# DIR2025



10<sup>th</sup> International Symposium on Digital Industrial Radiology and Computed Tomography



dazto

**PROGRAMME** July 1<sup>st</sup> to 3<sup>rd</sup>, 2025, Paris, France

### **SPONSORS**



Contact: dir2025@cofrend.com

www.dir2025.com

With the support of





The 10th International Symposium on Digital Industrial Radiography and Computed Tomography organized by the COFREND in partnership with CEA LIST and DGZfP,

#### will be held in Paris, July 1st to 3rd , 2025

We are delighted to welcome you at the 10th International Symposium on Digital Industrial Radiology and Computed Tomography (DIR 2025), hosted by COFREND in Paris, at the beginning of July 2025.

The DIR 2025 international conference is a major meeting dedicated to X-ray imaging in the field of non-destructive testing (NDT). After a successful event held in Lyon in 2007, we are excited to bring it back to France in 2025 for its 10th edition.

**Organised by COFREND, CEA list and DGZfP,** the conference brings together experts, researchers, industrial players and decision-makers from around the world to discuss advances, challenges and opportunities related to applications of digital radiology and computed tomography in a large variety of industrial domains.

The scientific program covers a wide range of topics, from the newest trends such as robotic inspection and artificial intelligence based inspection, to the traditional progress reports in hardware developments, modelling and simulation, image processing, standardisation and materials characterisation. **More than 80 contributions** were received and reviewed by the scientific committee, which enabled us to build a comprehensive program, expected to promote rich exchanges between researchers, users and equipment suppliers. **Additionally, 6 keynote talks** from distinguished experts will provide valuable insights and fresh perspectives for the community.

Beyond the scientific sessions, DIR2025 will propose engaging **social events, through the Welcome Cocktail and the Gala Dinner,** which will take place as a scenic cruise on the Seine River.

The conference program will end with laboratory visits, with four options proposed for the morning of July 4th.

We sincerely appreciate the support of **our 8 sponsors** and we warmly welcome the presence of **16 exhibitors** showcasing state-of-the-art hardware and software solutions for the NDT community.

We look forward to seeing you in Paris in July 2025!

The Organising Committee of DIR 2025



#### **ORGANISING COMMITTEE**

- Marius Costin (CEA List, COFREND), Chairman of DIR 2025
- Uwe Zscherpel (BAM, DGZfP),
- Stefan Kasperl (Fraunhofer EZRT, DGZfP),
- Pierre Calmon (CEA List), President of COFREND's scientific committee,
- Florence Giraud (COFREND),
- Adrien Stolidi (CEA List, COFREND)

### **SCIENTIFIC COMMITTEE**

- Marius Costin (CEA List), Chairman of DIR 2025, France
  - Adrien Stolidi CEA List, France
  - Stefan Kasperl, EZRT, Germany
  - Uwe Zscherpel, BAM, Germany
  - Sébastien Brzuchacz, Cetim France
  - Simone Carmignato, University of Padova, Italy
  - Wim Dewulf, KU Leuven, Belgium
  - Nicolas Estre, CEA IRESNE, France
  - Uwe Evert, Kowotest, Germany
  - Christoph Heinzl, University of Passau, Germany
  - Frank Herold, Visiconsult, Germany
  - Frédéric Jenson, Safran Tech, France
  - Valérie Kaftandjian, INSA Lyon, France
  - Johann Kastner, University of Applied Sciences Upper Austria, Austria
  - Alessandro Olivo, University College London, United Kingdom
  - Andreas Schumm, EDF, France
  - Jan Sijbers, University of Antwerp, Belgium
  - Ion Tiseanu, National Institute for Lasers, Plasma and Radiation Physics, Romania
  - Norman Uhlmann, Fraunhofer EZRT, Germany

