



**Sistema Integral de Información Académica**  
**Coordinación de Planeación, Evaluación y**  
**Simplificación de la Gestión Institucional**  
**Reporte individual**



**RONALD STUART LEDER**

## **Datos Generales**

**Nombre:** RONALD STUART LEDER

**Máximo nivel de estudios:** DOCTORADO

**Antigüedad académica en la UNAM:** 9 años

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## **Nombramientos**

**Último:** PROFESOR ASIGNATURA A TP No Definitivo  
Facultad de Ingeniería  
Desde 01-06-2009 hasta 31-08-2013

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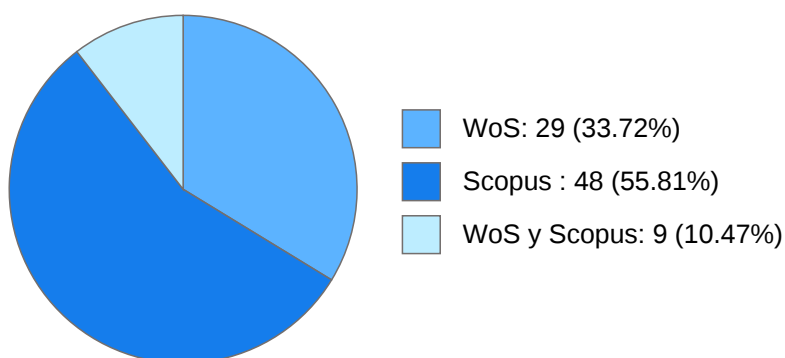
## **Estímulos, programas, premios y reconocimientos**

SNI I 2008

**RONALD STUART LEDER**

## DOCUMENTOS EN REVISTAS

### Histórico de Documentos



| # | Título                                                                                                                                                    | Autores                                                                                                      | Revista                                               | Año  |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------|
| 1 | Minimally-Invasive and Efficient Method to Accurately Fit the Bergman Minimal Model to Diabetes Type 2                                                    | ANA GABRIELA GALLARDO<br>HERNANDEZ MARCOS ANGEL<br>GONZALEZ OLVERA MARIA CRISTINA<br>REVILLA MONSALVE et al. | CELL MOL<br>BIOENG                                    | 2022 |
| 2 | Accurate diagnosis of sepsis using a neural network: Pilot study using routine clinical variables                                                         | LOURDES ANDREA ARRIAGA PIZANO<br>MARCOS ANGEL GONZALEZ OLVERA<br>MARIA CRISTINA REVILLA MONSALVE<br>et al.   | COMPUTER<br>METHODS AND<br>PROGRAMS IN<br>BIOMEDICINE | 2021 |
| 3 | Rapid automatic identification of parameters of the Bergman Minimal Model in Sprague-Dawley rats with experimental diabetes for adaptive insulin delivery | ANA GABRIELA GALLARDO<br>HERNANDEZ MARCOS ANGEL<br>GONZALEZ OLVERA MARIA CRISTINA<br>REVILLA MONSALVE et al. | COMPUTERS IN<br>BIOLOGY AND<br>MEDICINE               | 2019 |
| 4 | Significant and safe reduction of propofol sedation dose for geriatric population undergoing pacemaker implantation: randomized clinical trial            | ANA GABRIELA GALLARDO<br>HERNANDEZ MARIA CRISTINA REVILLA<br>MONSALVE RONALD STUART LEDER<br>et al.          | AGING CLINICAL<br>AND<br>EXPERIMENTAL<br>RESEARCH     | 2018 |
| 5 | Nikola Tesla: Why was he so much resisted and forgotten?                                                                                                  | RONALD STUART LEDER Valentinuzzi<br>M.E. Ortiz M.H. et al.                                                   | IEEE PULSE                                            | 2016 |

