S14** Optimizing without compromising in plain imaging, *Graciano Paulo\** (22')

**S15** Dose optimization in CT, *Christoph Hoeschen* (22')

**S16** Clinical DRLs in diagnostic and interventional radiology *Virginia Tsapaki* (22')

**S17** Fluoroscopy-guided procedures: protecting patients and staff, *Jenia Vassileva* (22')

## 15:00 – 15:30 Coffee break (Gallery of Aula Magna)

## 15:30 – 17:00 EURAMED Plenary lecture. Topic: Clinical dosimetry in modern radiation medicine. Current needs and future prospects (Aula Magna right)

Chair: *Guy Frija*

**S18** Diagnostic and Interventional Radiology *John Damilakis* (30')

**S19** Nuclear Medicine *Klaus Bacher* (30')

**S20** Radiation Oncology *Marta Lazzeroni* (30')

## 17:00 – 18:00 Parallel sessions 2

European Radiation Research Area (Aula Magna right)	NERIS (Aula Magna left)	RENEB (Bergsmannen – Aula Magna level 7)
<p><b>Topic: Quo vadis platforms &amp; European Joint Program (EJP)?</b> Chair: <i>Andrzej Wojcik</i></p> <p>The aim of the session is to discuss the future role and shape of the EU platforms and of the EJP. The first EJP (CONCERT) will end in 2020. What is the experience? What are the expectations for the future? The session will kick off with short statements by platform and program representatives, followed by a general discussion.</p> <p>ALLIANCE – <i>Almudena Real</i> CONCERT – <i>Thomas Jung</i> EURADOS – <i>Werner Rühm</i> EURAMED – <i>John Damilakis</i> MELODI – <i>Nathalie Impens</i></p>	<p><b>Topic: Data assimilation and data management</b> Chair: <i>Johan Camps &amp; Paulo Numes</i></p> <p><b>S21</b> Bayesian method for localisation of point gamma radiation sources, <i>Antanas Bukartas*</i> (10')</p> <p><b>S22</b> Detection and discrimination of point sources and surface contamination with drone-borne dose rate detector, <i>Stef Geelen*</i> (10')</p> <p><b>S23</b> Citizen radiation measurements in Belgium analysed in the framework of emergency preparedness and response, <i>Johan Camps</i> (10')</p>	<p><b>Topic: New developments in biological dosimetry</b> Chair: <i>Ulrike Kulka &amp; Tomas Palmqvist</i></p> <p><b>S27</b> Biodose Tools: An R Shiny Application for Biological Dosimetry, <i>Alfredo Hernandez*</i> (15')</p> <p><b>S28</b> BALANCE: US –European collaboration in biological dosimetry for neutron exposure, <i>Ursula Oestreicher</i> (15')</p> <p><b>S29</b> Serum miR-375-3p increase in mice exposed to a high dose of ionizing radiation, <i>Mitsuru Chiba</i> (15')</p> <p><b>S30</b> New Bayesian contributions to radiation dose estimation in biological</p>

NERIS – *Thierry Schneider*  
RENEB – *Laurence Roy*  
SHARE – *Susan Molyneux-Hodgson*

**S24** Adaptation of an EU-initiated mobile phone application interface for interactive support *Takashi Ohba (10')*

retrospective dosimetry, *Sophie Ancelet (15')*

**S25** Involvement of French stakeholders in the decision-making process in the context of uncertainties, *Vanessa Durand (10')*

**S26** Local stakeholders confronted to mid- and long-term uncertainties in a post-nuclear accident situation: outputs from the TERRITORIES French panel *Melanie Maitre\* (10')*

