

# **2015 Workshop on Research, Education and Development of Unmanned Aerial Systems (RED-UAS 2015)**

**Cancun, Mexico  
23 – 25 November 2015**



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# Content List of 2015 Workshop on Research, Education and Development of Unmanned Aerial Systems

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| Mora, Andres                                                                                                                 |  | Arizona State Univ                                                              |
| Vemprala, Sai                                                                                                                |  | Arizona State Univ                                                              |
| Carrio, Adrian                                                                                                               |  | Tech. Univ. of Madrid                                                           |
| Saripalli, Srikanth                                                                                                          |  | Arizona State Univ                                                              |
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| Hou, Zhicheng                                                                                                                |  | Univ. of Tech. of Compiègne                                                     |
| Fantoni, Isabelle                                                                                                            |  | Heudiasyc - Univ. De Tech. De Compiègne - CNRS                                  |
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| Akiyama, Kentaro                                                                                                             |  | Tokyo City Univ                                                                 |
| Wang, Zhenwei                                                                                                                |  | Tokyo City Univ                                                                 |
| Sekiguchi, Kazuma                                                                                                            |  | Tokyo City Univ                                                                 |
| Nonaka, Kenichiro                                                                                                            |  | Tokyo City Univ                                                                 |
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| Ortega Vargas, Giovanni                                                                                                      |  | Univ. Pol. De Pachuca                                                           |
| Muñoz Palacios, Filiberto                                                                                                    |  | CINVESTAV                                                                       |
| Espinoza Quesada, Eduardo Steed                                                                                              |  | LAFMIA UMI 3175 CNRS-CINVESTAV Mexico                                           |
| Garcia Carrillo, Luis Rodolfo                                                                                                |  | Univ. of Nevada Reno                                                            |
| Ordaz, Patricio                                                                                                              |  | Pol. Univ. of Pachuca                                                           |
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| Boutayeb, Mohamed                                                                                                            |  | Nancy Univ. IUT Longwy                                                          |
| Rafaralahy, Hugues                                                                                                           |  | CRAN, Univ. De Lorraine                                                         |
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| Fernández-Flores, David                                                                                                      |  | CINVESTAV Unidad Guadalajara                                                    |
| Castillo-Toledo, Bernardino                                                                                                  |  | Centro de Investigaciones y Estudios Avanzados del IPN (CINVESTAV), UNIDAD gDL. |
| Ramirez, Antonio                                                                                                             |  | CINVESTAV-IPN                                                                   |
| Luque-Vega, Luis Fernando                                                                                                    |  | ITESO Univ.                                                                     |
| González-Jiménez, Luis Enrique                                                                                               |  | Inst. de Estudios Superiores de Occidente (ITESO)                               |
| Ghommam, Jawhar                                                                                                              |  | École de Tech. supérieure                                                       |
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| Pepe, Guillaume                                                                                                              |  | Telecom Physique Strasbourg                                                     |
| Satler, Massimo                                                                                                              |  | Scuola Superiore Sant'Anna                                                      |
| Tripicchio, Paolo                                                                                                            |  | Percro                                                                          |
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| Hoogervorst, Robin Willem Pieter                                                                                             |  | Univ. of Twente                                                                 |