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|    |                                                                                                                                       |                                                                                  |                                                                         |      |
|----|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------|------|
| 6  | Response to ?Letter to the editor: Robot training for hand motor recovery in subacute stroke patients: A randomized controlled trial? | RONALD STUART LEDER Orihuela-Espina, F. Roldán, G.F. et al.                      | JOURNAL OF HAND THERAPY                                                 | 2016 |
| 7  | Robot training for hand motor recovery in subacute stroke patients: A randomized controlled trial                                     | RONALD STUART LEDER Orihuela-Espina, Felipe Femat Roldan, Giovana et al.         | JOURNAL OF HAND THERAPY                                                 | 2016 |
| 8  | Gesture therapy: An upper limb virtual reality-based motor rehabilitation platform                                                    | RONALD STUART LEDER Enrique Sucar, Luis Orihuela-Espina, Felipe et al.           | IEEE TRANSACTIONS ON NEURAL SYSTEMS AND REHABILITATION ENGINEERING      | 2014 |
| 9  | High-order sliding-mode control for blood glucose: Practical relative degree approach                                                 | LEONID FRIDMAN RONALD STUART LEDER Gallardo Hernandez, Ana Gabriela et al.       | CONTROL ENGINEERING PRACTICE                                            | 2013 |
| 10 | Neural Reorganization Accompanying Upper Limb Motor Rehabilitation from Stroke with Virtual Reality-Based Gesture Therapy             | ERICK HUMBERTO PASAYE ALCARAZ RONALD STUART LEDER Orihuela-Espina, Felipe et al. | TOPICS IN STROKE REHABILITATION                                         | 2013 |
| 11 | Retrospectroscope: Cardiac output: Since when, who, and how?                                                                          | RONALD STUART LEDER Valentinuzzi, Max E.                                         | IEEE PULSE                                                              | 2013 |
| 12 | STARS: Pacemakers                                                                                                                     | RONALD STUART LEDER Geselowitz M.N.                                              | P IEEE                                                                  | 2013 |
| 13 | Control por modos deslizantes para la presión positiva binivel en las vías respiratorias: Ventajas sobre el control PID               | RONALD STUART LEDER LEONID FRIDMAN Amado R.G.L.                                  | Pan American Health Care Exchanges                                      | 2013 |
| 14 | Recognition of arm activities based on Hidden Markov Models for natural interaction with service robots                               | JOSE ISRAEL FIGUEROA ANGULO JESUS SAVAGE CARMONA ERNESTO BRIBIESCA CORREA et al. | 2013 16th International Conference On Advanced Robotics, Icar 2013      | 2013 |
| 15 | Robust control for propofol induced anesthesia based on second-order sliding-mode control                                             | ANA GABRIELA GALLARDO HERNANDEZ LEONID FRIDMAN RONALD STUART LEDER et al.        | IEEE Conference on Decision and Control                                 | 2013 |
| 16 | High-order sliding-mode control for anesthesia                                                                                        | ANA GABRIELA GALLARDO HERNANDEZ RONALD STUART LEDER LEONID FRIDMAN et al.        | IEEE Engineering in Medicine and Biology Society Conference Proceedings | 2013 |

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|    |                                                                                                             |                                                                                 |                                                                                                                                       |      |
|----|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------|
| 17 | Experimental glucose regulation with a High-Order Sliding-Mode Controller                                   | ANA GABRIELA GALLARDO<br>HERNANDEZ LEONID FRIDMAN<br>RONALD STUART LEDER et al. | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings                                                | 2012 |
| 18 | The Modern Hospital in Historical Context                                                                   | RONALD STUART LEDER Valentinuzzi, Max E.                                        | IEEE PULSE                                                                                                                            | 2012 |
| 19 | Advances in Medical Devices and Medical Electronics                                                         | RONALD STUART LEDER Neuman, Michael R. Baura, Gail D. et al.                    | P IEEE                                                                                                                                | 2012 |
| 20 | Experimental glucose regulation with a high-order sliding-mode controller.                                  | ANA GABRIELA GALLARDO<br>HERNANDEZ LEONID FRIDMAN<br>RONALD STUART LEDER et al. | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings                                                | 2012 |
| 21 | High-order sliding-mode control for blood glucose regulation in the presence of uncertain dynamics          | ANA GABRIELA GALLARDO<br>HERNANDEZ LEONID FRIDMAN<br>RONALD STUART LEDER et al. | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings                                                | 2011 |
| 22 | High-Order Sliding-Mode control of blood glucose concentration via practical relative degree identification | ANA GABRIELA GALLARDO<br>HERNANDEZ LEONID FRIDMAN<br>RONALD STUART LEDER et al. | IEEE Conference<br>on Decision<br>and Control                                                                                         | 2011 |
| 23 | Gesture therapy: A vision-based system for upper extremity stroke rehabilitation                            | RONALD STUART LEDER Sucar L.E. Luis R. et al.                                   | 2010 Annual<br>International<br>Conference Of<br>The Ieee<br>Engineering In<br>Medicine And<br>Biology Society,<br>Embc'10            | 2010 |
| 24 | EMB history to increase health technology literacy in the general public for improved health worldwide      | RONALD STUART LEDER                                                             | Proceedings Of<br>The 31st Annual<br>International<br>Conference Of<br>The Ieee<br>Engineering In<br>Medicine And<br>Biology Society: | 2009 |