		JULY 1st	:, <b>202</b>	5
		8h00 - Opening to exhi 8h15 - Opening of the Symposium,		
		9h00 - 9h10: OPENING C	EREMO	NY - Auditorium
Ma	arius CC	Welcome & In OSTIN (CEA-List, France), Chair of the 10th international Symp		ion on Digital Industrial Radiography and Computed Tomography
		9h10 - 9h55 - KEYNOTE: Recent Uwe EWERT (DG		
		10h00 - 10h40 : PLENARY SESSION CHAIRS: Marius COSTIN (CEA-List, France) &		•
10h00-10h20	Performances of TOMIS a transportable LINAC-based X-ray tomograph			
10h20-10h40	0 Combining the RoboCT Technology with ISAR using ADR for In- and At-Line Inspection of Cast Parts Frank SUKOWSKI, Fraunhofer Development Center X-Ray Technology, Germany			
		10h45 - 11h15 - Coffee Brea	k & Exhib	ition - Zodiaque Hall
SESSIONS		TU.1.A Auditorium		TU.1.B Philae Room
TOPICS		High energy imaging		Modeling and simulation I
CHAIRS		Marius COSTIN (CEA-List, France) & Uwe ZSCHERPEL (BAM Berlin, Germany)		Stefan KASPERL (Fraunhofer IIS, Germany) & Anthony TOURON (Université Paris-Saclay, CEA-List France)
11h15-11h35	TU.1.A.1	Performance of 9 to 15 MV Computed Tomography of large objects in industrial and nuclear field Nicolas ESTRE, CEA Iresne, France	TU.1.B.1	Artistlib - remote control the radiographic simulator aRTist from Python Carsten BELLON, Bundesanstalt für Materialforschung und -prüfung (BAM), Germany
11h35-11h55	TU.1.A.2	New Microfocus Linear Accelerators Called MicroBeam Linatron (MBL) at Varex Imaging Andrey Valentinovich MISHIN, Varex Imaging Corporation, United States	TU.1.B.2	Novi-Sim: A Fast and Accurate Simulation Tool for X-Ray Tomography with Scatter Modeling Awen AUTRET, Novitom, France
11h55-12h15	TU.1.A.3	Development of an industrial inspection system based on High Energy Photon Counting Detectors and off-line Time Delay Integration Angela PETERZOL, Framatome Intercontrole, France	TU.1.B.3	Simulation of a real dimensional CT-measurement study using a calibrated aluminum specimen Matthias BRAUN, Chair of Manufacturing Metrology (FMT), Germany
12h15-12h35	TU.1.A.4	Comparison of standard digital detector arrays and photon counting detectors with high-energy X-ray generators Nicolas DANKAR, Cetim, France	TU.1.B.4	Flat-Field based Characterization, Modeling and Simulation of Noise in a Digital X-ray Imaging System Markéta TKADLECOVÁ, Central European Institute of Technology, Czech Republic

