

5<sup>th</sup>  
Jubilee  
Edition

DEGGENDORF  
INSTITUTE OF  
TECHNOLOGY **DIT**  
European Campus Rottal-Inn

Pfarrkirchen, Germany

# DigiHealthDays-2024

Global Digital Health — today, tomorrow, and beyond

11-15  
NOV  
2024

## DigiHealthDay Workshop

### Data Integration and Interoperability

May 13 - 17, 2024 (Online & Onsite), DIT-ECRI, Pfarrkirchen

**Format:** Blended (Physical & Virtual)

**Duration:** 5 days

**Days:** May 13 - 17, 2024, DIT-ECRI Pfarrkirchen

**Learning Objectives:** By the end of this workshop, participants will be able to understand and apply key concepts and techniques of data integration and interoperability within Digital Health systems.

- Foundational Understanding of Data Integration
- Health Level Seven International (HL7) Standards: HL7 V2, CDA, IPS
- Fast Healthcare Interoperability Resources (FHIR)
- Introduction to OpenEHR Standard & Implementation
- Terminology and Mapping
- European EHR Xchange Format (EEHRxF) and its features

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## Speakers



**Dr. Luis Marco Ruiz, PhD (Norway)**

Senior Research Fellow, Norwegian Centre for E-health

Dr. Luis Marco Ruiz is a distinguished senior researcher and adept data engineer, renowned for his pioneering work in crafting and executing groundbreaking solutions for harnessing healthcare data for biomedical research purposes. With a focus on the secondary use of healthcare data, Dr. Marco-Ruiz has consistently demonstrated his expertise in devising innovative methodologies that propel the integration of clinical data into biomedical research landscapes.

Since joining the Norwegian Centre for E-health Research (NSE) in 2013, Dr. Marco-Ruiz has been instrumental in spearheading national and international initiatives aimed at facilitating the seamless utilization of clinical data for research endeavors. His advisory role with esteemed entities such as the Norwegian Ministry of Health and the German consortium HiGHmed underscores his influence in advocating for the adoption of clinical information standards and biomedical ontologies within expansive health research networks.

The emergence of the SARS-CoV-2 pandemic precipitated a pivotal shift in Dr. Marco-Ruiz's focus, propelling him towards the development of novel methodologies geared towards enabling swift data reuse for gaining critical insights into the virus. Notably, he played a pivotal role as a solution architect in the establishment of the German National Covid Research Infrastructure (CODEX), showcasing his agility and acumen in navigating complex healthcare challenges.

Currently, Dr. Marco-Ruiz serves as a distinguished member of the IMIA Working Group for Opensource Health Informatics, where his contributions continue to shape the discourse surrounding the design of open digital health ecosystems. Additionally, his involvement in the openEHR Education Program underscores his commitment to nurturing talent and fostering knowledge exchange within the realm of health informatics.

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**Jonathan Okereke, M.Sc. (Germany)**

IT Validation Manager & Compliance Architect, Zeiss Group

Jonathan Okereke, M.Sc., is a seasoned professional with over 13 years of experience in Medical Informatics. Currently serving as the IT Validation Manager & Compliance Architect at ZEISS Group in Germany, Jonathan is dedicated to leveraging Information Technology (IT) to advance healthcare.

In his role at ZEISS Group, Jonathan plays a vital part in the architecture team, where he crafts High-Level Solution Designs, oversees Enterprise Architecture Management, and leads initiatives in Computerized Systems Validation (CSV). His responsibilities also include designing Integration Architecture Blueprints and ensuring compliance with Cloud Governance standards.

Before joining ZEISS Group, Jonathan served as the Technical Lead/Solutions Architect at the Medical Data Integration Center, Uniklinik Cologne, contributing significantly to the HiGHmed project, Germany's premier Medical Informatics Consortium.

Throughout his career, Jonathan has gained valuable insights from engagements with prestigious organizations such as the EU-Horizon2020 Project (Credential) and Medneo Teleradiology GmbH. His experiences have deepened his understanding of value-based healthcare delivery and fueled his passion for collaborative problem-solving within the industry.

Jonathan holds an M.Sc. in Medical Informatics from Technische Hochschule Deggendorf, THD-ECRI, where he received the esteemed Best Graduating Student Award in 2018.

With his extensive experience and unwavering dedication, Jonathan Okereke continues to drive innovation in healthcare IT. His leadership qualities and expertise position him as a trusted authority in the field, capable of navigating complex challenges and driving positive change within the healthcare landscape.

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**Fernando Portilla, M.Sc. (Germany)**

Digital Health Senior Advisor, Banco Interamericano del Desarrollo

As a Digital Health Advisor at the Inter-American Development Bank (IDB), Fernando Portilla plays a pivotal role in advancing healthcare across Latin America and the Caribbean (LAC) by spearheading the development of digital health strategies and projects. With a focus on interoperability, architectures, and the utilization of standards for health information systems, he uses his expertise to empower governments and healthcare institutions in the region.

He is currently pursuing a PhD in Digital Health at the University of Agder (Norway) and holds a Master's degree in Medical Informatics from the Deggendorf Institute of Technology (Germany), as well as a Master's in ICT Management from ICESI University (Colombia). He obtained his Systems Engineering degree from Universidad Javeriana in Cali, Colombia.