**18:00 – 18:30 MELODI young scientist award** (Aula Magna right)

Chair: *Nathalie Impens*

**S31** From radiation-induced initial events to the biological response: "tracks" to follow *Giorgio Baiocco*

**18:30 – 21:00 Welcome reception** (Gallery of Aula Magna)



## Wednesday 16 October

### 09:00 – 10:30 Parallel sessions 3

MELODI (Aula Magna right)	NERIS (Vivi Täckholm Q211)	ALLIANCE (Bergsmannen – Aula Magna level 7)
<p><b>Topic: Non cancer disease</b> <i>Chair: Elisabeth Cardis &amp; Jean-René Jourdain</i></p> <p>Introduction of the session <i>Elisabeth Cardis &amp; Jean-René Jourdain</i> (5')</p> <p><b>S32</b> LDLensRad: Towards a full mechanistic understanding of low dose radiation induced cataracts <i>Elizabeth Ainsbury</i> (15')</p> <p><b>S33</b> Radiation effects on the immune system – A report of the MELODI workshop at Sitges, <i>Katalin Lumniczky</i> (15')</p> <p><b>S34</b> The neuropsychological-developmental effects of exposure to low-to-moderate doses of ionizing radiation: a systematic review <i>Elisa Pasqual *</i> (15')</p> <p><b>S35</b> CREB signalling in the irradiated hippocampus <i>Soile Tapio</i> (15')</p> <p><b>S36</b> Circulatory diseases and effects on the metabolism - summary of MELODI workshop on non-cancer effects of ionising radiation <i>Sisko Salomaa</i> (15')</p> <p>General discussion toward updating the MELODI strategic research agenda (10')</p>	<p><b>Topic: Facing the threat of a radiological terrorist act: How to minimize consequences</b> <i>Chair: Wolfgang Raskob &amp; Benjamin Zorko</i></p> <p><b>S37</b> Assessment of radiological scenarios in JRODOS <i>Wolfgang Raskob</i> (22')</p> <p><b>S38</b> Using gamma cameras as screening devices for internal contamination in emergency preparedness <i>Martin Hjellström*</i> (22')</p> <p><b>S39</b> Importance of Fire-fighters activities in transboundary Nuclear and Radiological Emergency Preparedness and Response plans <i>Benjamin Zorko</i> (22')</p> <p><b>S40</b> Informing the public about a radiological or nuclear attack: lessons from cold war communication plans <i>Yevgeniya Tomkiv*</i> (22')</p>	<p><b>Topic: Transfer of radionuclides in ecosystems and the human food chain</b> <i>Chair: Karolina Stark &amp; Laura Urso</i></p> <p><b>S41</b> Reducing uncertainties in human food chain modelling <i>Nick Beresford</i> – presented by <i>Javier Guillén</i> (15')</p> <p><b>S42</b> Transfers of radionuclides to marine organisms: knowledge and modelling approaches <i>Celine Dufta</i> (15')</p> <p><b>S43</b> Transfer of I-129 to freshwater fish - comparative Chernobyl and Fukushima studies <i>Brit Salbu</i> (15')</p> <p><b>S44</b> Chernobyl field experiments: seasonality of the radionuclide transfer to fish <i>Hans Teien</i> (15')</p> <p><b>S45</b> Inhalation dosimetry: physicochemical differences between primary plume and resuspended material <i>Johen Tschiersch</i> (15')</p> <p><b>S46</b> Quantitative estimation of conceptual (structural) model uncertainty of radioecological models <i>Laura Urso</i> (15')</p>

### 10:30 – 11:00 Coffee break (Gallery of Aula Magna)

### 11:00 – 12:00 CONCERT Plenary session (Aula Magna right)

*Chair: Andrea Ottolenghi*

Introduction of the plenary E&T session (5') *Tom Clarijs*

**S47** Creation of video tutorials describing cytogenetic assays for dose exposure assessment *Cecile Herate\** (10')

**S48** Education and Preparedness for Radiation Emergency Medicine at Hirosaki University Graduate School of Health Sciences, Japan *Toshiya Nakamura* (10')

**S49** Education and training to support radiation protection research: the contribution from EURATOM projects *Vere Smyth* (10')

**S50** Optimization of training in radiation protection, report of the 8th EUTERP workshop *JE Stewart and Tom Clarijs* (10')

Discussion (15')

### 12:00 – 13:00 Lunch (Gallery of Aula Magna)

### 13:00 – 14:00 Poster session 1: posters 1-40 (Gallery of Aula Magna)

#### 14:00 – 15:30 Parallel sessions 4

CONCERT (Aula Magna right)	EURADOS (Aula Magna left)	EURAMED (Bergsmannen – Aula Magna level 7)
<p><b>Topic: LDLensRad and SEPARATE projects</b> Chair: <i>Elisabeth Ainsbury &amp; Ali Pour Khavari</i></p> <p><b>S51</b> Towards a more mechanistic understanding of low dose radiation-induced cataract: in vitro studies <i>Maryam Ahmadi*(22')</i></p> <p><b>S52</b> Inverse dose-rate effect of ionising radiation on residual 53BP1 foci in the eye lens (LDLensRad project) <i>Stephen Barnard *(22')</i></p> <p><b>S53</b> Non-targeted effects of exosome-mediated radiation signalling: comparison of whole and partial body irradiation <i>Munira Kadhim (22')</i></p> <p><b>S54</b> Changes in neurogenesis and miRNA profiles in out of field hippocampus from partial-body irradiated mice <i>Francesca Antonelli (22')</i></p>	<p><b>Topic: Dosimetric intercomparisons in Europe – the state of art of personal, environmental and computational dosimetry</b> Chair: <i>Liliana Stolarczyk &amp; Werner Rühm</i></p> <p><b>S55</b> EURADOS intercomparisons for photon and beta personal dosimeters: a review of results and conclusions <i>Hannes Stadtmann (22')</i></p> <p><b>S56</b> EURADOS Intercomparison Exercises for Eye Lens Dosimeters <i>Isabelle Clairand (22')</i></p> <p><b>S57</b> Internal dose assessment intercomparison exercise ICIDOSE 2017: a tool to check and promote quality <i>Carlo Castellani (22')</i></p> <p><b>S58</b> In vivo monitoring intercomparisons: the CATHyMARA and EURADOS experiences <i>David Broggio (22')</i></p>	<p><b>Topic: The new EU BSS: The challenges ahead</b> Chair: <i>Christoph Hoeschen &amp; Pamela Akuwudike</i></p> <p><b>S59</b> Justification of medical exposures: What's new? <i>Guy Frija (30')</i></p> <p><b>S60</b> New dose limit for the eye lens of radiation workers and its implications <i>Filip Vanhavere (30')</i></p> <p><b>S61</b> Accidental and unintended exposures in radiotherapy <i>Iuliana Toma-Dasu (30')</i></p>