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------|
| 25 | Rehabilitation strategies of the stroke patients [Actividades simuladas de la vida diaria para rehabilitación motora del miembro superior en pacientes con enfermedad vascular cerebral] | RONALD STUART LEDER<br>Sánchez-Villavicencio I.<br>Hernández-Franco J. et al. | Archivos Del<br>Instituto<br>Nacional De<br>Neurología Y<br>Neurocirugía                                                                     | 2009 |
| 26 | Gesture therapy: A clinical evaluation                                                                                                                                                   | RONALD STUART LEDER Sucar L.E.<br>Molina A. et al.                            | 2009 3rd<br>International<br>Conference On<br>Pervasive<br>Computing<br>Technologies<br>For Healthcare<br>- Pervasive<br>Health 2009,<br>Pct | 2009 |
| 27 | The modern hospital in historical context.                                                                                                                                               | RONALD STUART LEDER Valentinuzzi<br>M.E.                                      | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings                                                       | 2009 |
| 28 | The natural history of the Engineering in Medicine and Biology Society from a modern perspective.                                                                                        | RONALD STUART LEDER<br>Requena-Carrion J.                                     | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings                                                       | 2009 |
| 29 | The modern hospital in historical context                                                                                                                                                | RONALD STUART LEDER Valentinuzzi<br>M.E.                                      | Proceedings Of<br>The 31st Annual<br>International<br>Conference Of<br>The IEEE<br>Engineering In<br>Medicine And<br>Biology Society:        | 2009 |
| 30 | The natural history of the engineering in medicine and biology society from a modern perspective                                                                                         | RONALD STUART LEDER<br>Requena-Carrión J.                                     | Proceedings Of<br>The 31st Annual<br>International<br>Conference Of<br>The IEEE<br>Engineering In<br>Medicine And<br>Biology Society:        | 2009 |

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|    |                                                                                                                       |                                                                           |                                                                                                   |      |
|----|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------|
| 31 | Gesture therapy: A low-cost vision-based system for rehabilitation after stroke                                       | RONALD STUART LEDER Enrique Sucar L. D. Reinkensmeyer D. et al.           | Healthinf 2008 - 1st International Conference On Health Informatics, Proceedings                  | 2008 |
| 32 | Nintendo Wii remote for computer simulated arm and wrist therapy in stroke survivors with upper extremity hemiparesis | RONALD STUART LEDER RODRIGO SAVAGE CHAVEZ EMILIO LOREN ROTH MONZON et al. | 2008 Virtual Rehabilitation, Iwvr                                                                 | 2008 |
| 33 | Gesture therapy: A vision-based system for arm rehabilitation after stroke                                            | RONALD STUART LEDER Sucar L.E. Azcárate G. et al.                         | Communications in Computer and Information Science                                                | 2008 |
| 34 | X-ray and EPR study of reactions between B4C and TiO2                                                                 | RONALD STUART LEDER Kakazey M. Vlasova M. et al.                          | MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING | 2006 |
| 35 | Game motivated and constraint induced therapy in late stroke with fMRI studies pre and post therapy                   | FERNANDO ALEJANDRO BARRIOS ALVAREZ RONALD STUART LEDER Azpiroz J. et al.  | IEEE Engineering in Medicine and Biology Society Conference Proceedings                           | 2005 |
| 36 | Quantitative and qualitative evaluation of filter characteristics for wavelet packet compression of mr images         | RONALD STUART LEDER Azpiroz-Leehan J. Lerallut J.-F.                      | IEEE Engineering in Medicine and Biology Society Conference Proceedings                           | 2004 |
| 37 | The importance of biomedical engineering history.                                                                     | RONALD STUART LEDER                                                       | IEEE ENG MED BIOL                                                                                 | 2004 |
| 38 | EPR-characterization of carbon inclusions in boron carbide                                                            | RONALD STUART LEDER Kakazey M. Vlasova M. et al.                          | JOURNAL OF THE AMERICAN CERAMIC SOCIETY                                                           | 2004 |

