

# Subject index

## Issues 102-105, Jan-Dec 2022

Revista Facultad de Ingeniería Universidad de Antioquia

### A

#### Aerodynamics

Control surface design for radio-controlled aircraft. Case: SAE aero design micro-class prototype/ R. A. Márquez, M. A. Martínez and M. J. Martínez// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 71-82.

#### Antennas

Literature review of deploying small transmitters on a spectrum sharing scheme/ J. G. Torres, R. Bustamante and C. E. Caicedo// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 116-129.

#### Antimicrobial activity

Evaluation of Lactic Acid Bacteria (LAB) against *Shigella sonnei* ATCC 25931/ M. del P. Cortés and C. M. Amorochó// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 89-97.

#### Artificial intelligence

Electricity demand forecasting in industrial and residential facilities using ensemble machine learnings/ R. Porteiro, L. Hernández-Callejo and S. Nesmachnow// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 9-25.

### B

#### Biosynthesis

Chromatographic analysis of phytochemicals in the peel of *Musa Paradisiaca* to synthesize silver nanoparticles/ M. J. Buendía, D. J. Jiménez, Z. I. Caamaño De Ávila and J. B. Restrepo// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 130-136.

### C

#### CAD modeling

Design and simulation of mechanical press for testing of coining tools with nanostructured coatings/ J. Andrés Galán, D. F. Avendaño and D. E. Villalobos// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sept); pp. 53-70.

#### Catalyst

Simulation of methanol production from residual biomasses in a Cu/ZnO/Al<sub>2</sub>O<sub>3</sub> packed bed reactor/ C. E. Artistizábal, A. F. Vargas and P. N. Alvarado// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 115-124.

#### Climate change adaptation

Water supply failure probability under influence of climate change - Balsillas river basin case study/ D. Mena, E. M. Espinosa, P. C. Soler, M. C. Ramos, F. S. Duarte and J. R. Palacios// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 9-19.

#### Coal mining

Association between particulate matter and respiratory symptoms in students in the municipality of Guachetá, Colombia/ B. J. Saavedra, A. F. Sepúlveda, R. J. Sierra and L. C. Blanco-Becerra// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 168-177.

#### Composite materials

Fragmentation model for tensile behavior of intermingled hybrid composites and optimal mixing ratio/ J. D. Vanegas, L. J. Cruz and I. D. Patiño// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 96-115.

#### Computational fluid dynamics

Numerical modelling of the oscillatory flow effect around submarine pipelines/ M. Yegres and A. Blanco// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 77-87.

#### Construction engineering

A review of airflow rate estimation techniques for natural ventilation in buildings/ M. Chein Austin, D. Mora, D. Bruneau and A. Sempey// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 83-100.

### D

#### Disasters

Rainfall-intensity effect on landslide hazard assessment due to climate change in north-western Colombian Andes/ E. Aristizábal, E. F. García, R. J. Marín, F. Gómez and J. Guzmán// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 51-66.

### E

#### Energy efficiency in buildings

Relationship between construction parameters and thermal loads in a building without internal gains/ J. A. Díaz, S. Soutullo, E. Giancola and J. A. Ferrer// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 60-75.

#### Energy storage

Activated carbon from cassava peel: A promising electrode material for supercapacitors/ J. Ospino, J. P. Parra, S. Cervera, E. E. Coral and O. A. Vargas// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 88-95.

## Essential oil

Separation of carvone by batch distillation from the mixture obtained from limonene oxidation/ J. A. Becerra and A. L. Villa// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 118-128.

## F

### Finite element analysis

Analysis and optimization of the spin beam in the CCA-5000 Cuban sugarcane harvester/ R. A. Estrada, H. Calzadilla, J. Martínez, R. Valera and J. R. Pérez// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 96-107.

## G

### Gap energy

Analysis and comparison of metal-doped on Graphene-Genistein using QM/MM calculations/ M. Choupani, A. Alihosseini, M. Monajjemi and H. Sakhaeinia// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 164-174.

### Geothermal systems

Evaluation of different methodologies for the design of the wellfield in shallow geothermal systems/ C. Sáez-Blázquez, I. Martín-Nieto, A. Farfán-Martín and D. González-Aguilera// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 9-19.

## H

### H-Darrieus

Effect of the opening and location ratio on the performance of an H-Darrieus VAWT/ A. Burbano, D. Hincapié, J. Graciano and E. Torres// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 33-41.

### Heavy metal removal

Heavy metal removal by biopolymers-based formulations with native potato starch/nopal mucilage/ D. Choque, B. S. Ramos, C. A. Ligarda, G. I. Barboza, A. Kari, F. Taipe and Y. Choque// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 44-50.

### Hydrodynamic forces

Hidroituango intake gate closure - Emergency conditions/nopal mucilage/ B. Suárez, J. D. Vera, F. Botero, B. H. Suárez and W. Giraldo// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 140-151.

## I

### Lower limb amputation

Conceptual design of an alignment device for transfemoral

prosthesis/ A. I. Vásquez and J. Uribe// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 108-114.

## M

### Management operations

Buffer allocation problem in a shoe manufacturing line: A metamodeling approach/ A. J. Bravo-Valero, M. A. Vera, Y. Huerfano and Y. F. Manrique-Hidalgo// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 175-185.

### Markov

Hybrid algorithm for the detection of Pixel-based digital image forgery using Markov and SIFT descriptors/ J. A. Cortés, J. A. Chaves and C. D. López// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 111-121.

### Medical technology

A comprehensive study of a similarity criterion in cardiac computerized tomography images enhancement/ A. J. Bravo-Valero, M. A. Vera, Y. Huerfano and Y. F. Manrique-Hidalgo// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 51-61.