#### 15:30 – 16:00 Coffee break (Gallery of Aula Magna)

#### 16:00 – 16:45 ALLIANCE Plenary lecture (Aula Magna right)

Chair: *Hildegard Vanderhove*

**S62** Chernobyl Observatory, *Nick Beresford & Nele Horemans (45')*

#### 16:45 – 17:45 ERPW Plenary lecture (Aula Magna right)

Chair: *Brit Salbu and Paul Schofield*

**S63** Open Access: challenges and possibilities, *Göran Hermerén*

#### 19:00 – 21:00 Reception in the City Hall, hosted by the City of Stockholm

Address: Hantverkargatan 1, 111 52 Stockholm, entrance in the inner court. Please bring your invitation card.

## Thursday 17 October

### 09:00 – 10:30 Parallel sessions 5

MELODI (Aula Magna right)	EURADOS (Aula Magna left)	ALLIANCE (Bergsmannen – Aula Magna level 7)
<p><b>Topic: MELODI SRA and 10th Anniversary</b> Chair: <i>Nathalie Impens</i></p> <p><b>S64</b> Updating the MELODI Strategic Research Agenda, <i>Simon Bouffler (20')</i></p> <p><b>S65</b> The MELODI Association to coordinate and promote European research on the risk associated with low-dose exposure to ionizing radiation, <i>Mats Harms-Ringdahl (20')</i></p> <p>Panel discussion: <i>Andre Jouve, Elisabeth Cardis, Mats Harms-Ringdahl, Thomas Jung, Wolfgang Weiss (50')</i></p>	<p><b>Topic: Dosimetric phantoms</b> Chair: <i>Roger Harrison &amp; Christelle Huet</i></p> <p><b>S66</b> Overview of voxel phantoms development and use in dosimetry <i>Christelle Huet (30')</i></p> <p><b>S67</b> Animating Flexible Computational Phantoms using 3D motion-capture data and their applications in personal dosimetry <i>Mahmoud Abdelrahman * (30')</i></p> <p><b>S68</b> Automatic organ segmentation using machine learning and personalized dosimetry in nuclear medicine <i>Ruiyao Ma*(30')</i></p>	<p><b>Topic: Effects of radiation on wildlife in the field and laboratory</b> Chair: <i>Nele Horemans &amp; Deborah Oughton</i></p> <p><b>S69</b> Arabidopsis thaliana plants sampled alongside a gradient of radiation in the Chernobyl Exclusion zone show little or no measurable effect of long term exposure to enhanced gamma radiation <i>Nele Horemans (22')</i></p> <p><b>S70</b> Uranium exposure influences the expression of calcium transporters in Arabidopsis thaliana <i>Amber Mertens* (22')</i></p> <p><b>S71</b> Low dose rate priming exposure affects the induction of chromosome breaks by acute photon irradiation in Drosophila melanogaster <i>Patrizia Morciano (22')</i></p> <p><b>S72</b> The Worm Turned: Bystander, adaption and gut microbiome effects at field sites <i>Deborah Oughton (22')</i></p> <p><b>S73</b> Soil biological activity in the Chernobyl Exclusion Zone <i>Nick Beresford (22')</i></p>

### 10:30 – 11:00 Coffee break (Gallery of Aula Magna)

### 11:00 – 12:00 MELODI Plenary lecture (Aula Magna right)

Chair: *Simon Bouffler*

**S74** Low dose ionising radiation expands p53 mutant clones in vivo *Phil Jones (60')*

### 12:00 – 13:00 Lunch (Gallery of Aula Magna)

### 13:00 – 14:00 Poster session 2: posters 41 – 78 (Gallery of Aula Magna)

### 14:00 – 15:30 Parallel sessions 6

CONCERT (Aula Magna right)	EURAMED (Aula Magna left)	ALLIANCE (Bergsmannen – Aula Magna level 7)
<p><b>Topic: SHAMISEN SINGS and CONFIDENCE</b> Chair: <i>Thomas Jung &amp; Mandy Birschwilks</i></p> <p><b>S75</b> Shamisen sings project – benefits and challenges by using apps for dose</p>	<p><b>Topic: Radiation-induced risk of cancer from radiation medicine</b> Chair: <i>Paulo Graciano &amp; Milagrosa Lopez Riego</i></p> <p><b>S78</b> Conceptus dose and radiogenic risks from CT performed on the mother <i>John Damilakis (30')</i></p>	<p><b>Topic: NORM/TeNORM in the environment</b> Chair: <i>Catherine Berthomieu &amp; Boguslaw Michalik</i></p> <p><b>S81</b> What does NORM bring to radiation protection society and what</p>

and health monitoring after a nuclear accident *Liudmila Liutsko (30')*

**S76** Education and training general approaches and actions of the NERIS Platform and CONFIDENCE project *Tatiana Duranova (30')*