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|----|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------|------|
| 39 | Lipreading Aid via the Tongue                                                                                                             | RONALD STUART LEDER Plant G.M.<br>Bach-y-Rita P.                 | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings | 2003 |
| 40 | Performance of Impedance and Inductance Ventilation Sensors on Premature Infants During Natural Breathing, Motion, and Airway Obstruction | RONALD STUART LEDER Cohen K.P.<br>Peterson N. et al.             | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings | 2003 |
| 41 | Annual International of the IEEE Engineering in Medicine and Biology - Proceeding: Editor's Notes                                         | RONALD STUART LEDER                                              | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings | 2003 |
| 42 | Motivating, game-based stroke rehabilitation: A brief report                                                                              | RONALD STUART LEDER Wood S.R.<br>Murillo N. et al.               | TOPICS IN<br>STROKE<br>REHABILITATION                                                  | 2003 |
| 43 | Thermal processes during mechanical treatment of ZnO and ZnO-TiO <sub>2</sub> powders and their role in the formation of defect structure | RONALD STUART LEDER Kakazey M.<br>Gonzalez-Rodriguez J.G. et al. | INT J FRACTURE                                                                         | 2002 |
| 44 | Computer-assisted motivating rehabilitation (CAMR) for institutional, home, and educational late stroke programs                          | RONALD STUART LEDER Bach-y-Rita<br>P. Wood S. et al.             | TOPICS IN<br>STROKE<br>REHABILITATION                                                  | 2002 |
| 45 | Computer game motivating rehabilitation with objective measures of improvement in motor function                                          | RONALD STUART LEDER Murillo N.<br>Ibarra C.P. et al.             | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings | 2001 |
| 46 | Self-exciting chaos as a dynamic model for irregular neural spiking                                                                       | RONALD STUART LEDER Baier G.<br>Escalera Santos G.J. et al.      | PHYS REV E                                                                             | 2000 |
| 47 | Human electroencephalogram induces transient coherence in a spatially extended chaotic model                                              | RONALD STUART LEDER Baier G.<br>Parmanada P.                     | IEEE<br>Engineering in<br>Medicine and<br>Biology Society<br>Conference<br>Proceedings | 2000 |



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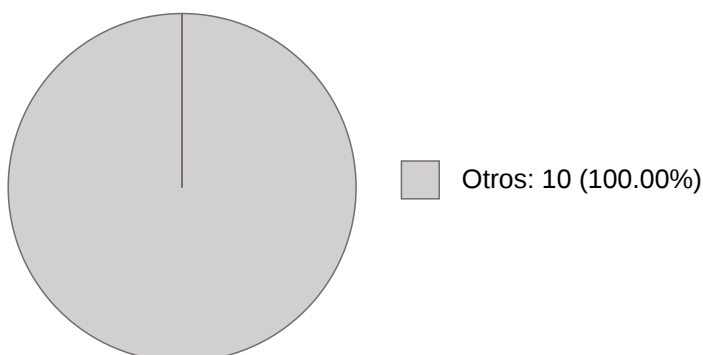
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|----|------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------|------|
| 48 | Human Electroencephalogram Induces Transient Coherence in Excitable Spatiotemporal Chaos | RONALD STUART LEDER Baier G. Parmananda P. | PHYSICAL REVIEW LETTERS | 2000 |
|----|------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------|------|