	12h35 - 14h00 - Lunch-Buffet & Exhibition - Zodiaque Hall					
	14h00 - 14h40 - Auditorium - KEYNOTE "Joint use of simulation and Artificial Intelligence for nondestructive Christophe REBOUD, CEA-List					
SESSIONS		TU.2.A - Auditorium		TU.2.B - Philae Room		
TOPICS		AI based inspection I		Standardization I		
CHAIRS		Valérie Kaftandjian (INSA-Lyon, France) & Christoph HEINZL (University of Passau, Germany)		Uwe EWERT (Kowotest, Germany) & Andreas SCHUMM (EDF R&D, France)		
14h45-15h05	TU.2.A.1	Artificial Intelligence in Digital Radiogaphy Lennart SCHULENBURG, VisiConsult X-ray Systems & Solutions, Germany	TU.2.B.1	20 years after – revision of ISO 14096 for NDT film digitization and present available hardware in the light of NDT 4.0 Uwe ZSCHERPEL, BAM Berlin, Germany		
15h05-15h25	TU.2.A.2	Smart-RT: End-to-end automatic radiographic images analysis through a multi-stage object detection algorithm Hocine MANSOUR, Exanodia, France	TU.2.B.2	Introduction of Digital Radiography in the French Design and Construction Rules for Mechanical Components of PWR Nuclear Islands. Presentation of the methods, experiments, and results. Romain JONCHIERE, EDF, Direction of Industrial Quality, France		
15h25-15h45	TU.2.A.3	Automated Defect Classification in Aerospace X-ray Images Using CNNs Caglayan TUNA, Université Paris-Saclay, CentraleSupélec, Inria, France	TU.2.B.3	TRITON FBI - 10 years of industrial lesson learnt on Computed Tomography applied to composite fan blades Samuel MAILLARD, Safran Composites, France		
15h45-16h05	TU.2.A.4	Deep Learning for Robust Defect Detection in Industrial X-Ray Images with Minimal Real-Data Dependency Bishwajit GOSSWAMI, Fraunhofer IIS, Germany	TU.2.B.4	Dimensional measurement with X-ray CT systems. Review of existing standards and lessons learned from several recent comparative studies Lionel GAY, COFREND, France		
16h05-16h35		Coffee Break &	Exhibitio	n - Zodiaque Hall		
SESSIONS		TU.3.A - Auditorium		TU.3.B - Philae Room		
TOPICS		AI based inspection II		Automated inspection		
CHAIRS		Julie ESCODA (Université Paris-Saclay, CEA, List, France) & Frank HEROLD (VisiConsult X-ray Systems & Solutions, Germany)		Christophe REBOUD (Université Paris-Saclay, CEA, List, France) & Marius COSTIN (CEA-List, France)		
16h35-16h55	TU.3.A.1	A Neural Network for Denoising Multispectral Tomography Data at BM18 of the Europe- an Synchrotron Radiation Facility Peter GÄNZ, University of Stuttgart, Germany	TU.3.B.1	X-ray inspection and pore-classification in additive manufacturing: A systematic study on Al-alloys Kevin EICKHOFF, VisiConsult X-ray Systems & Solutions, Germany		
16h55-17h15	TU.3.A.2	Image segmentation using AI: real world examples adding value to industrial inspection Anton DU PLESSIS, Comet Technologies France	TU.3.B.2	LOGITOM: Advances in Automated Tomography Processing for Foundry Casting Quality Control Awen AUTRET, Novitom France		
17h15-17h35	TU.3.A.3	A 3D Denoising Neural Network for Improved Surface Quality in Inline CT Metrology Faizan AHMAD, University of Stuttgart, Germany	TU.3.B.3	Improved Measurement Repeatability with Significantly Faster Scans: Benefits of AI for X-ray CT Inspection in Production Sylvain GENOT, Nikon Metrology France		
17h35-17h55	TU.3.A.4	Machine Learning Based Scatter Correction for Industrial Computed Tomography Alexander SUPPES, Waygate Technology Germany	TU.3.B.4	Next Evolution of MesoFocus Technology – boosting Resolution and Power Adrian RIEDO, Comet X-Ray, Switzerland		
18h00-19h30	Ice Breaking welcome cocktail - Zodiaque Hall			ktail - Zodiaque Hall		

### JULY 2nd, 2025

8h00 - Opening to exhibitors and organizers

8h30 - Opening of the Symposium, Welcome Coffee and exhibition

### 9h00-9h40 - Auditorium: KEYNOTE « Tomography in Aerospace: Safran's Journey, Current Challenges, and Future Needs » Frédéric JENSON, Safran Tech, France

SESSIONS		WE.1.A - Auditrorium		WE.1.B - Philae room
TOPICS		Robotized inspection		Standardization II
CHAIRS		Marius COSTIN (CEA-List, France) & Norman UHLMAN (Fraunhofer IIS, Germany)		Anne-Françoise OBATON (LNE, France) & Uwe EWERT (Kowotest, Germany)
9h45-10h05	WE.1.A.1	CyXTraX: Object Placement Optimization for Industrial CT Simon WITTL, Deggendorf Institute of Technology, Germany	WE.1.B.1	Reflection about the interest to create a Certification for the NDT operators dedicated to X-ray Computed Tomography Lionel GAY, COFREND, France
10h05-10h25	WE.1.A.2	RadalyX: Portable Multimodal Robotic Scanner Josef UHER, Radalytica a.s., Czech Republic	WE.1.B.2	Creation of Digital Radiography Certification Arnaud BAILLY, Mistras Group, France
10h25-10h45	WE.1.A.3	Masked X-Ray Tomographic Reconstruction on a Dual-Arm Robotic Cell Victor BUSSY, Université Paris-Saclay, CEA, List, France	WE.1.B.3	ASME B89.4.23 Performance Evaluation and Interim Testing of X-Ray CT Joe SCHLECHT, VJ Technologies, Inc., United States of America
		10h45 - 11h15 - Coffee B	reak & Ex	hibition - Zodiaque Hall
SESSIONS		WE.2.A - Auditorium		WE.2.B - Philae room
TOPICS		Modeling and simulation II		Image quality and quantitative evaluations
CHAIRS		Stefan KASPERL (Fraunhofer IIS, Germany) & Andreas SCHUMM (EDF R&D, France)		Christoph HEINZL (University of Passau, Germany) & Jan Sijbers (University of Antwerp, Belgium)
11h15-11h35	WE.2.A.1	On the joint use of simulations and experimental RX images for generating very large datasets with application to object detection tasks Anthony TOURON, Université Paris-Saclay, CEA, List, France	WE.2.B.1	New Concept for Detail Sensitivity Monitoring in industrial Computed Tomography - the EURAMET Project SensMonCT Uwe EWERT, Kowotest, Germany
11h35-11h55	WE.2.A.2	Hybrid Modeling of Material Imperfection Indications in X-ray Computed Tomography Datasets Erik LINDGREN, University West, Trollhättan, Sweden	WE.2.B.2	X-ray tomography as a tool for dimensional measurement: challenge of the surface determination Malik ENNIAFA, Cetim, France
11h55-12h15	WE.2.A.3	3D Augmentation of Raw CT Data for Improved Automated Defect Inspections Nina LASSALLE-ASTIS, CETIM Sudouest, France	WE.3.B.3	Image Quality Analysis of a Laminographic Multiplicative Algebraic Reconstruction Algorithm compared to Filtered Shift Averaging Weslley Carlos Dias da SILVA, Petrobras Petróleo Brasileiro, Brazil
12h15-12h35	WE.2.A.4	X-rays: using simulation to enrich data Stéphane AMIEL, Safran Tech, France	WE.2.B.4	Use of Digital Focal Spot Measurement for Optimisation of X-ray Tubes in Development and Production Klaus BAVENDIEK, Kowotest, Germany