**S77** VERIDIC project: accuracy of skin dose calculation software in interventional cardiology *Jérémie Dabin (30')*

**S79** Dose tracking and risks from medical imaging *Niki Fitousi (30')*

**S80** Risk of second cancer following radiation therapy *Iuliana Toma-Dasu (30')*

may get in return? *Boguslaw Michalik (12')*

**S82** Characterization of Th-rich particles from a NORM site *Ole Lind (12')*

**S83** Modern practice regarding Residues (NORM) during the exploration drilling in Oil & Gas Industry in Republic of Croatia *Ivica Pirlic (12')*

**S84** Exposure, effect and risk of NORM and metals - case Road and Tunnel Construction in alum shale areas *Lindis Skipperud (12')*

**S85** Modelling the impact of radiation in the Belgian Grote Nete basin *Nele Horemans (12')*

### 15:30 – 16:00 Coffee break (Gallery of Aula Magna)

### 16:00 – 17:00 NERIS Plenary session (Aula Magna right)

*Chair: Tatiana Duranova and Catrinel Turcanu*

**S86** Citizen-science approaches to monitoring networks in Ukraine *Oleg Bondarenko (15')*

**S87** Citizen radiation measurement organizations after Fukushima: local bottom-up initiatives in context *Joke Kenens\* (15')*

**S88** Correct use of apps for self-made measurements of radiation: proposal of recommendations for citizens, developers and authorities *Sara Della Monaca (15')*

**S89** Analyzing frames and practices of stakeholder engagement in emergency preparedness and recovery *Robbe Geysmans\* (15')*

### 17:00 – 17:15 Closing ceremony (Aula Magna right)

*Chair: Lovisa Lundholm*

Concluding remarks *Andrzej Wojcik*

Invitation to ERPW2020 *Pedro Vaz*

## Friday 18 October

9:00 – 12:00 Early career researcher meeting (Bergsmannen – Aula Magna level 7)

### Open to all - you are only as old as you feel

The main aim of the meeting is to discuss ideas for a potential network of early career researchers in radiation research

#### Session 1 - What has happened up to now, what already exists?

*Chair: Pamela Akuwudike, Stockholm University, Sweden*

Contributions on:

- EURAYS *Giorgio Baiocco, University of Pavia, Italy*
- SWE-RAYS *Charlotte Andersson, University of Gothenburg, Sweden*
- CONCERT WP7 *Vere Smyth/Andrea Ottolenghi, University of Pavia, Italy*
- RAPKEYS *Elisabeth Ainsbury, PHE, United Kingdom*

#### Session 2 - What's next?

*Chair: Giorgio Baiocco, University of Pavia, Italy*

Ideas and needs (presented by committee members and highlighted by participants).

Just few examples:

- Dedicated training courses
- Register of experts
- Register of opportunities
- Project platform descriptions online
- Training in the next CONCERT project?
- What else?

#### Session 3 - Open discussion, how to take this forward?

*Chair: Giorgio Baiocco, University of Pavia, Italy*

- Merging of EURAYS, RAPKEYS, CONCERT WP7.
- Funding/sustainability?

Catering will be served in the Gallery of Aula Magna at 10.00-10.30 and 12.00-13.00.

## Posters

(with names of presenting authors)

Authors of posters 1 - 40 should hang up their posters on Tuesday 15<sup>th</sup> October and take them down after the poster session 1. Authors of posters 41-78 should hang up their posters after the poster session 1 and take them down before the end of the meeting.

The size of the poster boards is 120 cm wide and 150 cm tall, an A0 size standing poster fits well. There will be 20 double-side poster walls.

### Wednesday 16 October 13:00 - 14:00, authors please be at your posters

#### Topic: ALLIANCE/CONCERT

- P1. Biological half-lives for farm animals, *Barnett, CL*
- P2. Comparison of transfer parameters to cereals in temperate and Mediterranean ecosystems, *Guillen, J*
- P3. Gamma radiation-induced dose-dependent responses have an impact on growth and development on of Arabidopsis plants during recovery, *Horemans, N*
- P4. Taking advantage of radionuclide bioaccumulation and -sorption by aquatic plants: remediation of radioactively contaminated water, *Horemans, N*
- P5. Radioactivity levels in the Swedish market basket, *Pinero-Garcia, F*
- P6. Transfer of elements from soil to earthworms and carabid beetles in boreal forest, *Roivainen, P*
- P7. A Simplified Approach to Estimate Foliar Uptake by Agricultural Crops, *Cristina, A\**