## RONALD STUART LEDER

### LIBROS Y CAPITULOS CON ISBN

#### Obras con registro ISBN



| # | Título                                                                                                                                                                  | Autores                                                                                                              | Alcance           | Año  | ISBN          |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------|------|---------------|
| 1 | Recognition of Arm Activities Based on Hidden Markov Models for Natural Interaction with Service Robots                                                                 | JOSE ISRAEL FIGUEROA<br>ANGULO JESUS SAVAGE<br>CARMONA ERNESTO<br>BRIBIESCA CORREA et al.                            | Proceedings Paper | 2013 | 9781479927227 |
| 2 | FMRI-based inverse analysis of stroke patients' motor functions                                                                                                         | RONALD STUART LEDER<br>Gutiérrez-Celaya J.A.<br>Carrillo R. et al.                                                   | Conference Paper  | 2011 | 9781612849164 |
| 3 | Nintendo Wii remote and Nunchuck as a wireless data subsystem for digital acquisition of analog physiologic data relevant to motor rehabilitation after stroke; part II | JOSE MAURICIO<br>MATAMOROS DE MARIA Y<br>CAMPOS MARCO<br>ANTONIO NEGRETE<br>VILLANUEVA RONALD<br>STUART LEDER et al. | Conference Paper  | 2010 | 9781424462926 |
| 4 | The educational value of teaching biomedical engineering history                                                                                                        | RONALD STUART LEDER<br>Requena-Carrión J.<br>Beebe M. et al.                                                         | Conference Paper  | 2010 | 9781424441235 |
| 5 | The natural history of the sleep and respiratory engineering track at EMBC 1988 to 2010                                                                                 | RONALD STUART LEDER<br>Schlotthauer G. Penzel T.<br>et al.                                                           | Conference Paper  | 2010 | 9781424441235 |
| 6 | Nintendo Wii remote como un subsistema inalámbrico para adquisición digital de datos de señales fisiológicas relevantes en la terapia física                            | MARCO ANTONIO<br>NEGRETE VILLANUEVA<br>JIMENA OLVERES<br>MONTIEL RONALD STUART<br>LEDER et al.                       | Conference Paper  | 2009 | 9781424436699 |

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|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------|------|---------------|
| 7  | Nintendo Wii remote and Nunchuck as a wireless data subsystem for digital acquisition of analog physiologic data relevant to motor rehabilitation after stroke; poster | MARCO ANTONIO<br>NEGRETE VILLANUEVA<br>RONALD STUART LEDER<br>Matamoros M. | Conferenc<br>e Paper | 2009 | 9781424441891 |
| 8  | Clinical evaluation of a low-cost alternative for stroke rehabilitation                                                                                                | RONALD STUART LEDER<br>Sucar L.E. Hernández J.<br>et al.                   | Conferenc<br>e Paper | 2009 | 9781424437894 |
| 9  | EMB history to increase health technology literacy in the general public for improved health world wide                                                                | RONALD STUART LEDER                                                        | Conferenc<br>e Paper | 2009 | 9781424451197 |
| 10 | Qualification of arm gestures using hidden markov models                                                                                                               | RONALD STUART LEDER<br>Quintana G.E. Sucar L.E.<br>et al.                  | Conferenc<br>e Paper | 2008 | 9781424421541 |



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**PARTICIPACIÓN EN PROYECTOS**

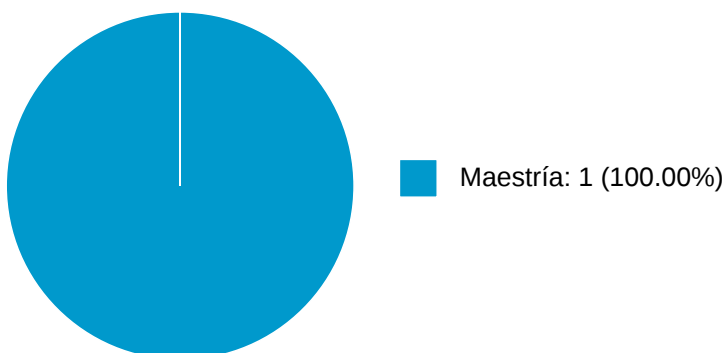
**No se encuentran registros en la base de datos de SISEPRO asociados a:**

