

CARPETA 04. RELACIÓN DE LA PARTICIPACIÓN DE LOS ESTUDIANTES Y PROFESORES EN LAS LGAC

En el presente documento se enlistan los productos de investigación obtenidos durante el periodo de evaluación por los estudiantes del programa. Primero se presentan tablas que resumen la productividad por las Líneas de generación y aplicación del conocimiento (LGAC's), después se muestran algunos gráficos que conjuntan los elementos de productividad más relevantes de los estudiantes en las LGAC.

Las líneas de Generación y Aplicación de Conocimiento (LAGC's) desarrolladas en el programa son: Línea de Sistemas Dinámicos (SD), Línea de Ciencia e Ingeniería de Materiales con dimensionalidad reducida (CIMDR) y Línea de Fenómenos electromagnéticos y cuánticos y sistemas telemático (FECST).

Tabla 0. Resumen de productividad de los estudiantes

| Tabla | Rubro | SD | CIMDR | FECST | Total |
|-------|--|----|-------|-------|-------|
| 1 | Artículos indizados o arbitrados publicados con participación de estudiantes/graduados | 18 | 24 | 11 | 53 |
| 2 | Capítulos de libro (ISBN) con participación de alumnos/graduados | 2 | 0 | 0 | 2 |
| 3 | Trabajos presentados en congresos con participación de estudiantes/graduados | 2 | 18 | 3 | 23 |

Se presenta la distribución de productividad de los estudiantes y graduados del programa en el periodo de evaluación. La inclusión de los graduados es debido a que en el periodo de evaluación y con un programa de duración de 24 meses, dicha productividad se empalma con la transición entre estudiante y graduado del alumno. Se destaca que los artículos (67.9%) y la participación en congresos (29.5%) es la principal actividad de producción de investigación del programa ahora a través de la participación de este sector de la comunidad del programa.



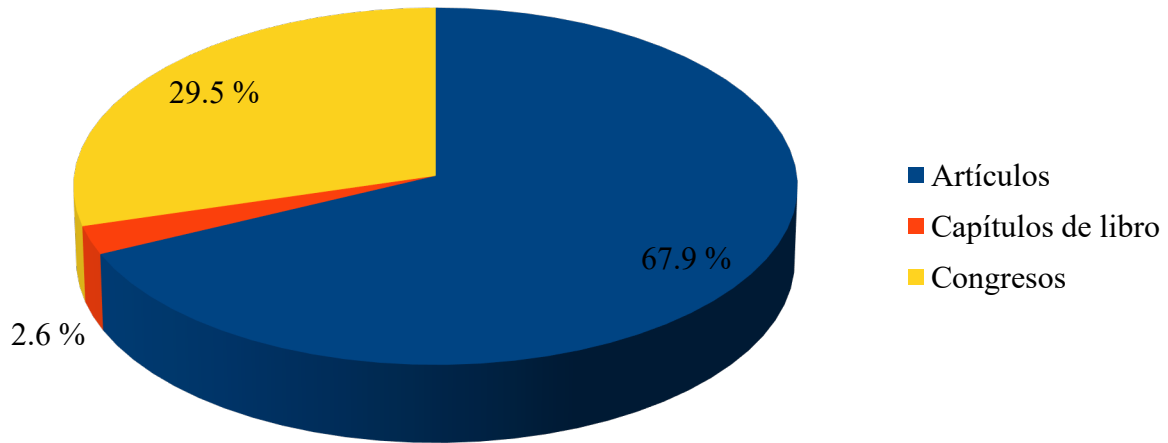


Figura 1. Distribución de la productividad total de Estudiantes/graduados.

Ahora observamos la productividad de los productos más relevantes, es decir, de publicación de artículos y participación en congresos, por LGAC.