1	l2h35 - 14h00 :	Lunch-Buffet &	& Exhibition - 2	Zodiaque Hall	

### 14h00 - 14h40 - Auditorium: KEYNOTE « Potentials of Quantum Computing for Tomography » Theobald FUCHS, Fraunhofer EZRT, Germany

SESSIONS		WE.3.A - Auditorium		WE.3.B - Philae room
TOPICS		CT reconstruction		Image quality and quantitative evaluations II
CHAIRS		Valérie KAFTANDJIAN (INSA-Lyon, France) & Nicolas ESTRÉ (CEA IRESNE, France)		Anne-Françoise OBATON (LNE, France) & Sascha SENCK (University of Applied Sciences Upper Austria)
14h45-15h05	WE.3.A.1	Learning a projection term on a manifold to constrain tomographic reconstruction Victor BUSSY, Université Paris-Saclay, CEA, List, France	WE.3.B.1	Application of radiographic criteria to Computed Tomography inspection in non-destructive testing Sebastien Antoine BRZUCHACZ, CETIM, France
15h05-15h25	WE.3.A.2	A Fast Deep Incremental Angle Refinement Model for Limited-Angle CT Reconstruction Xingyu LIU, University of Stuttgart, Germany	WE.3.B.2	New method for characterizing contrast sensitivity in radiography: application to a photon-counting detector Jean RINKEL, Safran Tech, France
15h25-15h45	WE.3.A.3	Exact reconstruction for helical cone-beam X-ray CT using the ASTRA toolbox Pavel PARAMONOV, University of Antwerp, Belgium	WE.3.B.3	3D resolution in microCT : a comparison study on visual resolution versus MTF measurement Solene VALTON, RX Solutions, France
15h45-16h05	WE.3.A.4		WE.3.B.4	Evaluating Image Quality: A Comparative Study of Computed Radiography and Digital Radiography in Aerospace Applications Muzibur KHAN, National Research Council Canada
		16h05 - 16h35 : Coffee Bi	reak & E>	chibition - Zodiaque Hall
SESSIONS		WE.4.A - Auditorium		WE.4.B - Philae room
TOPICS		NDT Applications		Characterization and cross-domain topics I
CHAIRS		Frank SUKOWSKI (Fraunhofer IIS, Germany) & Ion TISEANU (National Institute for Lasers, Plasma and Radiation Physics, Romania)		Jean RINKEL (Safran Tech, France) & Norman UHLMAN (Fraunhofer IIS, Germany)
16h35-16h55	WE.4.A.1	Inspection of Composite Pipelines Using X-ray Imaging Weslley C.D. SILVA, Petrobras, Riode Janeiro, Brazil	WE.4.B.1	Characterization of the damage mechanisms of aeronautical composite materials via synchrotron in- situ tensile testing Georges GIAKOUMAKIS, Université Paris-Saclay, Onera, France
16h55-17h15	WE.4.A.2	Concrete bridge investigation: alternatives to radioactive gamma sources James GILBERT, Cerema, France	WE.4.B.2	Non-destructive testing of electronic components using X-ray computed laminography and tomography Sascha SENCK, University of Applied Sciences Upper Austria