|                                                                                                                                              |                                                              |
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| Stramigioli, Stefano                                                                                                                         | Univ. of Twente                                              |
| Wopereis, Han                                                                                                                                | Univ. of Twente                                              |
| Fumagalli, Matteo                                                                                                                            | Univ. of Twente                                              |
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| Zsedrovits, Tamas                                                                                                                            | Pazmany Peter Catholic Univ                                  |
| Bauer, Peter                                                                                                                                 | Inst. for Computer Science and Control of the Hungarian Acad |
| Nemeth, Mate                                                                                                                                 | Pázmány Péter Catholic Univ. Faculty of Information Tech     |
| Jani Matyasne Pencz, Borbala                                                                                                                 | Inst. for Computer Science and Control of the Hungarian Acad |
| Zarandy, Akos                                                                                                                                | Inst. for Computer Science and Control of the Hungarian Acad |
| Vanek, Balint                                                                                                                                | Inst. for Computer Science and Control of the Hungarian Acad |
| Bokor, Jozsef                                                                                                                                | Hungarian Acad. of Sciences                                  |
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| Flores, Gerardo                                                                                                                              | Univ. of Tech. of Compiègne                                  |
| Bazan, Eric                                                                                                                                  | Cinvestav                                                    |
| Lozano, Rogelio                                                                                                                              | Univ. De Tech. De Compiègne                                  |
| Rodriguez-Mata, Abraham Efraim                                                                                                               | Cinvestav                                                    |
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| Mayen González, Karina                                                                                                                       | CINVESTAV                                                    |
| Espinosa Ramírez, Carlos Isaac                                                                                                               | CINVESTAV                                                    |
| Romero, Hugo                                                                                                                                 | Univ. Autónoma Del Estado De Hidalgo                         |
| Salazar, Sergio                                                                                                                              | Unisersité De Compiègne                                      |
| Lizárraga Fernández, Mariano Isidro                                                                                                          | Univ. of California, Santa Cruz                              |
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| Santos, Milton César Paes                                                                                                                    | Federal Univ. of Espirito Santo                              |
| Sarcinelli-Filho, Mario                                                                                                                      | Federal Univ. of Espirito Santo                              |
| Carelli, Ricardo                                                                                                                             | Univ. Nacional De San Juan                                   |
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| Angelina, Hania                                                                                                                              | AIRBUS Defence and Space                                     |
| Heredia, Guillermo                                                                                                                           | Univ. of Seville                                             |
| Ollero, Anibal                                                                                                                               | Univ. of Seville                                             |
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| Al Shamaa, Daniel                                                                                                                            | Lebanese Univ                                                |
| Shraim, Hassan                                                                                                                               | Industrial. French Consulting Company                        |
| Francis, Clovis                                                                                                                              | Lebanese Univ                                                |
| Lussier, Benjamin                                                                                                                            | Heudiasyc - Univ. of Tech. of Compiègne                      |
| Fantoni, Isabelle                                                                                                                            | Heudiasyc - Univ. De Tech. De Compiègne - CNRS               |
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| Carneiro Gomes, Raif                                                                                                                         | Federal Univ. of Ceará                                       |
| Pereira Thé, George André                                                                                                                    | Federal Univ. of Ceará                                       |
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 Coopmans, Calvin  
 Hoffer, Nathan  
 Podhradsky, Michal

Utah State Univ  
 CSOIS, Utah State Univ  
 Utah State Univ

|                                                                                                                                  |                                              |
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| Ragel, Ricardo                                                                                                                   | Univ. De Sevilla                             |
| Maza, Ivan                                                                                                                       | Univ. of Seville                             |
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| Ollero, Anibal                                                                                                                   | Univ. of Seville                             |
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| Garcia Perez, Orlando                                                                                                            | CINVESTAV                                    |
| Santos Sanchez, Omar Jacobo                                                                                                      | Univ. Autonoma Del Estado De Hidalgo, Mexico |
| Romero, Hugo                                                                                                                     | Univ. Autónoma Del Estado De Hidalgo         |
| Salazar, Sergio                                                                                                                  | Unisersité De Compiégne                      |