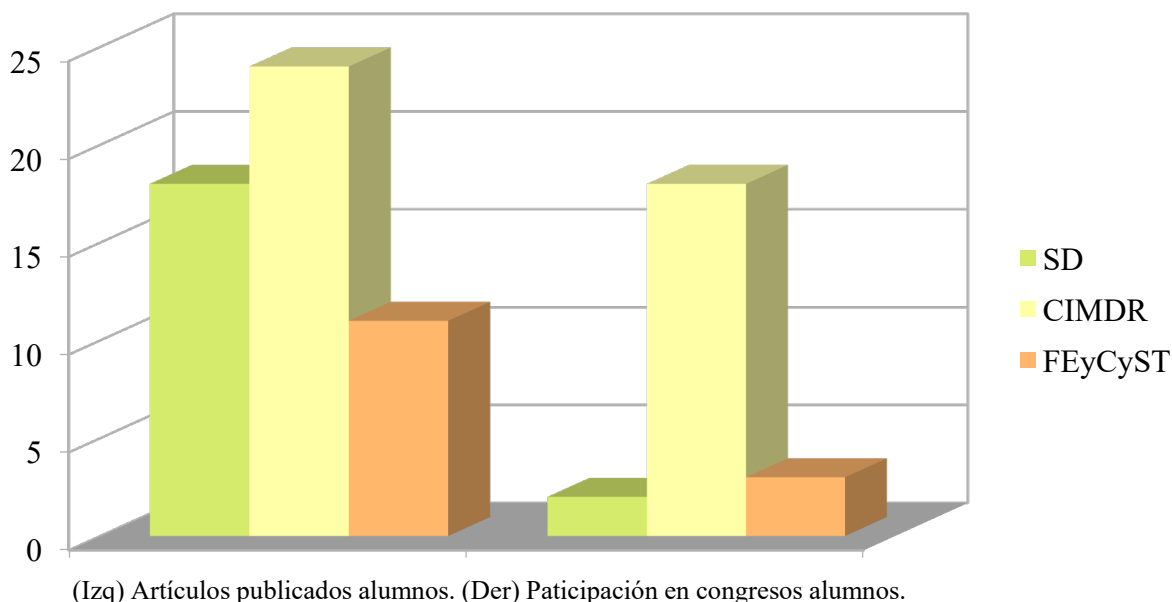


Figura 2. Grafica de productividad de artículos y congresos separado por LGAC.

Por último, se agregan las tablas de productividad a detalle de cada rubro de productividad reportado, manteniendo el código de color para las LGAC's.

Tabla 1. Artículos indizados o arbitrados publicados con participación de estudiantes/graduados

| | Estudiante | Profesor | Título | Revista | Número | Volumen | Año |
|-----------|-----------------------------|----------------------|--|---------|--------|---------|------|
| SD | | | | | | | |
| 1 | Carlos Carrizales Velazquez | Israel Reyes Ramirez | Multifractal ity of Pseudo-Velocities and Seismic Quiescence Associated with the Tehuantepec M8.2 EQ | Entropy | 20 | 12 | 2018 |
| 2 | Carlos Carrizales Velazquez | Lev Guzman Vargas | Multifractal ity of Pseudo-Velocities and Seismic Quiescence Associated with the Tehuantepec M8.2 EQ | Entropy | 12 | 20 | 2018 |





