

87th Meeting of the IFIP WG 10.4, Praia do Forta, BA, Brazil

Friday, February 7th						
Duration	Start Time	End Time	Session	Talk	Speaker	
10	8:30	8:40	Opening Remarks and welcome: "The Future of Mission-Critical Systems"			Marco Vieira, Lelio Di Martino, Elias Duarte, Andrey Brito
30	8:40	9:10	An industry overview on mission-critical challenges - Session Chair: Lelio Di Martino / Rapporteur: Domenico Cotroneo	Connected and intelligent mission critical applications for pit-to-port operations	Mario Azevedo (Vale)	
30	9:10	9:40		Challenges and solutions for IT for mission critical in Oil & Gas	Maximilliam Nunes Staring Vieira (Petrobras)	
30	9:40	10:10		Going Beyond Connectivity: architecture for Enterprise use cases	Marcio Veronesi (Nokia)	
30	10:10	10:40		Industrial policy challenges for critical systems of the future.	Valdenio Araujo (ABDI)	
30	10:40	11:10	Coffee Break			
30	11:10	11:40	Industry roadmap for mission-critical use cases - Session Chair: Christof Fetzer / Rapporteur: Long Wang	The mine of the future: vision, use cases and technology roadmap	Luccas Britto, Bruno Jesus (Vale)	
30	11:40	12:10		Critical and non-critical AI applications: the need for interpretability issues	Giovanni Moura de Holanda (Fitec)	
30	12:10	12:40		Strategic partnership for innovation: 5G Lab, Let5Go and Critical Tech initiatives	Irineu Mario Colombo, Jose Alberto Pereira dos Santos (Parquetec Itaipú)	
80	12:40	14:00	Lunch			
75	14:00	15:15	Panel Discussion - Session Chair: Lelio Di Martino / Rapporteur: Elias Duarte	What can academia do for industry and what can industry do for academia do accelerate research in mission-critical systems? What's still missing in current mission-critical systems? A prize will be given for the most challenging question and the most provocative answer!	Mario Azevedo, Maximilliam Vieira, Marcio Veronesi, Luccas Britto, Bruno Alves Romero, Jose Alberto Pereira dos Santos	
15	15:15	15:30	Coffee Break			
15	15:30	16:15	Bridging the gap between industry and academia: An overview of the Brazilian EMBRAPII innovation ecosystem. - Session Chair: Ahmed Helmi / Rapporteur: Alysso Bessani	An overview of the Brazilian EMBRAPII innovation ecosystem.	Luis Gustavo Delmont (EMBRAPII)	
25	16:15	16:40		VIRTUS-CC: Intelligent Hardware for the Industry	Danilo Santos (VIRTUS-UFCG)	
25	16:40	17:05		QUIN: Quantum Industrial Innovation	Alexandre Baron Tacla (CIMATEC)	
25	17:05	17:30		CISSA: Integrated Center for Security in Advanced Systems	Erico Souza Teixeira (CESAR)	

Saturday, February 8th

Duration	Start Time	End Time	Session	Talk	Speaker
30	9:00	9:30	Securing mission-critical systems in a digital and post-quantum world - Session Chair: Jay Lala / Rapporteur: Andrea Ceccarelli	Quantum Cryptograph	Alexandre Baron Tacla
30	9:30	10:00		CESAR/CISSA initiatives in Post-Quantum Cibersecurity	Erico Souza Teixeira
30	10:00	10:30	coffee break		
30	10:30	11:00	What is missing in mission-critical systems - Session Chair: Elias Duarte / Rapporteur: António Casimiro	Crafting ML Components in Safety-Critical Systems	Andrea Bondavalli
30	11:00	11:30		What's Missing from Computer-based System Safety?	Phil Koopman
30	11:30	12:00		Safety-Critical Systems: Human Factors Are Back in Full Force	Henrique Madeira
60	12:00	13:00	Lunch		
300	13:00	18:00	Excursion		
180	19:30	22:30	Banquet: Theme: "A Night of Ideas" – best ideas come from informal discussions; 20-minute round-table quick 3-statements ideas; applause-style vote for the most provocative idea; prize will be given		