# Technical Program for Tuesday November 24, 2015

|                                                                                                                    |  |                                                                |
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| Nikolakopoulos, George                                                                                             |  | Luleå Univ. of Tech                                            |
| Gustafsson, Thomas                                                                                                 |  | Luleå Univ. of Tech                                            |
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| Guerrero Castellanos, José Fermi                                                                                   |  | Autonomous Univ. of Puebla (BUAP)                              |
| Gonzalez-Diaz, Victor Rodolfo                                                                                      |  | Benemérita Univ. Autónoma De Puebla (BUAP)                     |
| Vega-Alonzo, Argel                                                                                                 |  | Benemérita Univ. Autónoma De Puebla (BUAP)                     |
| Mino Aguilar, Gerardo                                                                                              |  | Autonomous Univ. of Puebla (BUAP), Faculty of Electronics      |
| López López, Mario                                                                                                 |  | Autonomous Univ. of Puebla (BUAP), Faculty of Electronics      |
| Guerrero Sánchez, W. Fermin                                                                                        |  | Autonomous Univ. of Puebla                                     |
| Maya Rueda, Selene Edith                                                                                           |  | Autonomous Univ. of Puebla (BUAP), Faculty of Electronics      |
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| Espinoza Fraire, Arturo Tadeo                                                                                      |  | Inst. Tecnológico De La Laguna                                 |
| Parada Morado, Ricardo Pavel                                                                                       |  | Inst. Tecnológico De La Laguna                                 |
| Dzul, Alejandro                                                                                                    |  | Inst. Tecnológico De La Laguna                                 |
| Lozano, Rogelio                                                                                                    |  | Univ. De Tech. De Compiègne                                    |
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| Colmenares-Vázquez, Josue                                                                                          |  | Univ. De Grenoble, GIPSA-Lab                                   |
| Castillo, Pedro                                                                                                    |  | Sorbonne Univ. Univ. De Tech. De Compiègne                     |
| Téllez-Guzman, José Juan                                                                                           |  | Univ. De Grenoble, GIPSA-Lab                                   |
| Alvarez-Muñoz, Jonatan Uziel                                                                                       |  | Univ. De Grenoble, GIPSA-Lab                                   |
| Marchand, Nicolas                                                                                                  |  | GIPSA-Lab CNRS/U of Grenoble/INRIA                             |
| Gomez Balderas, Jose Ernesto                                                                                       |  | GIPSA-Lab                                                      |
| Dumon, Jonathan                                                                                                    |  | GIPSA-LAB                                                      |
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| Jurado, Francisco                                                                                                  |  | Inst. Tecnológico De La Laguna                                 |
| Rodriguez, Marco Antonio                                                                                           |  | Tecnológico Nacional De México, Inst. Tecnológico De La Laguna |
| Dzul, Alejandro                                                                                                    |  | Inst. Tecnológico De La Laguna                                 |
| Campa, Ricardo                                                                                                     |  | Inst. Tecnológico De La Laguna                                 |
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| Cariño, Jossué                                                                                                     |  | CINVESTAV-IPN                                                  |
| Castillo, Pedro                                                                                                    |  | Sorbonne Univ. Univ. De Tech. De Compiègne                     |
| Lozano, Rogelio                                                                                                    |  | Univ. De Tech. De Compiègne                                    |
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| Stegagno, Paolo                                                                                                    |  | Max Planck Inst. for Biological Cybernetics                    |
| Buelthoff, Heinrich H.                                                                                             |  | Max Planck Inst. for Biol. Cybernetics                         |
| Ahmad, Aamir                                                                                                       |  | Max Planck Inst. for Biological Cybernetics                    |

|                                                                                                                              |                                                         |
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| Duling, Kristin                                                                                                              | West Virginia Univ                                      |
| Darrah, Marjorie                                                                                                             | West Virginia Univ                                      |
| Fuller, Edgar                                                                                                                | West Virginia Univ                                      |
| Wathen, Mitchell                                                                                                             | Army Res. Lab                                           |
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| Bento da Silva, Thais                                                                                                        | Federal Univ. of Viçosa                                 |
| Souza e Silva, Matheus Venancio Muniz                                                                                        | Federal Univ. of Viçosa                                 |
| Brandao, Alexandre Santos                                                                                                    | Federal Univ. of Viçosa                                 |
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| Martinez-Carranza, Jose                                                                                                      | INAOE                                                   |
| Marquez-Aquino, Francisco                                                                                                    | Inst. Nacional De Astrofisica Optica Y Electronica      |
| Garcia, Omar                                                                                                                 | INAOE                                                   |
| Munoz-Melendez, Angelica                                                                                                     | INAOE                                                   |
| Mayol, Walterio                                                                                                              | Univ. of Bristol                                        |
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| Loewen, Nils                                                                                                                 | Inst. Tecnológico Y De Estudios Superiores De Monterrey |
| Marquez-Aquino, Francisco                                                                                                    | Inst. Nacional De Astrofisica Optica Y Electronica      |
| Garcia, Omar                                                                                                                 | INAOE                                                   |
| Mayol, Walterio                                                                                                              | Univ. of Bristol                                        |
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| Beloti Pizetta, Igor Henrique                                                                                                | Federal Inst. of Espirito Santo                         |
| Brandao, Alexandre Santos                                                                                                    | Federal Univ. of Viçosa                                 |
| Sarcinelli-Filho, Mario                                                                                                      | Federal Univ. of Espirito Santo                         |
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| Smith, Brendan                                                                                                               | Univ. of California at Merced                           |
| Beman, Michael                                                                                                               | Univ. of California at Merced                           |
| Gravano, David                                                                                                               | Univ. of California at Merced                           |
| Chen, YangQuan                                                                                                               | Univ. of California, Merced                             |
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| Micconi, Giorgio                                                                                                             | Univ. Degli Studi Di Parma                              |
| Aleotti, Jacopo                                                                                                              | Univ. of Parma                                          |
| Caselli, Stefano                                                                                                             | Univ. of Parma                                          |