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| 3 | Pamela Patricia Vera Tizatl | Alberto Luviano Juarez | Tracking control of tomographic image acquisition robotic system based on active disturbance rejection theory with adaptive gains | Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering | No aplica | No aplica | 2018 |
| 4 | Jose Alejandro Aguirre Anaya | Oscar Octavio Gutierrez Frias | Nested Saturation Function Control of a Magnetic Levitation System | Complexity | No aplica | 2020 | 2020 |
| 5 | Daniel Aguilar Velázquez | Lev Guzman Vargas | Critical synchronization and 1/f noise in inhibitory/excitatory rich-club neural networks | SCIENTIFIC REPORTS | 0 | 9 | 2019 |
| 6 | Rodolfo Vera Amaro | Alberto Luviano Juarez | Design and Analysis of Wireless Sensor Networks for Animal Tracking in Large Monitoring Polar Regions Using Phase-Type Distributions and Single Sensor Model | IEEE Access | SN | 7 | 2019 |
| 7 | Sergio Isai Palomino Resendiz | Alberto Luviano Juarez | A heuristic approach for tracking error and energy consumption minimization in solar tracking systems | IEEE Access | 1 | 7 | 2019 |
| 8 | Sergio Isai Palomino Resendiz | Oscar Octavio Gutierrez Frias | A Heuristic Approach for Tracking Error and Energy Consumption Minimization in Solar Tracking Systems | IEEE Access | No aplica | 7 | 2019 |
| 9 | Daniel Aguilar Velázquez | Israel Reyes Ramirez | A wavelet analysis of multiday extreme ozone and its precursors in Mexico city during 2015-2016 | Atmospheric Environment | no aplic | 188 | 2018 |
| 10 | Luis Ángel Castañeda Briones | Alberto Luviano Juarez | Tracking control of uncertain time delay systems: An ADRC | Control Engineering Practice | No aplica | 78 | 2018 |



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|--------------|------------------------------------|-------------------------------|---|----------------------------------|-----------|-----|------|
| | | | approach | | | | |
| 11 | Rogelio Basurto Flores | Lev Guzman Vargas | On entropy research analysis: cross-disciplinary knowledge transfer | Scientometrics | 1 | 117 | 2018 |
| 12 | Sergio Isai Palomino Resendiz | Alberto Luviano Juarez | Design and implementation of a robotic active solar distiller based on a Fresnel concentrator and a photovoltaic system | Energy Conversion and Management | No aplica | 166 | 2018 |
| 13 | Sergio Isai Palomino Resendiz | Lev Guzman Vargas | Design and implementation of a robotic active solar distiller based on a Fresnel concentrator and a photovoltaic system | Energy Conversion and Management | 0 | 166 | 2018 |
| 14 | Daniel Aguilar Velázquez | Lev Guzman Vargas | Synchronization and 1/f signals in interacting small-world networks | Chaos, Solitons and Fractals | 0 | 104 | 2017 |
| 15 | Roberto Juarez Lopez | Lev Guzman Vargas | Characteristics of the oil transport network in the South of Mexico | Journal of Physics: Conf Ser. | | 792 | 2017 |
| 16 | Rogelio Basurto Flores | Lev Guzman Vargas | Evaluating the Irregularity of Natural Languages | ENTROPY | 10 | 19 | 2017 |
| 17 | Sergio Isai Palomino Resendiz | Alberto Luviano Juarez | Mechatronic design and implementation of a two axes sun tracking photovoltaic system driven by a robotic sensor | Mechatronics | No aplica | 47 | 2017 |
| 18 | Luis Ángel Castañeda Briones | Alberto Luviano Juarez | Robust disturbance rejection control of a biped robotic system using high-order extended state observer | ISA Transactions | No aplica | 62 | 2016 |
| CIMDR | | | | | | | |
| 1 | Gabriela Elizabeth Mijangos Zuñiga | Issis Claudette Romero Ibarra | In-situ transesterification of <i>Jatropha curcas</i> L. seeds using homogeneous and heterogeneous basic catalysts | Fuel | 235 | 235 | 2019 |