#### Topic: EURADOS/EURAMED/MELODI/RENEB/E&T

- P8. Opportunities and challenges in assessing individual occupational dose in Interventional Radiology using only computational simulations: preliminary results from the PODIUM project, *Almen, A*
- P9. Synthesis and thermoluminescence characterization of self-agglomerating CaSO<sub>4</sub> and CaSO<sub>4</sub>:Cu phosphors exposed to beta particle irradiation, *Castro-Campoy, AI \**
- P10. Retrospective dose reconstruction with display glass from mobile phones, *Cemusova, Z*
- P11. Evaluation of the radiation environment at a PET clinic – comparisons with shielding calculations *Geber-Bergstrand, T\**
- P12. CIEMAT in-vitro internal dosimetry laboratory: 7 years of accreditation experience and future transition to the new version of ISO/IEC 17025 standard, *Hernandez-Gonzalez, C*
- P13. New ICRP mesh-type reference computational phantoms and phantom individualization by deformation of body size and posture, *Kim CH*
- P14. A new software for estimating doses delivered by X-ray patient positioning systems during Image-Guided radiotherapy treatments, *Lazaro, D*
- P15. Dose optimization in computed tomography by using pediatric phantoms, *Ma, R \**
- P16. Dose measurements as performed by Laboratory of Individual and Environmental Dosimetry as a part of Radiation Protection System in Poland, *Pasieka, A*
- P17. Design of energy compensation filter for NaI(Tl) scintillation crystals: preliminary findings, *Pavelic, L \**
- P18. Results of a TLD system in two EURADOS intercomparisons (2014-2018) of passive H\*(10) area dosimeters used for environmental dosimetry, *Rodriguez, R*
- P19. EURADOS education and training programme and policy, *Rühm, W*
- P20. The contribution of computed tomography to the collective dose of the population in Greece, *Simantirakis, G*
- P21. 3D printed eye lens dosimeter holder for IR and IC, *Suric Mihic, N*
- P22. Occupational doses in proton therapy center in Poland, *Szumaska, A \**
- P23. HARMONIC: Health effects of cArdiac fluoroscopy and MOrderN radiotherapy in paediatricCs, *Thierry-Chef, I*
- P24. Development of a compact nanodosimeter track imaging detector, *Vasi, F \**

#### Topic: EURAMED/MELODI

- P25. Long term effects of fractionated radiation exposure on cancer induction in normal cells, *Akuwudike, P \**
- P26. Chronotherapy: a possible way to optimize 131I-based therapy?, *Andersson, C \**

- P27. rA1M, a kidney protector during PRRT?, *Andersson, C \**
- P28. Birth-defects and adult behavioural defects following x-ray exposure during neurulation and prevention with folic acid, *Benotmane, R*
- P29. Second primary malignancy risk after primary thyroid cancer: A systematic review and meta-analysis, *Bernier, M-O*
- P30. A personalized approach counteracting the establish for EBR in oncology, *Botelho, MF*
- P31. The effects of  $\alpha$ -particles therapy using Radium-223 in human prostate cancer cell lines, *Botelho, MF*
- P32. Optimization processes in radiotherapy: clinical and dosimetric audits (OPRORA), *De Angelis, C*
- P33. Assessing medical radiation exposure - results and experiences from the first fully implemented Level-3-study within the German National Cohort (GNC) study, *Dreger, S\**
- P34. Healthy aging, stem cells and the consequences of low dose irradiation, *Galderisi, U*
- P35. Development and profiling of breast cancer cell lines with enhanced radiation resistance Inalegwu, A \*
- P36. Impact of ATM and DNA-PK inhibition on gene expression and individual response of human lymphocytes to mixed beams of alpha particles and X-rays, *Lundholm, L*
- P37. Ethics contexts for radiation protection in medicine: the law, good practice, and patient preferences, *Malone, J*
- P38. Ethics in Radiological Protection for Medical Diagnosis and Treatment, *Zölzer, F*
- P39. Role of multi-potent progenitor cells in bone marrow damage induced by high dose rate of ionising radiation, *Monzen, S*
- P40. Exposure to medical radiation during fetal life, childhood and adolescence and risk of brain tumor in young age: results from the MOBI-kids study, *Pasqual, E\**

### Thursday 17 October 13:00 - 14:00, authors please be at your posters

- P41. Design of an Image and Radiation Dose Biobank (IRDBB) as a support for research on low dose radiation exposure in medical imaging, *Spaltenstein, J \**
- P42. How accurately can we predict surviving fraction after irradiation based on the copy number state? *Tobiasz, J \**
- P43. Current status and problems for citizen science and engagement in radiation protection: view from the practice of new projects, *Xia, X*

#### Topic: MELODI/CONCERT

- P44. Inflammatory profile dysregulation in professionally exposed to low dose gamma radiation, *Aneva, N \**
- P45. Estimation of lung cancer risk associated to multiple correlated sources of ionizing radiation in the post-55 French cohort of uranium miners, *Belloni, M \**
- P46. The MELODI 2019 workshop on non-cancer effects: cognitive effects, *Benotmane, R*
- P47. Proteomic analysis of the Radiation-Induced Bystander Effects between low-dose irradiated Chondrosarcoma cells and Bystander Chondrocytes, *Chevalier, F*
- P48. Cataract development after gamma irradiation in mice, *Dalke, C \**
- P49. Opinion pool related to radiation protection or radiation risk perception: assessment and analysis, *Della Monaca, S*
- P50. Exploring the role of age, dose, dose rate and genetic background in radiation-induced cataract in PTCH1+/- mice, *De Stefano, I \**
- P51. Hyper-radiosensitivity decreases acute myeloid leukaemia incidence in an in silico murine model, *Dekkers, F*
- P52. Deterministic and Bayesian inverse modeling methods for source identification: Application to the selenium (75Se) detection event in May 2019, *Didier, D*
- P53. ProZES - methodology and software tool to quantify the relationship between cancer and previous radiation exposure, *Eidemüller, M*
- P54. An analysis of commercial radiation measurement mobile apps for citizens use, *Fattibene, P*
- P55. Reconstruction of organ dose for Japanese nuclear workers and reanalysis of cancer mortality risk for J-EPIISODE 1991-2010, *Furuta, H*
- P56. Confounding between the cumulative dose and a hazardous job history among Japanese nuclear workers (J-EPIISODE), *Kudo, S*