|                                                                                                         |                                              |
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| Benassi, Giacomo                                                                                        | Due2lab                                      |
| Zambelli, Nicola                                                                                        | Due2lab                                      |
| Zappettini, Andrea                                                                                      | IMEM-CNR                                     |
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| Vazquez Nicolas, Jesus                                                                                  | Centro De Investigacion En Computacion - IPN |
| Giacomini, Matteo                                                                                       | Ec. Pol. - DRI Inst. Pol. De Sciences Ava    |
| Escareno, Juan-Antonio                                                                                  | Inst. Pol. De Sciences Avancées (IPSA)       |
| Rubio Espino, Elsa                                                                                      | Centro De Investigación En Computación - IPN |
| Sossa Azuela, Juan Humberto                                                                             | Centro De Investigacion En Computacion - IPN |
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| Mendoza-Mendoza, Julio Alberto                                                                          | Cic Ipn                                      |
| Sepulveda-Cervantes, Gabriel                                                                            | CIDETEC-IPN                                  |
| Aguilar-Ibañez, Carlos                                                                                  | CIC-IPN                                      |
| Mendez-Martinez, Mauricio                                                                               | Inst. Pol. NACIONAL                          |
| Reyes Larios, Marco Hugo                                                                                | Tech. Development & Res. Group S.A. De C.V   |
| Matabuena, Pedro                                                                                        | Aidronix                                     |
| González-Avila, Juan Jesús                                                                              | Rubik Ingeniería Estratégica                 |
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| Makarov, Maria                                                                                          | L2S, CentraleSupélec                         |
| Stoica Maniu, Cristina                                                                                  | L2S, CentraleSupélec                         |
| Tebbani, Sihem                                                                                          | L2S, CentraleSupélec                         |
| Hinostroza, Israel                                                                                      | SONDRA                                       |
| Moreira Beltrami, Matheus                                                                               | CentraleSupélec                              |
| Kienitz, Jonas Raphael                                                                                  | CentraleSupélec                              |
| Menegazzi, Rafael                                                                                       | CentraleSupélec                              |
| Sallé Moreno, Carlos                                                                                    | ONERA                                        |
| Rocheron, Thibaut                                                                                       | CentraleSupélec                              |
| Rojas Lombarte, Joan                                                                                    | CentraleSupélec                              |