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| 2 | Gabriela Elizabeth Mijangos Zuñiga | Issis Claudette Romero Ibarra | A novel green one- pot synthesis of biodiesel from Ricinus communis seeds by basic heterogene ous catalysis | Journal of Cleaner Production | 196 | 196 | 2018 |
| 3 | Brahim El Filali X | José Luis Casas Espínola | Band-edge emission, defects, morpholog y and structure of in-doped ZnO nanocrystal films | Optical Materials | No aplica | 89 | 2019 |
| 4 | César Raymundo González Vargas | Janna Douda | Optical properties of amine- functionaliz ed graphene oxide | Applied Nanoscience | 4 | 9 | 2019 |
| 5 | Francisco Bersain Moreno Luna | Jose Luis Herrera Perez | Quick synthesis of gold nanopartic les at low temperatur e, by using Agave potatorum extracts | Materials Letters | no aplica | 235 | 2019 |
| 6 | Jesús Antonio Fuentes García | Janna Douda | Optical properties of amine- functionaliz ed graphene oxide | Applied Nanoscie nce | 4 | 9 | 2019 |
| 7 | Juan Antonio Jaramillo Gomez | José Luis Casas Espínola | Band-edge emission, defects, morpholog y and structure of in-doped ZnO nanocrystal films | Optical Materials | No aplica | 89 | 2019 |
| 8 | Xochitl Andrea Hernandez Contreras | Janna Douda | Optical properties of amine- functionaliz ed graphene oxide | Applied Nanoscience | 4 | 9 | 2019 |
| 9 | Brahim El Filali X | José Luis Casas Espínola | Emission and structure variations at aging ZnO:Ag nanocrystal s prepared by spray pyrolysis | Journal of Materials Science: Materials in Electronics | 18 | 29 | 2018 |
| 10 | Brahim El Filali X | José Luis Casas Espínola | Morpholog y, structure and emission of Al-doped ZnO nanocrystal films | Journal of Materials Science: Materials in Electronics | 18 | 29 | 2018 |
| 11 | César Raymundo González Vargas | Janna Douda | Modificatio ns of the optical properties of quantum dots on liposome encapsulati on for | Applied Nanoscience | 9 | 5 | 2018 |





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| 12 | Froylan Angel Huerta | Jose Francisco Sanchez Ramirez | application s in theranostic liposomes Synthesis temperatur e-dependent optical properties of ZnS- shell formation on InP Nanoparticl es | Journal of Lumines cence | May | 197 | 2018 |
| 13 | Froylan Angel Huerta | Jose Luis Herrera Perez | Study of the effect of the synthesis temperatur e on the photolumin escent properties of InP@ZnS nanocrystal s | Journal of Materials Science: Materials in Electronics | 18 | 29 | 2018 |
| 14 | Froylan Angel Huerta | Jose Luis Herrera Perez | Synthesis temperatur e-dependent optical properties of ZnS- shell formation on InP nanoparticl es | Journal of Luminescence | - | 197 | 2018 |
| 15 | Isis Chetzyl Ballardo Rodríguez | Aaron Israel Diaz Cano | Luminesce nce, structure and aging c-axis - Oriented silver doped ZnO nanocrystal line films | MATERIALS SCIENCE IN SEMICON DUCTOR PROCESSI NG | No aplica | 79 | 2018 |
| 16 | Jesús Antonio Fuentes García | Aaron Israel Diaz Cano | Magnetic domain interaction s of Fe3O4 nanoparticl es embedded in a SiO2 matrix | SCIENTIFIC REPORTS | No aplica | 8 | 2018 |
| 17 | Juan Antonio Jaramillo Gomez | Janna Douda | Aspects of emission variation in CdSeTe/Zn S quantum dots conjugated to antibodies | Journal of Materials Science: Materials in Electronics | 28 | 1 | 2017 |
| 18 | Juan Antonio Jaramillo Gomez | José Luis Casas Espínola | Emission Dependent on compositio n of Si- rich- SiNX Films obtained by PECVD | IOP Conference Series: Materials Science and Engineering | 1 | 169 | 2017 |
| 19 | Victor Manuel Flores Sanchez | Aaron Israel Diaz Cano | CHARACTE RIZATION OF VERTICALL Y ALIGNED ZINC OXIDE | Digest Journal of Nanomaterials | 3 | 12 | 2017 |