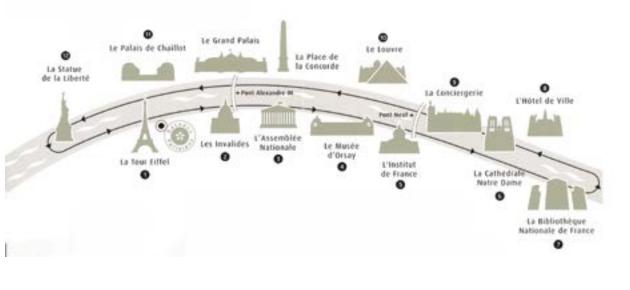
17h15-17h35	WE.4.A.3	Comparison of CT Imaging Methods for Defect Detection in a Multi-Material 7-Pin Power Connector Jochen BUTZER, Corporate Research, Robert Bosch, Germany	WE.4.B.3	In-situ observation of electrolyte movement in commercial 18650 Li-ion battery cells under various temperature conditions by Industrial X-ray Computed Tomography Zuzana STRAVOVÁ, University of Technology, Brno, Czech Republic
		19h30 - 23h30 : F	ARIS	CRUISE DINNER

**GALA DINNER** 

The participants will enjoy a summer evening on the Seine. Along with an excellent dinner on a private boat, you will have the opportunity to appreciate a sightseeing of several major monuments in Paris, such as the Eiffel Tower, Orsay Museum, Louvre Museum and Notre Dame Cathedral.

19h30 - Meeting at the ship boarding dock at the foot of the Eiffel Tower 20h00 - Boarding on & Welcome cocktail 20h30 - Departure of the boat 20h30 - 23h00 - Paris Cruise dinner 23h00-23h30 - Back to the boarding dock





### JULY 3rd, 2025

8h00 - Opening to exhibitors and organizers

8h30 - Opening of the Symposium, Welcome Coffee and exhibition

### 9h00 - 9h40 - Auditorium - KEYNOTE « High energy laser-based X-ray source » Cédric THAURY, ENSTA – Paris Tech /LOA, France

SESSIONS		THU.1.A		THU.1.B
TOPICS		New sources and imaging methods		Image processing I
CHAIRS		Nicolas ESTRÉ (CEA IRESNE, France) & Frank SUKOWSKI (Fraunhofer IIS, Germany)		Jitendra Singh RATHORE (Université Paris-Saclay, CEA, List, France) & Thomas LANG (Fraunhofer IIS, Germany)
9h45-10h05	THU.1.A.1	Tomography strategies dedicated to laser-based Kα X-ray source Adrien STOLIDI, Université Paris-Saclay, CEA, List, France	THU.1.B.1	Crack segmentation in radiographic images of additively manufactured parts Tebogo LEDWABA, Stellenbosch University, South Africa
10h05-10h25	THU.1.A.2	Thermal neutron imaging in the local lab Serge DUARTE PINTO, Photonis France	THU.1.B.2	A projective digital volume correlation approach for wall thickness measurement by multiple view X-ray imaging of metallic turbine blades Julian BETANCUR, Safran Tech, France
10h25-10h45	THU.1.A.3	Localized Phase Retrieval Application for Analyzing Multi-Material Samples Lukas MALECEK, CEITEC, University of Technology, Brno, Czech Republic	THU.1.B.3	Image Super-resolution Algorithm for Fan Beam CT Based on Denoising Diffusion Probabilistic Models Han YU, China Academy of Machine Shenyang Research Institute of Foundry, China
		10h45 - 11h15 : Coffee B	reak & Ex	chibition
SESSIONS		THU.2.A		THU.2.B
TOPICS		Characterization and cross-domain topics II		Image processing II
CHAIRS		Sebastien Antoine BRZUCHACZ (CETIM, France) & Adrien STOLIDI (Université Paris-Saclay, CEA, List, France)		Lionel GAY (COFREND, France) & Anton DU PLESSIS (Comet Technologies France)
11h15-11h35	THU.2.A.1	X-Ray Computed Tomography of Polymers exposed to High-pressure Hydrogen Gas Johann KASTNER, University of Applied Science Upper Austria	THU.2.B.1	Active Contour for Applying CT Segmentation on a Single Image to Surrounding Multiple Images Takashi KAWAMOTO, Tokyo Boeki Techno-System, Japan
11h35-11h55	THU.2.A.2	Holistic Quality Assessment of Additively Manufactured Heat Exchangers Using Robotic CT Jitendra Singh RATHORE, Université Paris-Saclay, CEA, List, France	THU.2.B.2	Semi-Automatic Approach for Parts Segmentation of CT Scanned Assembled Car Naoki MURAKAMI, The University of Tokyo, Japan
11h55-12h15	THU.2.A.3	X-ray tomo-ptychography of single micrometric carbon and basalt fibres Mathieu DUCOUSSO, Safran Tech, France	THU.2.B.3	Distribution analysis in xCT data for identifying factors influencing uncertainty of repeated measurements Lionel KIELHÖFER, RWTH Aachen University, Germany