# **Technical Program for Wednesday November 25, 2015**

|                                                                                                                                                          |  |                                                      |
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| <b>WeWeAT1</b>                                                                                                                                           |  | Room T1                                              |
| <b>UAV Modeling and Control II (Podium Sessions)</b>                                                                                                     |  |                                                      |
| 08:30-08:50                                                                                                                                              |  | WeWeAT1.1                                            |
| <i>Adaptive Backstepping Control for a Convertible UAV</i> , pp. 298-307.                                                                                |  |                                                      |
| Martinez Herrera, Victor                                                                                                                                 |  | CIIIA-FIME-UANL                                      |
| Garcia Salazar, Octavio                                                                                                                                  |  | CIIIA-FIME-UANL                                      |
| Sanchez, Anand                                                                                                                                           |  | CINVESTAV                                            |
| Parra Vega, Vicente                                                                                                                                      |  | CINVESTAV                                            |
| Escobar Ruiz, Alan Gerardo                                                                                                                               |  | CIIIA-FIME-UANL                                      |
| 08:50-09:10                                                                                                                                              |  | WeWeAT1.2                                            |
| <i>Modeling and Experimental Parameter Identification of a Multicopter Via a Compound Pendulum Test Rig</i> , pp. 308-317.                               |  |                                                      |
| Capello, Elisa                                                                                                                                           |  | Pol. Di Torino CNR IEIT                              |
| Park, Hyeongjun                                                                                                                                          |  | Naval Postgraduate School                            |
| Tavora, Bruno                                                                                                                                            |  | Naval Postgraduate School                            |
| Guglieri, Giorgio                                                                                                                                        |  | Pol. Di Torino                                       |
| Romano, Marcello                                                                                                                                         |  | US Naval Postgraduate School                         |
| 09:10-09:30                                                                                                                                              |  | WeWeAT1.3                                            |
| <i>Backstepping Control for a Quadrotor Vehicle*</i> .                                                                                                   |  |                                                      |
| Flores Palmeros, Pedro Fernando                                                                                                                          |  | Centro de Investigación y Estudios Avanzados del IPN |
| Castillo, Pedro                                                                                                                                          |  | Sorbonne Univ. Univ. de Tech. de Compiègne           |
| Castanos, Fernando                                                                                                                                       |  | SUPELEC                                              |
| 09:30-09:50                                                                                                                                              |  | WeWeAT1.4                                            |
| <i>A New Avenue of Research in Robust and Ultrafast Decentralized Control</i> , pp. 318-322.                                                             |  |                                                      |
| Bensoussan, David                                                                                                                                        |  | ETS - Univ. of Quebec                                |
| 09:50-10:10                                                                                                                                              |  | WeWeAT1.5                                            |
| <i>Altitude Control of an Unmanned Aircraft System Using a Super-Twisting Controller Based on High Order Sliding Mode Observer</i> , pp. 323-328.        |  |                                                      |
| Muñoz Palacios, Filiberto                                                                                                                                |  | CINVESTAV                                            |
| Gonzalez-Hernandez, Ivan                                                                                                                                 |  | CINVESTAV-IPN                                        |
| Espinoza Quesada, Eduardo Steed                                                                                                                          |  | LAFMIA UMI 3175 CNRS-CINVESTAV Mexico                |
| Salazar, Sergio                                                                                                                                          |  | Unisersité De Compiègne                              |
| Osorio Cordero, Antonio                                                                                                                                  |  | Cinvestav Umi Lafmia                                 |
| <b>WeWeBT1</b>                                                                                                                                           |  | Room T1                                              |
| <b>UAS New Designs and Prototypes (Podium Sessions)</b>                                                                                                  |  |                                                      |
| 10:30-10:50                                                                                                                                              |  | WeWeBT1.1                                            |
| <i>Velocity Control of Mini-UAV Using a Helmet System</i> , pp. 329-335.                                                                                 |  |                                                      |
| Téllez-Guzman, José Juan                                                                                                                                 |  | Univ. De Grenoble, GIPSA-Lab                         |
| Gomez Balderas, Jose Ernesto                                                                                                                             |  | GIPSA-Lab                                            |
| Marchand, Nicolas                                                                                                                                        |  | GIPSA-Lab CNRS/U of Grenoble/INRIA                   |
| Castillo, Pedro                                                                                                                                          |  | Sorbonne Univ. Univ. De Tech. De Compiègne           |
| Colmenares-Vázquez, Josue                                                                                                                                |  | Univ. De Grenoble, GIPSA-Lab                         |
| Alvarez-Muñoz, Jonatan Uziel                                                                                                                             |  | Univ. De Grenoble, GIPSA-Lab                         |
| Dumon, Jonathan                                                                                                                                          |  | GIPSA-LAB                                            |
| 10:50-11:10                                                                                                                                              |  | WeWeBT1.2                                            |
| <i>A Simulation Framework to Validate the Use of Head-Mounted Displays and Tablets for Information Exchange with the UAV Safety Pilot</i> , pp. 336-341. |  |                                                      |
| Ruiz, Juan Jesús                                                                                                                                         |  | Univ. of Seville                                     |
| Escalera, Marco Antonio                                                                                                                                  |  | Center for Advanced Aerospace Tech. (CATEC)          |
| Viguria, Antidio                                                                                                                                         |  | Center for Advanced Aerospace Tech. (CATEC)          |
| Ollero, Anibal                                                                                                                                           |  | Univ. of Seville                                     |
| 11:10-11:30                                                                                                                                              |  | WeWeBT1.3                                            |