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|----------------|------------------------------------|----------------------------|--|---|----|-----|------|
| 20 | Xochitl Andrea Hernandez Contreras | José Luis Casas Espínola | NANORODS VIA A RAPID MICROWAVE-ASSISTED HYDROTHERMAL SYNTHESIS PROCESS Effect of dielectric constant on emission of CdSe quantum dots | and Biostructures Journal of Materials Science: Materials in Electronics | 10 | 28 | 2017 |
| 21 | César Raymundo González Vargas | Janna Douda | EVALUACION DE LOS TAMAÑOS DE LIPOSOMAS CON FARMACOS ENCAPSULADOS Transformation of Photoluminescence Spectra at the liposomal encapsulation of Quantum Dots | Boletín de UPIITA Frontiers in Sensors | 54 | 1 | 2016 |
| 22 | César Raymundo González Vargas | Janna Douda | Transformation of Photoluminescence Spectra at the liposomal encapsulation of Quantum Dots | Frontiers in Sensors | 4 | 1 | 2016 |
| 23 | Genaro López Gamboa | Jose Luis Jimenez Perez | NonLinear refractive index of gold nanoparticles dispersed in vegetable biodiesel | International Journal of Engineering and Technical Research (IJETR) | 1 | 4 | 2016 |
| 24 | Genaro López Gamboa | Jose Luis Jimenez Perez | SYNTHESIS AND THERMAL PROPERTIES OF NEW BIONANOFIBERS CONTAINING GOLD NANOPARTICLES | APPL. PHYS. A | 1 | 122 | 2016 |
| FEyCyST | | | | | | | |
| 1 | Carlos Alberto Ramirez Fuentes | Víctor Barrera Figueroa | On the calculation of entropy of EEG transients | Journal on Systems, Cybernetics and Informatics: JSCI | 1 | 17 | 2019 |
| 2 | Carlos Santiago Cruz | Sara Guadalupe Cruz Y Cruz | Position dependent mass Scarf Hamiltonians | Mathematical Methods in the | 15 | 42 | 2019 |





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| 3 | Leticia Olivera Ramirez | Víctor Barrera Figueroa | generated via the Riccati equation On the spectra of one-dimensional Schrödinger operators with singular potentials | Applied Sciences Frontiers in Physics | 1 | 7 | 2019 |
| 4 | Hassel Aurora Alcala Garrido | Mario Eduardo Rivero Angeles | Performance analysis of a wireless sensor network with cognitive radio capabilities in structural health monitoring applications: A discrete model | International Journal of Distributed Sensor Networks | 5 | 14 | 2018 |
| 5 | Nidia Escamilla Bojorges | Sara Guadalupe Cruz Y Cruz | Generation of sources of light with well defined orbital angular momentum | Journal of Physics Conference Series | | 698 | 2016 |
| 6 | Rodolfo Vera Amaro | Mario Eduardo Rivero Angeles | Design and Analysis of Wireless Sensor Networks for Animal Tracking in Large Monitoring Polar Regions Using Phase-Type Distributions and Single Sensor Model | IEEE Access | 1 | 7 | 2019 |
| 7 | Damian Jacinto Mendez | Sara Guadalupe Cruz Y Cruz | Static structure of sodium polystyrene sulfonate solutions obtained through a coarse-grained model | Molecular Physics | 17 | 116 | 2018 |
| 8 | Roberto Eswart Zagal Flores | Miguel Felix Mata Rivera | A recommender system to generate museum itineraries applying augmented reality and social-sensor mining techniques | Virtual Reality | no aplica | no aplica | 2018 |
| 9 | Sergio Manuel Martinez Chavez | Mario Eduardo Rivero Angeles | Cognitive Radio System for Interference Reduction in BANETs Focused on Epilepsy Diagnosis | Computer Networks | 2018 | 137 | 2018 |