12h15-12h35	THU.2.A.4	Quantifying the Impact of XCT Data Compression on Defect Shapes Thomas LANG, Fraunhofer IIS, Germany	THU.2.B.4	A novel scatter correction method for dual-layer flat-panel detector based CBCT imaging Yongshuai GE, Chinese Academy of Sciences, Shenzhen, China
		12h35 - 14h00 : Lunch-Buffet &	Exhibitio	n - Zodiaque Hall
	14h00 -	14h40 - Auditorium: KEYNOTE « X-ray micro-tomograph review from the Patricia WILS, MNHI	e MNHN	N »
SESSIONS		THU.3.A		THU.3.B
TOPICS		Characterization and cross-domain topics III		Image processing III
CHAIRS		Solene VALTON (RX Solutions, France) & Johann KASTNER (University of Applied Science Upper Austria)		Julie ESCODA (Université Paris-Saclay, CEA, List, France) & Jitendra Singh RATHORE (Université Paris-Saclay, CEA, List, France)
14h45-15h05	THU.3.A.1	The use of radiography at the C2RMF for heritage objects Elsa LAMBERT, C2RMF, France	THU.3.B.1	A Hybrid X-Ray Computed Tomography System for Education and Synthetic Data Generation for A Model Training Martin SIMON, University of Applied Sciences Karlsruhe, Germany
15h05-15h25	THU.3.A.2	Parametric study of lightning induced damage in carbon composite using X-ray phase contrast imaging Adrien STOLIDI, Université Paris-Saclay, CEA, List, France	THU.3.B.2	DnCNN based Compton Backscatter Imaging Denoising Algorithm Peiyuan MA, Tsinghua University, China
15h25-15h45	THU.3.A.3	Comparison of porosity rate calculation implementing different software Janka WILBIG, Laboratoire National de Métrologie et d'Essais (LNE), France	THU.3.B.3	Filling quantification of capillary target using X-Ray radiography and X-Ray fluorescence. Alexandre ROYER, CEA DAM, France
15h45-16h05	THU.3.A.4	Development of a 20 kN Tension/Compression Testing System for In-Situ Microtomography of Lattice Structures Under Compression Andrea CIUFFINI, Novitom, France	THU.3.B.4	Unveiling degradation mechanisms: Morphological Analysis of Li-ion battery electrodes using X-ra nano-Computed Tomography (nXRCT) Saptarshee MITRA, CEA SyMMES, France
		16h05 - 16h35 : Coffee Break & I	Exhibition	ı - Zodiaque Hall
SESSIONS		THU.4.A		THU.4.B
TOPICS		Progress on sources and detectors		Image processing IV
CHAIRS		Alix SARDET (Université Paris Saclay, CEA-List, France) & Frank HEROLD (VisiConsult X-ray Systems & Solutions, Germany)		Adrien STOLIDI (Université Paris-Saclay, CEA, List, France) & Victor BUSSY (Université Pa- ris-Saclay, CEA, List, France)
16h35-16h55	THU.4.A.1	Experimental and simulation results for inherent unsharpness estimation of cassette contribution Anthony TOURON, Université Paris-Saclay, CEA List, France	THU.4.B.1	Resolution Improvement by Speckle-based Learning Yukie NAGAI, The University of Tokyo, Japan