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## PARTICIPACIÓN EN TESIS

### Histórico de Colaboraciones en Tesis

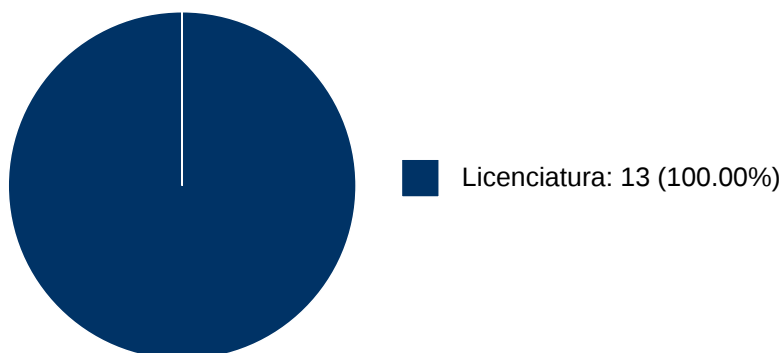


| # | Título del documento                                                                                                                                                        | Tipo de Tesis     | Sinodales            | Autores                  | Entidad                 | Año  |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------|--------------------------|-------------------------|------|
| 1 | Uso de herramientas financieras para la optimización y evaluación de un plan para la importación de un servicio de información médica en México basado en telefonía celular | Tesis de Maestría | RONALD STUART LEDER, | Mispalma León, Fernando, | Facultad de Ingeniería, | 2009 |

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## DOCENCIA IMPARTIDA

### Histórico de docencia



| #  | Nivel titulación | Asignatura                          | Entidad                | Alumnos | Semestre |
|----|------------------|-------------------------------------|------------------------|---------|----------|
| 1  | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 1       | 2013-1   |
| 2  | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 2       | 2012-2   |
| 3  | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 3       | 2012-1   |
| 4  | Licenciatura     | SEMINARIO DE TITULACION             | Facultad de Ingeniería | 2       | 2011-2   |
| 5  | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 10      | 2011-1   |
| 6  | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 18      | 2010-2   |
| 7  | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 13      | 2010-1   |
| 8  | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 13      | 2009-2   |
| 9  | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 9       | 2009-1   |
| 10 | Licenciatura     | SISTEM. EQUIPOS BIOMEDICOS ELECTRON | Facultad de Ingeniería | 1       | 2009-1   |
| 11 | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 7       | 2008-2   |
| 12 | Licenciatura     | SISTEM. EQUIPOS BIOMEDICOS ELECTRON | Facultad de Ingeniería | 3       | 2008-1   |
| 13 | Licenciatura     | SIST.Y EQUIP.BIOMEDICS.ELECTRONICS  | Facultad de Ingeniería | 5       | 2008-1   |



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**PATENTES**

**No se encuentran registros en la base de datos de patentes asociados a:**

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## FUENTES DE INFORMACIÓN

### Internos

| # | Información                                                          | Fuente | Sistema     | Periodo   |
|---|----------------------------------------------------------------------|--------|-------------|-----------|
| 1 | Grupos ordinarios y resumen de historias académicas                  | DGAE   | SIAE        | 2008-2025 |
| 2 | Nombramientos, datos generales, estímulos, premios y reconocimientos | DGAPA  | RUPA        | 2008-2025 |
| 3 | Producción Académica                                                 | CH     | Humanindex  | 2008-2021 |
| 4 | Producción Académica                                                 | CIC    | SCIC        | 2000-2017 |
| 5 | Proyectos                                                            | DGPO   | SISEPRO     | 2018-2022 |
| 6 | Tesis                                                                | DGB    | TESIUNAM    | 2008-2025 |
| 7 | Tutorías en Posgrado                                                 | CGEP   | SIIPosgrado | 2008-2021 |

### Externos

| #  | Información             | Fuente          | Sistema      | Periodo   |
|----|-------------------------|-----------------|--------------|-----------|
| 8  | Documentos Indexados    | Elsevier        | Scopus       | 2008-2025 |
| 9  | Documentos Indexados    | Thomson Reuters | WoS          | 2008-2025 |
| 10 | Obras con registro ISBN | INDAUTOR        | Agencia ISBN | 2008-2025 |
| 11 | Patentes                | IMPI            | SIGA         | 2008-2024 |