All activities take place in Pavillon DESJARDINS, on Université Laval's campus
(only the Banquet will be outside, a bus service is provided)

Room A	Amphithéâtre Hydro-Québec, 2nd floor
Room B	Room no. 2326, 2nd floor
Group Picture	«Espace-jardin» (Garden space), room 1440, 1st floor
Exhibit, Coffee Breaks, Posters	«Espace-jardin» (Garden space), room 1440, 1st floor
Exhibit Schedule	THU: 10:30 - 15:45, FR: 9:00 to 1130
Coffee breaks (Friday pm only)	Outside Hydro-Québec Hall, 2nd floor
Lunches (WED, THU, FR)	Cafeteria «Saveurs Campus» , 1st floor, coupons required, enclosed in conference enveloppes
Bus Departure/Return	Outside Pav. Desjardins, gate no. 1325 («13 A & 13 B»), look for the yellow school bus!
Registration	Second floor, main hall
Registration hours	8h-16h, Thurs, Fri.

(**) Complimentary wireless internet access is available, simply select «ulaval» network and
accept the conditions. No password required. Access is granted for 2 weeks.

Candiates* Award Paper **«3rd Under 35 Paper Award»**	The shade -shown on left - indicates the shaded papers are candidate for the «3rd Under 35 Paper Award» and IXth IWASPNDE, Quebec Best Workshop Award Candidates. Selection will be announced after the Symposium. Please fill and return the Award Selection Sheet in the «Pink Box» at registration desk * as of today's version of the program

SHM-NDT 2020	The workshop Booklet with all received abstracts is available on the Workshop webpage in .PDF format: https://www.shm-ndt2020.gel.ulaval.ca/publication/

SHM-NDT Committee meeting	Room no. 1304, 1st floor - in the cafeteria, along the wall

Latest revision	Feb. 27th, 2020

		Thursday	May 14th, 2020	
		Event	Room A	Room B
8:30		opening ceremony	opening ceremony	
8:45		Keynote	keynote 1 - A. Osman	
9:30		Keynote	keynote 2 - G. Steenackers	
10:15		Sessions	SHM 1	Deep Learning
10:35		Sessions	SHM 1	Deep Learning
10:55	Coffee break			
11:25		Sessions	SHM 1	Deep Learning
11:45		Sessions	SHM 1	Deep Learning
12:05		Sessions	SHM 1	Deep Learning
12:25		Sessions	SHM 1	Deep Learning
12:45	Lunch			
14:00		Vendor Session	Vendor Session	
14:45		Poster Session «oN DuTy!» and Coffee Break		
16:00	Bus departure for banquet to Parc de la Chute Montmorency			
16:30	Bus arrival, self-visit of the site			
17:30		Cocktail		
18:00		Banquet		
20:30	Bus departure and			
21:00	Return at Pavillion Desjardins			

		Friday	May 15th, 2020	
		Event	Room A	Room B
8:30		Keynote	keynote 3 - P. Masson	
9:15		Keynote	Keynote 4 V. Parfenov	
10:00		Sessions	SHM 2	Applications 1
10:20		Sessions	SHM 2	Applications 1
10:40	Group Picture			
10:50	Coffee break			
11:10		Sessions	SHM 2	Thermography
11:30		Sessions	SHM 2	Thermography
11:50		Sessions	Applications 2	Thermography
12:10		Sessions	Applications 2	Thermography
12:30	Lunch			
13:45		Sessions	Applications 2	Ultrasonics
14:05		Sessions	Applications 2	Ultrasonics
14:25		Sessions	Applications 2	Ultrasonics
14:45		Closing ceremony	Closing ceremony	
15:05	Coffee break			
15:35		End		

Session	Chair
Applications 1	TBA
Applications 2	TBA
Deep Learning*	TBA
SHM 1	TBA
SHM 2	TBA
Thermography*	TBA
Ultrasonics*	TBA

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*: joint sessions of the IXth edition of
(IXth IWASPNDE, Quebec Workshops)