As a founding member of the RACSEL Network, a regional initiative fostering cooperation in digital health, he is committed to driving collaborative efforts in advancing healthcare technologies. He actively contributes to international standards development organizations such as HL7, IHE, and SNOMED CT, ensuring that digital health initiatives align with global best practices.

In addition to his advisory role, he also serves as a university professor and directs the Center for Digital Health at the Universidad del Rosario in Colombia. Through teaching and research, he shares his expertise and cultivates the next generation of healthcare professionals equipped to navigate the complexities of digital health.

With his extensive experience, academic background, and dedication to advancing healthcare through digital innovation, Fernando Portilla is a driving force in shaping the future of healthcare delivery in Latin America and the Caribbean.

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**Dr. Henrique Martins, PhD (Portugal)**

Associate Professor ISCTE - Instituto Universitário de Lisboa

Dr. Henrique Martins, MD, PhD, MLaw, FIAHSI, is a trailblazer in healthcare transformation and digital health innovation. With a diverse academic background, including a Medical Degree specializing in Internal Medicine, alongside Master's and PhD degrees in Management, and a Law Master's degree, Dr. Martins possesses a unique blend of medical expertise and interdisciplinary knowledge.

Dr. Martins began his pioneering journey as one of Portugal's first Chief Medical Information Officers (CMIOs) at Hospital Fernando Fonseca, Lisbon, from 2009 to 2013. During his tenure at the Ministry of Health, he was responsible for setting the agenda for eHealth in Portugal, leading initiatives to leverage digital technologies for enhanced healthcare delivery.

As President of SPMS, Portugal's Digital Health Agency, for nearly seven years, Dr. Martins played a pivotal role in driving national-level eHealth initiatives. He represented Portugal for eight years as the former Member States co-chair of the EU eHealth Network, shaping policies at the highest level.

In recognition of his contributions, Dr. Martins was elected a Fellow of the International Academy of Health Sciences Informatics (within IMIA) in July 2020. He also serves as a National Defence Auditor and sits on the Board of Directors of the HL7 Europe Foundation since August 2020.

Dr. Martins's commitment to education is evident through his roles as an academic at ISCTE Business School, FCS-UBI medical school, and as a visiting professor at Korea University Medicine. He actively contributes to research, focusing on digital health trends across various levels.

Currently, Dr. Martins serves as Senior Consultant in Digital Health and Innovation for the WHO Athens Quality of Care and Patient Safety Office, as well as Senior Consultant for the Regional Action Plan on Digital Health for the WHO Western Pacific Region. Through his leadership and dedication, Dr. Henrique Martins continues to shape the future of healthcare on both national and global scales, leaving an indelible mark on the landscape of digital health innovation.



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## Agenda

	13 May (Monday) Room: EC 1.04-1.06 Zoom	14 May (Tuesday) Room: EC 1.17-1.20 Zoom	15 May (Wednesday) Room: EC 1.17-1.20 Zoom	16 May (Thursday) Room: EC 1.07-1.10 Zoom	17 May (Friday) Room: EC 1.17-1.20 Zoom
9:45 to 11:15	Introduction to Data Integration and Interoperability  (Jonathan Okereke)	FHIR Introduction  (Luis Ruiz)	Introduction to OpenEHR based data modeling  (Luis Ruiz)	Terminology binding of clinical information models  (Luis Ruiz/Fernando Portilla)	<ul style="list-style-type: none"> <li>Current eHealth landscape and the main EEHRxF features</li> <li>EHDS, adoption, implementation and the cocreation approach</li> </ul> (Henrique Martins)
<i>Break</i>					
11:30 to 13:00	<ul style="list-style-type: none"> <li>Data Integration Techniques</li> <li>Different Inegration models</li> </ul> (Jonathan Okereke)	<ul style="list-style-type: none"> <li>FHIR specifications</li> <li>Getting started with FHIR</li> <li>SMART on FHIR</li> </ul> (Luis Ruiz/Jonathan Okereke)	OpenEHR Implementation / Integration Techniques and Challenges  (Luis Ruiz)	Terminology servers SNOMED CT and LOINC  (Luis Ruiz/Fernando Portilla)	<ul style="list-style-type: none"> <li>Technical content I</li> <li>Technical content II</li> </ul> (Henrique Martins)
<i>Break</i>					
14:00 to 15:30	Hands on session HL7 V2  (Fernando Portilla)	Hands on session HL7 FHIR - Part 1  (Jonathan Okereke)	Hands on session OpenEHR - Part 1  (Luis Ruiz)	Hands on session Mapping  (Luis Ruiz/Fernando Portilla)	
<i>Break</i>					
15:45 to 17:00	<ul style="list-style-type: none"> <li>HL7 CDA</li> <li>ISO 13606 summary</li> <li>International Patient Summary (IPS)</li> </ul> (Fernando Portilla)	Hands on session HL7 FHIR - Part 2  (Jonathan Okereke)	Hands on session OpenEHR - Part 2  (Luis Ruiz)	Concluding remarks, student's work, and feedback  (Luis Ruiz/Fernando Portilla)	

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## Instructions for Participants

### Accounts:

Create an account → <https://tools.openehr.org/designer/#/>

Request an account → <https://sandbox.better.care/>

### Software:

Postman → <https://www.postman.com/downloads/>

### Resources:

Will be uploaded on 13<sup>th</sup> May, Monday → <https://nextcloud.th-deg.de/s/JwKkswjLHBXfbgd>

*Please make sure you fulfill these requirements and be ready with the software and accounts before the workshop.*

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