*Unmanned Aerial System Architecture for Maritime Missions. Design & Hardware Description*, pp. 342-350.

|                        |                                     |
|------------------------|-------------------------------------|
| Zolich, Artur Piotr    | Norwegian Univ. of Science and Tech |
| Johansen, Tor Arne     | Norwegian Univ. of Science and Tech |
| Cisek, Krzysztof Piotr | Norwegian Univ. of Science and Tech |
| Klausen, Kristian      | Norwegian Univ. of Science and Tech |

11:30-11:50 WeWeBT1.4

*Drones in Smart Cities: Overcoming Barriers through Air Traffic Control Research*, pp. 351-359.

|                  |                               |
|------------------|-------------------------------|
| Foina, Aislan    | UC Berkeley                   |
| Sengupta, Raja   | Univ. of California, Berkeley |
| Lerchi, Patrick  | UC Berkeley                   |
| Liu, Zhilong     | UC Berkeley                   |
| Krainer, Clemens | Univ. of Salzburg, Austria    |

**WeWeCT1** Room T1  
**Applications of UAVs (Podium Sessions)**

13:30-13:50 WeWeCT1.1

*DLR High Altitude Balloon Launched Experimental Glider (HABLEG): System Design, Control and Flight Data Analysis*, pp. 360-368.

|                      |                               |
|----------------------|-------------------------------|
| Laiacker, Maximilian | German Aerospace Center (DLR) |
| Wlach, Sven          | German Aerospace Center (DLR) |
| Schwarzbach, Marc    | German Aerospace Center (DLR) |

13:50-14:10 WeWeCT1.2

*Performance Analysis of a Powered Parafoil Unmanned Aerial Vehicle Using Open Loop Flight Test Results and Analytical Results*, pp. 369-376.

|                    |                                                 |
|--------------------|-------------------------------------------------|
| Devalla, Vindhya   | Univ. of Petroleum and Energy Studies           |
| Mondal, Amit Kumar | Univ. of Petroleum and Energy Studies, Dehradun |
| Prakash, Om        | Univ. of Petroleum and Energy Studies           |

14:10-14:30 WeWeCT1.3

*Preliminary Results on UAV-Based Forest Fire Localization Based on Decisional Navigation*, pp. 377-382.

|                             |                                                |
|-----------------------------|------------------------------------------------|
| Belbachir, Assia            | IPSA                                           |
| Escareno, Juan-Antonio      | Inst. Pol. De Ciencias Avanc  es (IPSA)        |
| Rubio Espino, Elsa          | Centro De Investigaci  n En Computaci  n - IPN |
| Sossa Azuela, Juan Humberto | Centro De Investigacion En Computacion - IPN   |

14:30-14:50 WeWeCT1.4

*Construction and Instrumentation of a Fixed Wing Aircraft, Guillo  w's Aeronca Champion 85*, pp. 383-392.

|                                    |           |
|------------------------------------|-----------|
| Aguill  n Balderas, Nestor Abraham | Cinvestav |
| Cardona S  nchez, Gerardo Emanuel  | Cinvestav |
| Maldonado Ramos, Jessica Jazm  n   | Cinvestav |
| Tovar Garc  a, Carlos Antonio      | Cinvestav |
| Malo-Tamayo, Alejandro             | Cinvestav |