		Thursday - May 14th, 2020				Thursday - May 14th, 2020		
		Events	**Room A**			**Events**	**Room B**	
8:30			Opening ceremony	Xavier Maldague	#			#
8:45	Keynote	**keynote 1** chair: TBA	Next Generation NDT An Enabling Technology for the Factory of the Future	Ahmad Osman	24			
9:30	session	**keynote 2** chair: TBA	Optimized non-destructive inspection using multi-modal measurement set-up and numerical modeling	Gunther Steenackers, Simon Verspeek and Bart Ribbens	6			
10:15	session	**SHM 1**	Passive guided waves tomography for structural health monitoring of pipes	Valentin Serey, Huu Tinh Hoang, Tom Druet and Bastien Chapuis	29	**Deep Learning** chair: TBA	Acoustic Ripeness Classification for Watermelon Fruits using Convolutional Neural Networks	Dominique Albert-Weiss, Egla Hadgini, Ziang Wei, Matthias Heinrich, Ahmad Osman and Giovanni Del Galdo / 33
10:35	session	**SHM 1**	WIRELESS ACOUSTIC EMISSION MONITORING OF RAIL CAR BODY COMPOSITE COMPONENTS	Evangelos Spyrou, Theocharis Tsenis Tsenis and Vassilios Kappatos	12	**Deep Learning**	Image Fusion based Evidence Theory for Multi-energy X-Ray Computed Tomography	Fatima Zahra Oujebbour, Valérie Kaftandjian, Joël Lachambre and Benyebka Bou-SaÏd / 31
10:55	**Coffee break**							
11:25	sessions	**SHM 1**	LOCALLY OPTIMAL SUBSAMPLING STRATEGIES FOR FULL-MATRIX CAPTURE MEASUREMENTS IN PIPE INSPECTION	Fabian Krieg, Jan Kirchhof, Eduardo Pèrez, Thomas Schwender, Florian Roemer and Ahmad Osman	18	**Deep Learning** chair: TBA	NEURAL NETWORK AND PARTICLE FILTERING: A HYBRID FRAMEWORK FOR CRACK PROPAGATION PREDICTION	Seyed Fouad Karimian, Ramin Moradi, Sergio Cofre-Martel, Katrina M. Groth and Mohammad Modarres / 5
11:45	sessions	**SHM 1**	EXPERIMENTAL INVESTIGATION OF DAMAGE DETECTION ON STRUCTURES WITH FSW JUNCTIONS	Assunta Sorrentino, Antonio Chiariello and Luigi Di Palma	28	**Deep Learning**	Transfer learning for recognizing casting defects inspected by tomography	Abdel Rahman Dakak, Valérie Kaftandjian, Philippe Duvauchelle and Patrick Bouvet / 38
12:05	sessions	**SHM 1**	OUTPUT-ONLY BRIDGE SCOUR MONITORING USING MEASURED VIBRATION	Esmaeil Ghorbani, Dagmar Svecova, Evangeline Murison and Young-Jin Cha	34	**Deep Learning**	Defect depth estimation in infrared thermography with deep learning	Qiang Fang, Xavier Maldague and Farima Mamoudan / 1
12:25	sessions	**SHM 1**	ULTRA-LOW-POWER WIRELESS STRAIN MONITPRING SYSTEM BASING ON INTERNET OF THINGS TECHNOLOGY	Jian Hua Tong, Yi Ching Lin and T.H. Lee	15	**Deep Learning**	Semi-supervised spectral-spatial data fusion for debonding detection in CFRP composite using optical thermography	Jue Hu, Bin Gao, Hai Zhang, Guiyun Tian and Xavier Maldague / 3
12:45	**Lunch & SHM-NDT Committee meeting**							
14:00	Vendor Session	**Vendor Session** (10 min per Vendor presentation)	**chair: X. Maldague**	Torngats / Telops / Eddyfi / Visioo-Image				
14:45	Poster Session «oN DuTy!» and Coffee Break	**Poster Session «oN DuTy!» and Coffee Break**	**chair: Clemente Ibarra-Castanedo**	see «Poster list», page 5				
16:00	Bus departure for banquet to Parc de la Chute Montmorency							
16:30	Bus arrival, self-visit of the site							
17:30	Cocktail							
18:00	Banquet							
20:30	Bus departure and return at Pavillion Desjardins							
21:00	Return							

