Cuauthémoc Acosta Lúa

Es licenciado en Ingeniería Eléctrica por el Instituto Tecnológico de Morelia y Maestro y Doctor en Ingeniería Eléctrica por el CINVESTAV Guadalajara. Ha realizado visitas en el INSA, Lyon, Francia y en el Centro para la Excelencia DEWS en L'Aquila, Italia. Realizó estudios posdoctorales en el DEWS y en el Centro de Investigación e Implementación de la Ford. Actualmente se encuentra involucrado en el desarrollo de técnicas no lineares para el control de vehículos y observadores para sistemas no lineares.

Reconocimientos y perfil

- Miembro del Sistema Nacional de Investigadores, Candidato.
- Cuerpo Académico Consolidado UDG-CA-871 "Ciencias Aplicadas a la Ingeniería".

Líneas de Investigación

- Control lineal y no lineal aplicado a sistemas dinámicos
- Control Híbrido
- Control Digital

Proyectos actuales de investigación

- Event-triggered and Self-triggered control applied to an Antilock Braking Systems.
- Event-triggered and Self-triggered control applied to collaborative vehicles.
- Collaborative control using drones
- Sliding Mode Control applied to Eolic Turbine.
- Vehicle Reference Generator for Collision Free Paths
- Advanced Controllers for PWRs of New Generation

Publicaciones

- Cuauhtemoc Acosta Lua, Stefano Di Gennaro and María Eugenia Sánchez Morales, "Nonlinear adaptive controller applied to an Antilock Braking System with parameters variations", International Journal of Control Automation and Systems, in press, 2017.
- Cuauhtemoc Acosta Lua and Stefano Di Gennaro., "Nonlinear Adaptive Tracking for Ground Vehicles in the Presence of Lateral Wind Disturbance and Parameter Variations", Journal of the Franklin Institute, Vol. 354 (7), pp. 2742-2768, 2017.
- Antonio Navarrete, Stefano Di Gennaro, Jorge Rivera Dominguez, Cuauhtemoc Acosta Lúa and Bernardino Castillo-Toledo, "Enhanced Discrete-Time Modeling via Variatonal Integrators and Digital Controller Design for Ground Vehicles", IEEE Transactions on Industrial Electronics, Vol. 63(10), pp. 6375 – 6385, 2016.
- Cuauhtemoc Acosta Lua, Bernardino Castillo-Toledo, Riccardo Cespi and Stefano Di Gennaro, "Nonlinear Observer-based Active Control of Ground Vehicles with non-Negligible Roll Dynamics", International Journal of Control Automation and Systems, Vol 14(3), pp. 743-752, 2016.

Cuauhtémoc Acosta Lúa

He obtained the B.Sc. in Electronic Engineering from the Technological Institute of Morelia (2001). He obtained the Master (2003) and Ph.D. (2007) in Science in Electrical Engineering from CINVESTAV Guadalajara Unit. He visited INSA Lyon, France, and the Center of Excellence DEWS in L'Aquila, Italy. He carried out his Postdoctoral studies at DEWS and at the Centre for Research and Implementation of the Ford Motor Company. Presently he is engaged in the development of nonlinear techniques for vehicle control, and observers for nonlinear systems.

Acknowledgments and Profile

- National Researchers System member, candidate
- Academic Group: UDG-CA-871 "Applied Sciences to Engineering".

Research areas

- Linear and Nonlinear Control and observer applied to dynamic systems. Controlo lineal y no lineal aplicado a sistemas dinámicos
- Hibrid Control
- Digital Control

Current research projects

- Event-triggered and Self-triggered control applied to an Antilock Braking Systems.
- Event-triggered and Self-triggered control applied to collaborative vehicles.
- Collaborative control using drones
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