Sunday, February 9th

Duration	Start Time	End Time	Session	Talk	Speaker
30	8:30	9:00	Cybersecurity challenges and opportunities in critical systems - Session Chair: Pascal Felber / Rapporteur: Sonia Ben Mokhtar	Confidential Encoded Processing to Build Safety Critical Systems	Christof Fetzer
30	9:00	9:30		Research Challenges at the Intersection of Cybersecurity and Safety	Bruno Crispo
30	9:30	10:00		Dependable software engineering: can we increase trust in our components?	Marcelo Pasin
40	10:00	10:40	Provocative session / plenary panel	Why current state of the art fault-tolerant mechanisms would/would not work with AI-driven systems?	ALL - moderated by Lelio
30	10:40	11:10	coffee break		
	11:10	11:10	Research reports - Chair: Marco Vieira	Intrusion-Tolerant Power Grid Infrastructure	Amy Babay
	11:10	11:10		Locating Network Failures in Cloud	Long Wang
	11:10	11:10		Open Challenges in Decentralized ML	Sonia Ben Mokhtar
	11:10	11:10		Dependable Software Defined In-Network Computing	Elias Duarte
	11:10	11:10		Secure Code Generation: Identifying and Remediating Vulnerabilities in AI-Generated Code	Pietro Liguori
	11:10	11:10		Exploiting diversity for improved adversarial robustness of ML-based NIDS	Antonio Casimiro
	11:10	11:10		Initial study towards anomaly-based detection of APTs	Andrea Ceccarelli
	11:10	11:10		LionsOS - Fast, Secure, Adaptable	Gernot Heiser
	11:10	11:10		Private network in action: use cases and challenges for current and future mission-critical applications in agro	Bruno Romero (Jacto)
50	11:10	12:00	Business meeting (part 1)	WG 10.4 business meeting - includes presentation of ISSRE 2025 (Sao Paulo, Brazil) and DSN 2025 (Naples, Italy)	
90	12:00	13:30	Lunch		

[Monday, February 10th](#)

Duration	Start Time	End Time	Session	Talk	Speaker
30	9:00	9:30	Dependability challenges and opportunities in critical systems	Dependability in Latin America: Challenges and Future Directions	Eliás P. Duarte Jr.
60	9:30	10:30	Summary and wrap-up of the session by the rapporteurs. Chair: Andrey Brito	Focus on “Global Challenges and Opportunities in Mission-Critical Systems”	
60	10:30	11:30	Business Meeting (Part 2)	WG 10.4 busienss meeting (part 2)	

		Member	
Ahmed Helmy	UNC		North America
Alberto Rodrigues	Nokia		South America
Alexandre Baron	CIMATEC		South America
Alysson Bessani	Universidade de Lisboa		Europe
Amy Babay	University of Pittsburgh		North America
Andrea Bondavalli	University of Florence	X	Europe
Andrea Ceccarelli	University of Florence	X	Europe
Andrey Brito	UFCG		South America
António Casimiro	Universidade de Lisboa	X	Europe
Bruno Crispo	University of Trento		Europe
Bruno Romero	DITIE - Grupo Jacto		South America
Christof Fetzner	TU Dresden	X	Europe
Danilo Freire Santos	UFCG		South America
Domenico Cotroneo	University of Naples Federico II	X	Europe
Erico Teixeira	CESAR		South America
Elias Duarte	UFPR	X	South America
Gernot Heiser	UNSW Sydney	X	Oceania
Giovanni Moura de Holanda	Fitec		South America
Henrique Madeira	University of Coimbra	X	Europe
Irineu Mario Colombo	Parquetec Itaipu		South America
Jaynarayan Lala	Raytheon	X	North America
Jose Alberto Pereira dos Santos	Parquetec Itaipu		South America
Lelio Di Martino	Nokia		South America
Long Wang	Tsinghua University		Asia
Luis Gustavo Delmont	EMBRAPII		South America
Marcelo Pasin	Haute école Arc, UNINE		Europe
Marcio Veronesi	Nokia		South America
Marco Vieira	UNC	X	North America
Mario Azevedo	Vale		South America
Maximillian Nunes Vieira	Petrobras		South America
Pascal Felber	UNINE	X	Europe
Paulo Romerio Maciel	UFPE		South America
Philip Koopman	Carnegie Mellon University	X	North America
Pietro Liguori	University of Naples Federico II		Europe
Regina Moraes	UNICAMP		South America
Sonia Ben Mokhtar	CNRS	X	Europe
Valdenio Araujo	ABDI		South America

Europe	12
South America	18
North America	5
Asia	1
Oceania	1