	Friday - May 14th, 2020				Friday - May 14th, 2020		
	Events	Room A	#		Events	Room B	#
8:30	keynote 3 chair: TBA	CORRELATION-BASED ULTRASOUND IMAGING IN NDT AND SHM	Patrice Masson and Nicolas Quaegebeur	26			
9:15	keynote 4 chair: TBA	MONITORING CULTURAL HERITAGE OBJECTS USING LASER AND OPTICAL 3D SCANNING	Vadim Parfenov	32			
10:00	SHM 2	CONDITION ASSESSMENT OF PRESTRESSED CONCRETE GIRDERS OF A HIGHWAY BRIDGE IN CANADA	Faraz Masoumi, Afshin Sadri, Wai Lai Ying and Claudio Pasqualino	22	Applications 1	NON-DESTRUCTIVE INSPECTION OF DECORATIVE MARQUETRY SAMPLE	Henrique Fernandes, Jannik Summa, Julie Daudre, Ute Rabe, Stefano Sfarra, Gianfranco Gargiulo and Hans-Georg Herrmann	21
10:20	SHM 2	A CASE ANALYSIS FOR OVERTEMPERATURE FAILURE OF STEEL DRUM UNDER INNER PRESSURE	Haibo Wang, Yantong Xiao and Fang Wang	4	Applications 1	COMPARISON OF NON-DESTRUCTIVE TECHNIQUES IN PLAIN WEAVE CARBON FIBER REINFORCED POLYMERS UNDER FATIGUE LOADING	Nidhal Bouslama, Nicolas Quaegebeur, Ahmed Maslouhi and Patrice Masson	11
10:40	Group picture						
10:50	Coffee break						
11:10	SHM 2	INFRARED THERMOGRAPHY FOR CULVERT INSPECTION	Davood Kalhor, Samira Ebrahimi, Roger Booto Tokime, Farima Abdollahi Mamoudan, Yohan Bélanger, Alexandra Mercier and Xavier Maldague	14	Infared Thermography	ANALYSIS OF BALLISTIC IMPACTS ON COMPOSITE MATERIALS BY INFRARED ACTIVE THERMOGRAPHY (Telops)	Stephane Boubanga Tombet, Éric Guyot and Jean-Philippe Gagnon	7
11:30	SHM2	AFFORDABLE SHM OF WOODEN WARREN TRUSS BUILDINGS	Jorge Orellana and Georges Akhras	39	Infared Thermography	Wooden flooring inspection using active thermography	Simon Verspeek, Bart Ribbens, Michaël Hillen, Xavier Maldague and Gunther Steenackers	8
11:50	Applications 2	LASER-ULTRASONIC METAL ADDITIVE MANUFACTURING INSPECTION AT NRC CANADA	Christophe Bescond, Daniel Levesque, Cristian Cojocaru and Priti Wanjara	25	Infared Thermography	INFLUENCE OF COIL POSITION ON INDUCTION THERMOGRAPHY OF AN AIRCRAFT ENGINE COMPONENT	Marc Genest	27
12:10	Applications 2	INFRARED-BASED NON-INVASIVE COMPUTER-AIDED DIAGNOSIS FOR EARLY DETECTION OF BREAST CANCER USING DYNAMIC THERMOGRAPHY	Bardia Yousefi, Clemente Ibarra Castanedo and Xavier P.V. Maldague	9	Infared Thermography	UAV NDT of aircraft structures	Shakeb Deane, Nicolas Avdelidis, Hamed Yazdani Nezhad, Antonios Tsourdos, Xavier Maldague and Clemente Ibarra Castanedo	19
12:30	Lunch						
13:45	Applications 2	Independent Component Thermography Applied to Pulsed Thermographic Data	Julien Fleuret and Xavier Maldague	13	Ultrasonics	High Precision Corrosion Monitoring Using Ultrasonic Techniques	Marie-Pierre Despaux, François Lachance and Philippe Rioux	2
14:05	Applications 2	MATHEMATICAL MORPHOLOGY FROM CATEGORICAL VIEWPOINT	Hossein Memarzadeh Sharifipour, Bardia Yousefi and Xavier P.V. Maldague	20	Ultrasonics	ULTRASONIC MONITORING OF ROCK BOLTS (NRC)	Zhigang Sun, Kuo-Ting Wu, Daniel Levesque, Silvio Krüger, Daniel Gagnon, Yves Quenneville, Roger Lacroix and Renée Royer	23
14:25	Applications 2	COMPARISON STUDY OF DIFFERENT ALGORITHM FOR MICROCRACK DETECTION USING EDDY CURRENT PULSED THERMOGRAPHY	Xiang Zhang and Jian-Ping Peng	10	Ultrasonics	ULTRASONIC IMAGING METHOD FOR THE DETECTION AND SIZING OF CRACKS IN A RIB-TO-DECK WELDED JOINT	Kazushi Kimoto and Hiroto Shimada	16
14:45	Closing ceremony						
14:55	Coffee break						
15:25	End						

Thursday May 14th, 2020		
14:45	**Coffee and Poster Session in «Espace-Jardin» (Garden Space), room 1440**	**#**
	NON-DESTRUCTIVE TESTING OF MATERIALS BY CAPACITIVE SENSING	Farima Abdollahi Mamoudan, Sebastien Savard, Xavier Maldague, Abdel Hakim Bendada and Tobin Filleter	30
	Advanced signal processing techniques to improve the detection of defects in pressure vessels by acoustic emission testing	Konstantin Polyakov, Fernando Lopez and Martin Viens	36
	Defect detection and Locations by Ultrasonic Testing on hydroelectric turbine runner	Mohammad Ebrahim Bajgholi, Gilles Rousseau and Martin Viens	17
	INSPECTION OF BUTT FUSION JOINTS OF MEDIUM DENSITY POLYETHYLENE PIPES USING PULSE-ECHO ULTRASOUND	Maryam Shafiei Alavijeh, Ryan Scott, Fedar Seviaryn and Roman Maev	35
	A NOVEL DRONE-ENABLED APPROACH FOR GAS LEAK DETECTION USING THERMAL IMAGE FLOW ANALYSIS	Parham Nooralishahi, Fernando Lopez and Xavier Maldague	37

Note: additional posters will be added soon