















# HAROS 2024 Conference Program 26-27 September 2024

## First day: 26 September PM (**amphitheater 1** IUT Nancy Brabois)

14:00-14:30	<b>Coffee and Opening Ceremony</b>			
	<b>Speaker</b>	<b>Speaker Affiliation</b>	<b>Title - photography</b>	
<b>Session 1 (Sensors/control systems)</b>				
14:30-15:00	Emmanuel Ferrier	Claude Bernard University Lyon 1, France	<i>Monitoring of FRP strengthened RC structures using Fiber optic sensors and Digital Image Corelation</i>	
15:00-15:30	Aghiad Khadour	Gustave Eiffel University, France	<i>Enhancing Structural Integrity Monitoring in Massive Structures: Integrating Distributed Optical Fibers and Digital Image Correlation for Advanced Crack Detection</i>	
15:30-16:00	Nikolay Smagin Marc Duquennoy Zakariae Oumekloul	Polytechnique Hauts-de-France University	<i>Development of SAW Sensors for Estimating Humidity in Concrete Structures</i>	
16:00-16:30	Filip Pachla	Cracow University of Technology, Poland	<i>Vibration-Based Damage Identification and Condition Monitoring of Metro Trains</i>	
16:30-16:50	<b>Coffee Break</b>			
<b>Session 2 (Materials and Structures)</b>				
16:50-17:20	Elhem Ghorbel	CY Cergy Paris University, France	<i>Efficiency of reinforced RC beams and slabs under flexural load: structural and sustainability consideration</i>	
	Glaucia Dalfre	UFSCar - Federal University of São Carlos, Brazil		

17:20-17:50	Jean Michel Mechling	University of Lorraine, France	<i>The historical mortars from the cathedral Notre-Dame de Paris: characterisation and restoration of the vaults</i>	
17:50-18:20	Shilpa Pal	Delhi Technological University, India	<i>Performance Assessment of Reinforced Concrete Buildings on Hill slopes</i>	

## Second day: 27 September AM (**amphitheater 1** IUT Nancy Brabois)

08:30-09:00	<b>Coffee</b>			
	<b>Speaker</b>	<b>Speaker Affiliation</b>	<b>Title</b>	
<b>Session 3 (Materials and Structures)</b>				
09:00-09:30	Jean-Paul Balyssac	Paul Sabatier University - Toulouse III	<i>Smart concrete reinforced with metallic and carbon fibers for the monitoring of mechanical damage and cracks</i>	
09:30-10:00	Nambiappan UMA MAHESWARI	SRM Institute of Science and Technology, India	<i>Restoration of Steel-Concrete Composite structural members-An Overview</i>	
10:00-10:30	Jules ASSIH	University of Reims Champagne-Ardenne, France	<i>Fibres of bio-based materials in the strengthening of reinforced concrete structures</i>	
10:30-10:50	<b>Coffee Break</b>			
<b>Session 4 (Materials and Structures)</b>				
10:50-11:20	Antonio Formisano	University of Naples Federico	<i>Innovative bio-based solutions for new and existing buildings</i>	
11:20-11:50	Norbert Randl	Carinthia University of Applied Sciences, Austria	<i>Sustainable structural strengthening with high performance materials</i>	
	Edoardo Rossi	Carinthia University of Applied Sciences, Austria		
11:50-12:20				
12:30-14:30	<b>Conference Lunch</b>			

## Second day: 27 September AM (**amphitheater 2** IUT Nancy Brabois)

08:30-09:00

**Coffee**

**Speaker**

**Speaker Affiliation**

**Title**

### Session 6 (Control Systems)

09:00-09:30

Chiara Calderini

University of Genoa,  
Italy

*Beyond the Naked Eye: Using  
Deformation Analysis to  
Diagnose Structural Integrity in  
Existing Buildings*



09:30-10:00

Marwan Alheib

University of Lorraine,  
France

*Monitoring of historic building for  
better conservation and  
restoration*



10:00-10:30

Berengère Lebental

Gustave Eiffel  
University, France

*Embedded pavement monitoring  
with (nano)strain sensor arrays –  
Use cases, challenges and  
implementations*



10:30-10:50

**Coffee Break**

### Session 7 (Control Systems)

10:50-11:20

Claude Rospars

Gustave Eiffel  
University, France

*Use of AI in Structural Health  
Monitoring of existing bridges :  
methodology to detect potential  
damage from dynamic  
responses*



11:20-11:50

Danièle Waldmann-  
Diederich

Darmstadt University of  
Technology, Germany

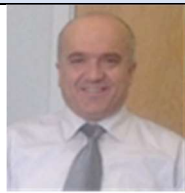

*Structural Health Monitoring of  
bridge structures by using the  
DAD method and drones*






12:30-14:30

**Conference Lunch**

## Second day: 27 September PM (**amphitheater 1** IUT Nancy Brabois)

	Speaker	Speaker Affiliation	Title	
<b>Session 5 (Materials and Structures)</b>				
14:30-15:00	Jamal Khatib	University of Wolverhampton (UoW)– UK	<i>Using Flu Gas Desuplphurisation waste in construction</i>	
15:00-15:30	Flora Faleschini	University of Padova, Italy	<i>New methods for damage detection in reinforced and prestressed concrete bridges</i>	
15:30	<b>Closing Session</b>			

## Second day: 27 September PM (**amphitheater 2**) IUT Nancy Brabois)

	Speaker	Speaker Affiliation	Title	
<b>Session 8 (Control Systems) - AI</b>				
14:30-15:00	Mohammad Samaanah	An-Najah National University, Palestine	<i>Use of AI for Detection of Cracks in Masonry Historical Buildings</i>	
	Anas Toma			
15:00-15:30	Baylasan Mohamad	University Of Kalamoon, Syria	<i>Multiple Regression and Neural network-based models for the prediction of the Ultimate Strength of CFRP- Confined Columns</i>	
15:30	<b>Closing Session</b>			