- P57. Exposure to ionizing radiation resulting from the Chernobyl fallout and childhood cardiac arrhythmia: a population based study, *Landon, G*
- P58. Effects on thyroid tissue and plasma after low-dose <sup>131</sup>I exposure of young rats, *Larsson, M \**
- P59. Reliability of a self-administered questionnaire for epidemiologic studies of Korean radiation workers, *Lee, D \**
- P60. Biological effects of alpha, gamma and mixed beam radiation exposure at low doses and dose rates in normal human fibroblasts, *Lopez-Riego, M \**
- P61. Status update of the SEPARATE project, *Mancuso, M*
- P62. The low dose and low dose rate effects on spleen and bone marrow cells isolated from whole body irradiated BL6 mice, *Pour Khavari, A \**
- P63. The STORE database; a platform for data and resource sharing in radiation biology, radioecology and epidemiology, *Schofield, PN*
- P64. Implications for radiation protection from the incident of radon-emitting mattress in Korea, *Seo, S \**
- P65. Deprivation of background radiation differentially stress bacteria, *Smith, GB*
- P66. Investigation into the possible radioadaptive effects of chronic low dose radiation in lymphoblastoid cells, *Tan, HW\**
- P67. Biochemical signatures in murine hippocampus following partial body irradiation, *Traynor, D \**
- P68. Radiophobia: how the misunderstanding of the LNT leads to mass media sensationalism and hysteria, *Vasilache, RA*

**Topic: EDUCATION&TRAINING/OTHER**

- P69. Regulatory requirements for radiation protection education and training, *Clarijs, T*
- P70. Detection of loss of Sfp1 gene from metaphase and interphase cells of radiation-exposed mice using FISH: a technique for the diagnosis of leukemia, *Hargitai, R*
- P71. Microvesicles as biomarkers for radiation risk assessment with evaluation by machine learning, *Kadhim, M*
- P72. Lactatemia as a biomarker of radioprotective efficacy of new NOS-inhibitor T1023, *Makarchuk, V*
- P73. High Dose Exposure Estimation Using Premature Chromosome Condensation Ring (rPCC) Analysis Moguet, J
- P74. Second prototype construction of the novel robot-driven CT geometry, *Saeid Nezhad, N \**
- P75. Dose rates effects of gamma radiation on the developmental process of Drosophila embryos, *Sangsuwan, T \**
- P76. Source Localization of Atmospheric Release in Continental Scale Scenario of Ruthenium-106 Release in 2017, *Tichy, O*
- P77. Communicating uncertainty within decision making, *Tomkiv, Y\**