**WeWeDT1** Room T1  
**UAV Modeling and Control III (Podium Sessions)**

15:10-15:30 WeWeDT1.1

*Design of Sliding Mode Observers for Quadrotor Pitch/roll Angle Estimation Via IMU Measurements*, pp. 393-400.

|                   |                              |
|-------------------|------------------------------|
| Chang, Jing       | Northwestern Pol. Univ       |
| Cieslak, J  r  me | IMS Lab. - Univ. of Bordeaux |
| Zolghadri, Ali    | Univ. Bordeaux I             |
| Davila, Jorge     | Ip  n, Esime-Upt             |
| Zhou, Jun         | Northwestern Pol. Univ       |

15:30-15:50 WeWeDT1.2

*An Automatic Flight Control System for the AR.Drone Quadrotor in Outdoor Environments*, pp. 401-410.

|                           |                                  |
|---------------------------|----------------------------------|
| Santana, Lucas Vago       | Federal Inst. of Esp  rito Santo |
| Brandao, Alexandre Santos | Federal Univ. of Vi  osa         |
| Sarcinelli-Filho, Mario   | Federal Univ. of Esp  rito Santo |

|                                                                                               |                                                              |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 15:50-16:10                                                                                   | WeWeDT1.3                                                    |
| <i>A Comparative Study of Altitude and Yaw Controllers for Rotorcraft UAV</i> , pp. 411-418.  |                                                              |
| Fernandes, Alexandre                                                                          | Federal Univ. of Viçosa                                      |
| Brandao, Alexandre Santos                                                                     | Federal Univ. of Viçosa                                      |
| Llanos Villarreal, Elmer Rolando                                                              | Department of Exact and Natural Sciences, Federal Rural Univ |
| 16:10-16:30                                                                                   | WeWeDT1.4                                                    |
| <i>Robust Control with Disturbance Observer for UAV Translational Tracking</i> , pp. 419-423. |                                                              |
| Rodriguez-Mata, Abraham Efraim                                                                | Cinvestav                                                    |
| López, Jesús Ricardo                                                                          | CINVESTAV                                                    |
| Martinez Vasquez, Adrian Humberto                                                             | CINVESTAV                                                    |
| Salazar, Sergio                                                                               | Unisersité De Compiègne                                      |
| Osorio, Antonio                                                                               | CINVESTAV                                                    |
| 16:30-16:50                                                                                   | WeWeDT1.5                                                    |
| <i>Quad-Rotor Orientation Control by Predictor Based Sliding Mode Control</i> , pp. 424-430.  |                                                              |
| Ordaz Jimenez, Jose Jairo                                                                     | CENTRO DE INVESTIGACION Y DE ESTUDIOS AVANZADOS DEL Inst. PO |
| Salazar, Sergio                                                                               | Unisersité De Compiègne                                      |
| Mondie, Sabine                                                                                | Centro De Investigacion Y De Estudios Avanzados Del Ipn      |
| Davila, Jorge                                                                                 | Ipn, Esime-Upt                                               |
| Rodriguez-Mata, Abraham Efraim                                                                | Cinvestav                                                    |
| 16:50-17:10                                                                                   | WeWeDT1.6                                                    |
| <i>Sliding Mode Line-Of-Sight Stabilization of a Two-Axis Gimbal System</i> , pp. 431-438.    |                                                              |
| Espinosa Ramírez, Carlos Isaac                                                                | CINVESTAV                                                    |
| Mayen González, Karina                                                                        | CINVESTAV                                                    |
| Lizárraga Fernández, Mariano Isidro                                                           | Univ. of California, Santa Cruz                              |
| Salazar, Sergio                                                                               | Unisersité De Compiègne                                      |
| Romero, Hugo                                                                                  | Univ. Autónoma Del Estado De Hidalgo                         |
| Lozano, Rogelio                                                                               | Univ. De Tech. De Compiègne                                  |
| 17:10-17:30                                                                                   | WeWeDT1.7                                                    |
| <i>Adaptive Decentralized Control Problem for MAS*</i> .                                      |                                                              |
| Dymkou, Siarhei                                                                               | NUS                                                          |