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| 10 | Roberto Eswart Zagal Flores | Miguel Felix Mata Rivera | A cross- domain framework for designing healthcare mobile application s mining social networks to generate recommen dations of training and nutrition planning | Telematics and Informati cs | no aplica | no aplica | 2017 |
| 11 | Zulema Gress Mendoza | Sara Guadalupe Cruz Y Cruz | A Note on the Off- Axis Gaussian Beams Propagatio n in Parabolic Media | Journal of Physics Conferen ce Series | | 839 | 2017 |

Tabla 2. Capítulos de libro (ISBN) con participación de alumnos y graduados

| | Estudiante | Profesor | Capitulo | Libro | Editorial | Pág. | ISBN | Año |
|-----------|-------------------------------|-------------------------------|--|--|---|-----------|------------------|------|
| SD | | | | | | | | |
| 1 | Sergio Isai Palomino Resendiz | Alberto Luviano Juarez | Control por par calculado para un seguidor solar de dos grados de libertad | Control por par calculado para un seguidor solar de dos grados de libertad | Asociación mexicana de mecatrónica A.C. | 98 a 110 | 9786 0793 9406 6 | 2016 |
| 2 | José Alejandro Aguirre Anaya | Oscar Octavio Gutierrez Frias | Diseño de un robot móvil para desplazamiento en terreno agreste. | Robótica y Mecatrónica de Servicios: Teoría y Aplicaciones | Asociación Mexicana De Mecatrónica | 147 a 156 | 9786 0793 9406 6 | 2016 |

Tabla 3. Trabajos presentados en congresos con participación de estudiantes/graduados

| | Estudiante | Profesor | Trabajo | Congreso | Participación | País | Año |
|-----------|-----------------------------|-----------------|----------------------------|------------------|-----------------------------|------------------|------|
| SD | | | | | | | |
| 1 | Pamela Patricia Vera Tizatl | Alberto Luviano | Trajectory Tracking for an | American Control | Presentación de articulo en | UNITED STATES OF | 2018 |





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| | | Juarez | Inverted Pendulum on a Cart: An Active Disturbance Rejection Control Approach | Conference | extenso | AMERICA | |
| 2 | Sergio Isai Palomino Resendiz | Alberto Luviano Juarez | Design Strategy for Low- Power Consumption in Solar Trackers | 14th International Conference on Concentrator Photovoltaics | Presentación de artículo en extenso | SPAIN | 2018 |
| CIMDR | | | | | | | |
| 1 | Noe Sanchez Gonzalez | Jose Luis Jimenez Perez | Experimental Investigation on Thermal Properties of Ag nanowire nanofluids | 19th International Conference on Photoacoustic and Thermal Phenomena | Póster | SPAIN | 2017 |
| 2 | Noe Sanchez Gonzalez | Jose Luis Jimenez Perez | Determination of Thermal Properties of Jatropa Nanobiodiesel as alternative base oil for Heat Transfer | XXVI International Materials Research Congress | Póster | MÉXICO | 2017 |
| 3 | Isaac Izcoatl Mota Diaz | Janna Douda | Hybrids of liposomes for drug co-encapsulation | XXVII IMRC | Póster | MÉXICO | 2018 |
| 4 | Xochitl Andrea Hernandez Contreras | Janna Douda | Optical properties of amine functionalized graphene oxide and nanodiamonds | XXVII IMRC | Póster | MÉXICO | 2018 |
| 5 | César Raymundo González Vargas | Janna Douda | Optical properties of amine functionalized graphene oxide and nanodiamonds | XXVII IMRC | Póster | MÉXICO | 2018 |
| 6 | Jesús Antonio Fuentes García | Janna Douda | Optical properties of amine | XXVII IMRC | Póster | MÉXICO | 2018 |