# Conference Venue - Stockholm University map of campus

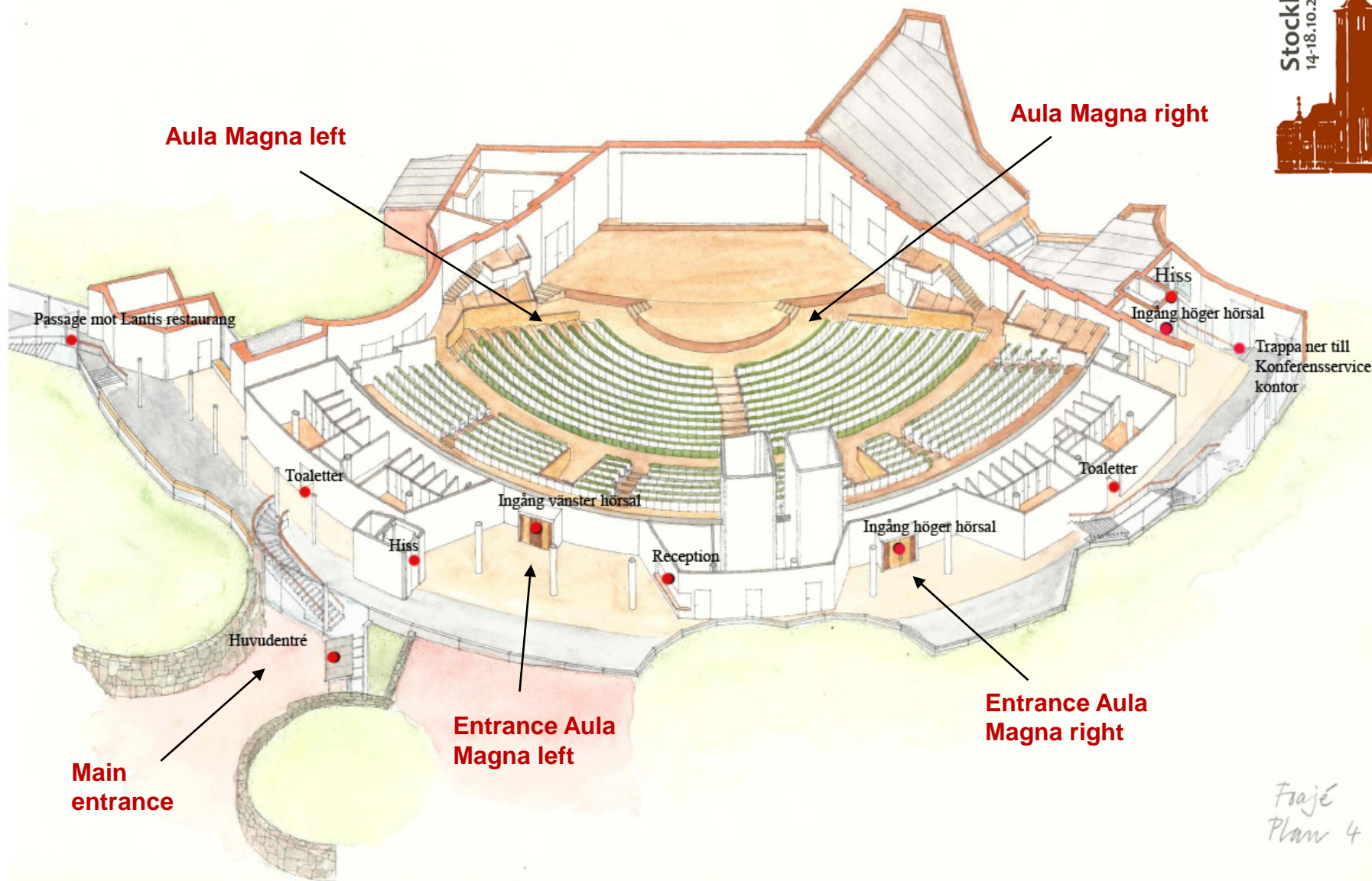


Vivi Täckholm - Q211  
entrance

Exit from the subway (T-bana)  
Station: Universitetet  
(red line towards Mörby Centrum)

Aula Magna

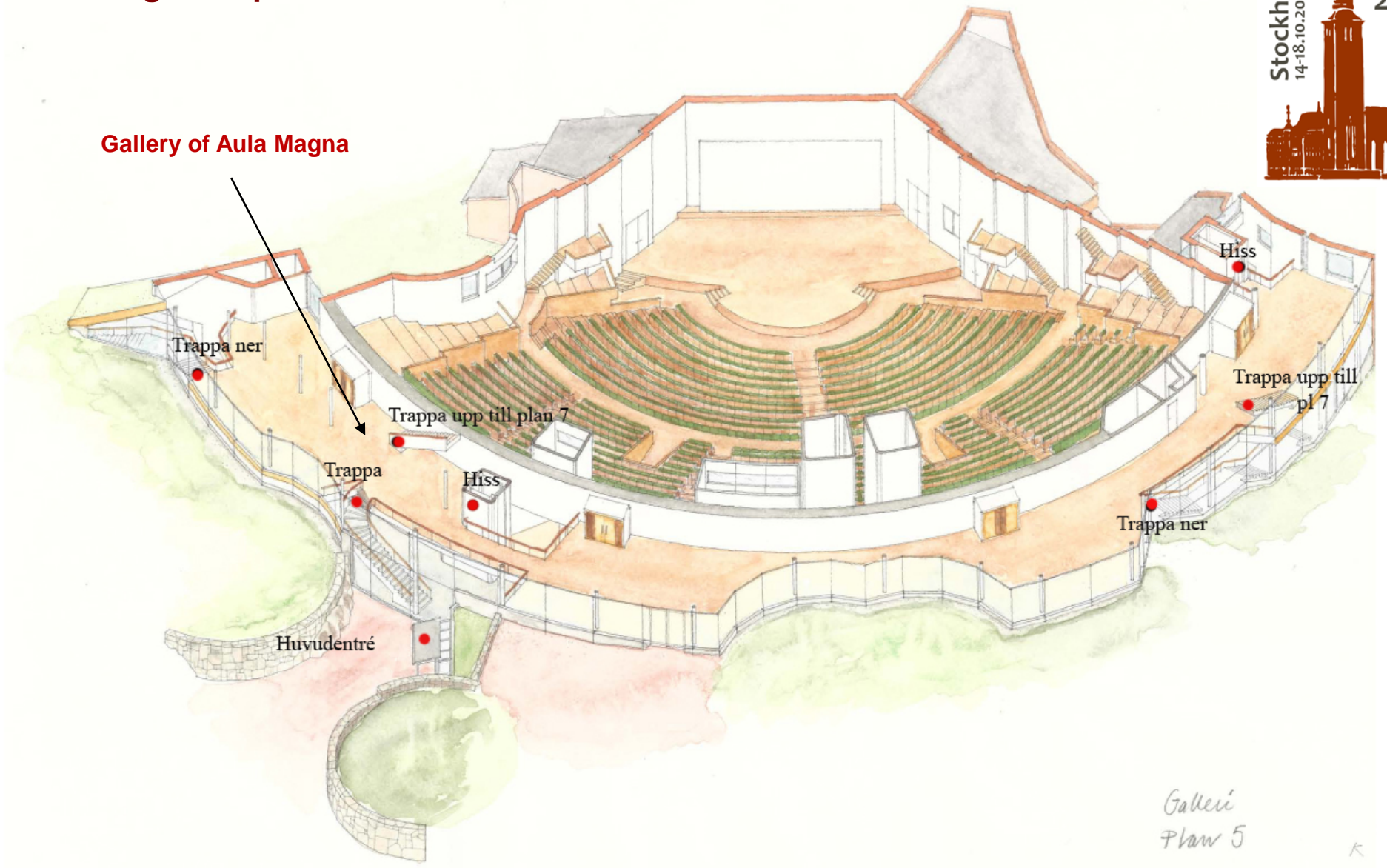
# Aula Magna map – level 4 (entrance level)