16h55-17h15	THU.4.A.2	High resolution CBCT imaging with a dual-layer detector Ting SU, Chinese Academy of Sciences, Shenzhen, China	THU.4.B.2	A Fast Metric Based on Marching Cubes and Hausdorff Distance for the Quality Assessment of 3D Volume Data for Computed Tomography Measurement Technology Ahmed BARAKA, WZL   RWTH Aachen University, Germany	
17h15-17h35	THU.4.A.3	Hardware and software developments on ESRF-EBS BM05 Fabien LÉONARD, The European Synchrotron Radiation Facility, France	THU.4.B.3	Study of parameter influency and measurement uncertainties with xray computed tomography on a weld Alexandre CHOUX, Université Paris-Saclay, CEA DAM, France	
17h35-17h55	THU.4.A.4	New generation of high-resolution 225 kV transmission X-ray tubes with LaB6 cathodes Vladimir BURLAKA, X-RAY WorX GmbH, Germany			
	Conclusion of the 10th international Symposium DIR2025				

### SITES VISITS ON JULY 4TH MORNING

Participants will have the choice between 4 sites to visit.



MNHN - PARIS Visit by groups of the AST-RX platform, the micro-tomography facility at the MNHN From 10h00 to 12h00



### **C2RMF** - Paris

Visit by groups of the Centre de Recherche et de Restauration des Musées de France (Center for Research and Restoration of French Museums

From 10h00 to 12h30



CEA-List PARIS-SACLAY 8h30 : Shuttle departure 9h30 -12h30 : Visit of the site Shuttle transfer to Paris : 14h00 approx. arrival



### SYNCHROTRON SOLEIL

PARIS-SACLAY 8h30 : Shuttle departure 9h30 -12h30 : Visit of the site Shuttle transfer to Paris : 14h00 approx. arrival

Shuttles transfers are organized from Paris to Paris-Saclay with drop-off on the way back at Orly Airport, and to the center of Paris.

Once registered, you will receive by email the registration link for the visit of your choice. Please, consider the timetables with approx arrival hours for your flights booking.









15





A vendor exhibition will be conducted to complement the technical presentations, from July 1st to 3rd, 2025 16 exhibitors will welcome you on their stand





#### Venue

Espace Saint Martin 199 bis, rue Saint Martin, 75003 PARIS https://www.espacesaintmartin.com/en/



#### By Airplane From:

Orly airport: about 30 minutes Roissy Charles de Gaulle airport: about 45 minutes



To the conference place :

Public transportation from airports to the center of Paris Air France shuttles Taxi Station at the Airports

Make sure to use official cabs awaiting outside at the official Taxi station of the airports of Orly and Roissy Charles de Gaulle.



#### By train and Public transportation

Located in the heart of Paris, you have a wide choice of transportation : From train stations: RER and metro Stop Stations: RER B & C: Forum des Halles Metro 4: Etienne Marcel Metro 3: Arts et Métiers



#### By Taxi or Uber

By Car

Metro 11: Rambuteau

You can order through Mobile Applications: Uber or Taxi G7



#### GPS # 48.865676064378334, 2.356070311444826

Paid Parkings are available around the conference place.

The closest being : Parking Indigo Paris Saint-Martin, 254 rue Saint Martin Please note that the traffic is generally slow and some streets are pedestrian only.

#### Hotel Reservation

Hotels, Air b'nB or even Appart Hotels, we invite you to book your stay through hotels booking websites and plateforms.

A large choice of accomodations and for all budgets, around the place or at few metro station

#### SEE HOTELS AROUND

#### Participation Fees (VAT included)

The conference fee include the contribution to the full organization of the event, scientific programme, proceedings, industrial visits, daily lunch and refreshments, welcome cocktail and Gala Dinner.

Presenting authors: 876 € VAT incl. Participant & co-authors - EARLY BIRD until May 31<sup>st</sup>: 918 € VAT incl Participant Full rate from June 1<sup>st</sup>: 999 € VAT incl PhD. Students: 540 € VAT incl

#### **Single Passes**

Participant 1 DAY (without Gala Dinner):  $300 \in VAT$  incl Participant 1 DAY with Gala Dinner:  $420 \in VAT$  incl Gala dinner invitation:  $210 \in VAT$  incl

#### Contact

COFREND, French NDT Society (64 rue Ampère, 75017 Paris, France) P: +33 1 44 19 05 30 - E-mail: dir2025@cofrend.com





## All information are available online www.dir2025.com