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| | | | functionalized graphene oxide and nanodiamonds | | | | |
| 7 | Genaro López Gamboa | Jose Luis Jimenez Perez | Determination of Thermal Properties of Jatropa Nanobiodiesel as alternative base oil for Heat Transfer | XXVI International Materials Research Congress | Póster | MÉXICO | 2017 |
| 8 | Xochitl Andrea Hernandez Contreras | José Luis Casas Espínola | Photoluminescence study of ZnO nanocrystals obtained by colloidal-route | XXVI International Materials Research Congress | Póster | MÉXICO | 2017 |
| 9 | Angel Netzahual Lopantzi | Jose Luis Jimenez Perez | Study of the Thermal Properties of compact silica nanoparticles in function of their size by the photoacoustic technique | X International Conference on Surfaces, Materials and Vacuum | Póster | MÉXICO | 2017 |
| 10 | Genaro López Gamboa | Jose Luis Jimenez Perez | Neural Network Model for the Determination of the Thermal Conductivity of higher nanoparticles concentrations in Nanobiodiesel | X International Conference on Surfaces, Materials and Vacuum | Póster | MÉXICO | 2017 |
| 11 | César Raymundo González Vargas | Janna Douda | Surface Enhanced Raman Scattering of Quantum Dots on Liposome encapsulation | NANO 2017 | Póster | UKRAINE | 2017 |
| 12 | César Raymundo González Vargas | Janna Douda | Buscando una solución ecológicamente amigable para la producción de | 32a Convocatoria para Premio de Investigación | Presentación de artículo en extenso | MÉXICO | 2016 |





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| | | | liposomas para propósitos farmacéuticos | Medica Dr. Jorge Rozenkranz 2016 | | | |
| 13 | César Raymundo González Vargas | Janna Douda | Liposome-Metoprolol hybrids for hypertension treating | International Materials Research Congress IMRS XXV | Póster | MÉXICO | 2016 |
| 14 | Juan Antonio Jaramillo Gomez | Janna Douda | Physical Aspects of emission variation in CdSe/ZnS Quantum Dots conjugated to antibodies | 7th ICOOPMA 2016 | Ponencia | CANADA | 2016 |
| 15 | Genaro López Gamboa | Jose Luis Jimenez Perez | Characterization of aromatic oils thermal parameters using photothermal techniques | IX International Conference on Surfaces, Materials and Vacuum, Mazatlán, Mexico, 26-30 Septiembre | Póster | MÉXICO | 2016 |
| 16 | Genaro López Gamboa | Jose Luis Jimenez Perez | NonLineal optical response of graphene nanoparticles dispersed in water | XXV International Materials Research Congress | Póster | MÉXICO | 2016 |
| 17 | Isaac Izcoatl Mota Diaz | Janna Douda | Selective delivery of anticancer drug on liposomes | IMRC XXV | Póster | MÉXICO | 2016 |
| 18 | Juan Antonio Jaramillo Gomez | Janna Douda | Emission variation in infrared (cdtese)/zns quantum dots conjugated to papiloma virus antibodies | IMRC XXII | Ponencia | MÉXICO | 2013 |





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|---|--------------------------------|------------------------------|---|---|-------------------------------------|--------------------------|------|
| 1 | Carlos Alberto Ramirez Fuentes | Víctor Barrera Figueroa | A methodology for the automatic identification and classification of EEG waves based on clinical guidelines | Proceedings of the 9th International Multi-Conference on Complexity, Informatics and Cybernetics | Presentación de artículo en extenso | UNITED STATES OF AMERICA | 2018 |
| 2 | Hassel Aurora Alcala Garrido | Mario Eduardo Rivero Angeles | Study of the Effect of the Primary Network Service Time on a Wireless Sensor Network for Seism Reporting in an Overlay Cognitive Radio System | WITCOM 2017 | Presentación de artículo en extenso | MÉXICO | 2017 |
| 3 | Sergio Manuel Martinez Chavez | Mario Eduardo Rivero Angeles | Priority Data Transmission Schemes for a Wireless Sensor Network on BANETs | Research in Computing Science, Edition especial de las memorias del 17th International Congress on Computer Science CORE 2017 | Presentación de artículo en extenso | MÉXICO | 2017 |

