



Schedule of COMRob 2021, XXIII Robotics Mexican Congress, online event October 27th to 29th, 2021

20 Regular Papers, 3 Keynote Speakers

COMRob 2021, October 27th		
Mexico City Time		Tijuana/ San Diego Time
	General Hall	
10:30	Roll call/Confirmation of attendance for speakers and attendees	8:30
10:55	Break	8:55
11:00	Opening event of the COMRob 2021	9:00
12:00	Break	10:00
12:10	Keynote Conference 1 Dr. Luis Enrique Sucar Succar Causal Models in Robotics	10:10
13:10	Lunch	11:10
16:00	Knowing the IEEE	14:00
16:45	Break	14:45
17:00	*Session 1: Control	15:00
18:00	First Day Closing	16:00

COMRob 2021, October 28th		
Mexico City Time		Tijuana/ San Diego Time
	General Hall	
9:40	Roll call/Confirmation of attendance for speakers and attendees	7:40
9:55	Break	7:55
10:00	*Session 2: Humanoids and Vision Systems	8:00
11:20	Break	9:20
11:40	Keynote Conference 2 Dr. José Alfonso Pámanes García New approaches to planning the movements of complex robotic systems	9:40
13:45	Lunch	11:45
16:00	*Session 3: Manipulator Robots	14:00
17:40	Break	15:40
18:00	Ordinary general meeting (AMRob members)	16:00

COMRob 2021, October 29th		
Mexico City Time		Tijuana/ San Diego Time
	General Hall	
9:40	Roll call/Confirmation of attendance for speakers and attendees	7:40
9:55	Break	7:55
10:00	*Session 4: Mobile robotics and Teloperation	8:00
11:20	Break	9:20
11:40	Keynote Conference 3 Dr. Luis Rodolfo García Carrillo Model-based and Learning-Inspired State Estimation and Control for Unmanned Autonomous Agents	9:40
13:45	Lunch	11:45
16:00	*Session 5: Aerial and educational robotics	14:00
17:20	Break	15:20
17:40	Closing event of COMRob 2021	15:40

Session	Topic (4 regular papers in each Session)	Moderator
1	Control	Dr. Nohe R. Cázarez nohe@tectijuana.edu.mx
2	Humanoids and Vision Systems	Dr. Paul A. Valle paul.valle@tectijuana.edu.mx
3	Manipulator Robots	Dra. Diana Gamboa diana.gamboa@tectijuana.edu.mx
4	Mobile robotics and Teloperation	Dr. Paul J. Campos paul.campos@tectijuana.edu.mx
5	Aerial and educational robotics	Dr. Ramón Ramírez Villalobos ramon.ramirez@tectijuana.edu.mx
A	Knowing the IEEE	Dr. Alejandro Dzul alejandrodzul@gmail.com

Keynote	KeynoteSpeaker/Topic	Moderator
1	Dr. Luis Enrique Sucar Succar Causal Models in Robotics	Dr. Jesús A. Sandoval jesus.sg@lapaz.tecnm.mx
2	Dr. José Alfonso Pámanes García: New approaches to planning the movements of complex robotic systems	Dr. Javier Moreno Valenzuela moreno@citedi.mx
3	Dr. Luis Rodolfo García Carrillo: Model-based and Learning-Inspired State Estimation and Control for Unmanned Autonomous Agents	Dr. Alejandro Dzul alejandrodzul@gmail.com



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XXIII CONGRESO MEXICANO DE ROBÓTICA

COMROB

2021

Schedule of COMRob 2021, XXIII Robotics Mexican Congress, online event October 27th to 29th, 2021: *Regular Sessions*

COMRob 2021, October 27th

Session 1		
Control		
Moderator: Dr. Nohe R. Cárquez nohe@tectijuana.edu.mx		
Mexico City Time	Regular Paper Title	Tijuana/San Diego Time
17:00	6. Minimum energy nonlinear controllers based on analytic behaviors for velocity tracking on DC motors	15:00
17:20	13. Robust stabilization of an inverted cart-pendulum: A second order continuous sliding mode approach	15:20
17:40	3. PID tuning using MOGA for joint position regulation of a pendular device	15:40

COMRob 2021, October 28th

Session 2		
Humanoids and Vision Systems		
Moderator: Dr. Paul A. Valle paul.valle@tectijuana.edu.mx		
Mexico City Time	Regular Paper Title	Tijuana/San Diego Time
10:00	8. The Role of Inertial Stabilization in Walking Patterns	8:00
10:20	18. Preliminary design and experimental tests of a real-time stereoscopic foveated vision system	8:20
10:40	14. Development of the capability of drawing portraits with the humanoid robot DarwinOP	8:40

COMRob 2021, October 29th

Session 4		
Mobile robotics and Teloperation		
Moderator: Dr. Paul J. Campos paul.campos@tectijuana.edu.mx		
Mexico City Time	Regular Paper Title	Tijuana/San Diego Time
10:00	2. Navegación autónoma de un robot móvil en un ambiente desconocido usando una red de neuronas tipo Hindmarsh-Rose	8:00
10:20	5. Modelado y Control para el Seguimiento de Trayectorias de un Robot Móvil AutoMiny 4.0	8:20
10:40	11. Complete mathematical modeling of a scale autonomous vehicle	8:40
11:00	7. An experimental comparison of scattering-based time delay compensation schemes	9:00

Session 3		
Manipulator Robots		
Moderator: Dra. Diana Gamboa, diana.gamboa@tectijuana.edu.mx		
Hora	Conferencia	Tijuana/San Diego Time
16:00	12. Comparing cost functions for the optimal control of robotic manipulators using Pontryagin's Maximum Principle	14:00
16:20	19. Regulación de posición usando control PID con compensación de gravedad adaptable para robots manipuladores	14:20
16:40	22. Study of performances of manipulators using Jacobian matrices homogenized by different approaches	14:40
17:00	16. Análisis por Elemento Finito de un Robot Industrial de 6-GDL Bajo Condición de Falla	15:00
17:20	23. Optimal Motions of a Welding Robot for Cooperative Tasks with a 2 DOF Positioner	15:20

Session 5		
Aerial and educational robotics		
Moderator: Dr. Ramón Ramírez Villalobos ramon.ramirez@tectijuana.edu.mx		
Hora	Conferencia	Tijuana/San Diego Time
16:00	1. Active Fault Tolerant Control for a Quad-Rotor in case of a Rotor Failure	14:00
16:20	21. Fault Diagnosis and Estimation for a Quadrotor UAV	14:20
16:40	17. Passivity-Based Control Strategy for a Tricopter	14:40
17:00	29. Motick Kids: Una herramienta orientada a la población infantil con deficiencias motoras	15:00



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