Some useful Swedish words:

hiss = lift, trappor = stairs, ingång = entrance, utgång = exit, höger = right, vänster = left, hörsal = lecture hall, plan = level, ner = down, upp = up

# Aula Magna map – level 5

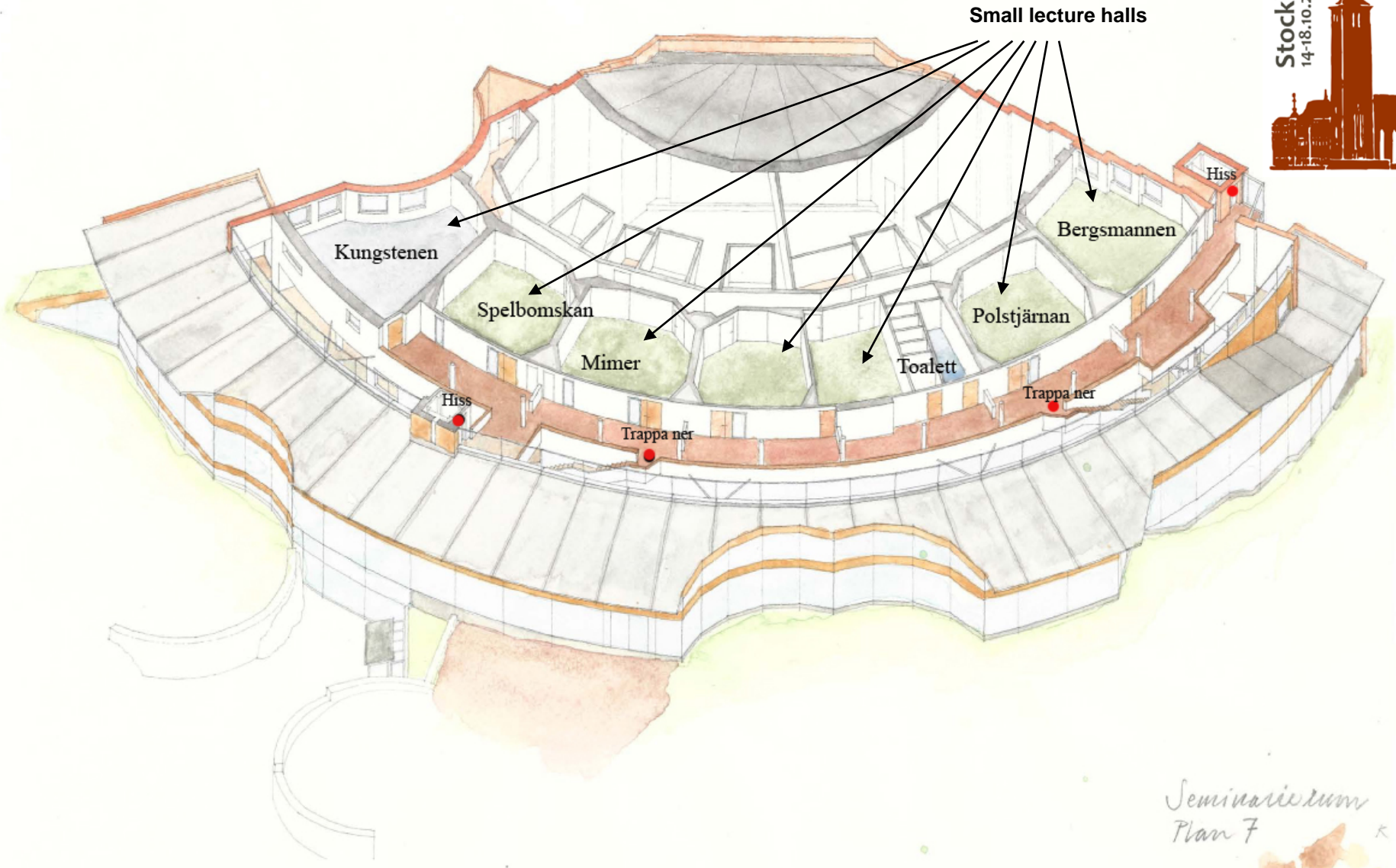


Galleri  
Plan 5

## Some useful Swedish words:

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# Aula Magna map – level 7 (top level)



*Seminarierum  
Plan 7*

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