## M

### Microgrid

Electric power management in a microgrid analyzing photovoltaic arrays and a turbine-generator system/ R. A. López-Meráz, L. Hernández-Callejo, L. O. Jamed-Boza, J. A. Del Ángel-Ramos, J. J. Marín-Hernández, V. Alonso-Gómez// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 129-139.

### Molecular dynamics

Molecular dynamics simulations of the mechanical behavior of nanostructured and amorphous  $Al_{80}Ti_{15}Ni_5$  alloy/ A. M. Barboza, I. N. Bastos and L. C. Rodríguez// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 20-33.

### Multisensor

Human activity recognition using penalized support vector machines and Hidden Markov Models in multimodal systems/ L. E. Pamplona, C. A. Henao and A. F. Calvo// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 152-163.

## N

### Neuro-fuzzy models

On the issue of automatic form accuracy during processing on CNC machines/ V. Ovsyannikov, R. Yu. Nekrasov, U.S. Putilova, D. P. Il'yaschenko and E. V. Verkhoturova// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 88-95.

## Noise pollution

Assessment of noise and ozone levels in a small industrial urban area/ L. Furst, M. Feliciano, A. Gonçalves and F. Romero// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 76-88.

## O

### Oil industry

Analysis of diesel engine oils from 2.5L engine pick-up trucks by means of X-ray fluorescence/ C. A. Palacio, K. Medina and Y. Pineda// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 9-19.

### Optical instruments

Spatial coherence modulation using plane waves generated with a digital micromirror device/ N. Correa, M. I. Álvarez and J. Herrera-Ramírez// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 44-50.

### Optimal control tuning

Control scheme selection and optimal tuning in industrial process control using factorial experiment design/ D. R. Acosta J. F. Noguera, A. Verdeza, B. L. Foliaco, A. F. Rincón and M. E. Sanjuan// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 34-43.

### Optimal power flow

Distributed optimal control for distribution systems with microgrids/ M. Ospina-Quiroga and E. Mojica-Nava// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 98-110.

## P

### Petroleum industry

Study of mechanisms responsible for foaming-agent loss in porous media at high-temperature conditions/ Y. F. Rodríguez, A. P. Villaquirán and S. F. Muñoz// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 62-76.

### Photocatalysis

Esterification of levulinic acid via catalytic and photocatalytic processes using fluorinated titanium dioxide materials/ C. Castañeda, J. J. Martínez and A. Mesa// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 29-36.

## R

### Renewable energy sources

Method of monitoring and detection of failures in PV system based on machine learning/ D. J. Benavides, P. Arévalo, L. G. González, L. Hernández, F. Jurado and J. A. Aguado// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 26-43.

## Renewable sources

Renewable energy in sustainable supply chain: A review/ E. Marques, V. de Almeida Guimarães, M. de Azevedo and R. A. Mancebo// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 152-167.

## S

### Simulation techniques

A fast method to seek the mean and variance of the summation of lognormal variables/ J. G. Torres, R. Bustamante and C. E. Caicedo// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 37-46.

### Soil mechanics

Analysis of beam-column elements on non-homogeneous soil using the differential transformation method/ J. S. Carvajal, C. A. Vega and J. C. Saldarriaga// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 67-76.

### Solid oxide fuel cell electric vehicle

SOFCEV: Conventional LCC reduction and NPV based on savings in fixed carbon by sugarcane/ JD. Rodrigues, V. de Almeida, L. Hernández, B. de Noronha and R. A. Mancebo// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 47-59.

### Structural design

Three-Bar structure optimality criterion using the linear resizing rule/ J. A. Ramírez-Monares and J. I. Hernández-Hernández// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 101-107.

### Sustainable development

Sustainability performance assessment of the transport sector in European countries/ JS. B. Gruetzmacher, C. B. Vaz and A. P. Ferreira// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 42-52.

## T

### Telecommunications

Analytical performance evaluation of GFDM in underwater acoustic communication systems/ A. Hilario-Tacuri, L. Soncco, D. Donaires and J. Borjas// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 20-32.

### Trophic state

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru/ D. Choque-Quispe, B. S. Ramos-Pacheco, C. A. Ligarda-Samanez, A. M. Solano-Reynoso, O. Correa-Cuba, Y. Quispe-Quispe and Y. Choque-Quispe// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 20-28.

## W

### Waste treatment

Use of agro-industrial residues of plantain (*Musa paradisiaca*) in the adsorption of Ni (II)/ C. Tejada, A. Villabona, W. Cortina, B. Díaz and R. Ortega// *redin-Revista Facultad de Ingeniería*. No. 103. (Apr-Jun); pp. 138-151.

### Water supply

Optimization of water reservoir volume in an urban water supply system/ L. Plantak, B. Đurin, T. Džeba and S. Dadar// *redin-Revista Facultad de Ingeniería*. No. 104. (Jul-Sep); pp. 178-188.

### Water treatment

Water quality in the municipalities of Sincerín and Gambote, Bolívar, Colombia (2017-2018)/ L. Duarte, M. A. Mendoza, B. E. Jaramillo and A. González// *redin-Revista Facultad de Ingeniería*. No. 103. (Apr-Jun); pp. 77-87.

### Wind power

Small wind turbines study and integration in a peri-urban microgrid/ P. Peña, O. Izquierdo, M. Jiménez and L. Hernández// *redin-Revista Facultad de Ingeniería*. No. 104. (Jul-Sep); pp. 108-117.

# Authors Index

## Issues 102-105, Jan-Dec 2022

Revista Facultad de Ingeniería Universidad de Antioquia

### A

#### Acosta Villamil, David Roberto

Control scheme selection and optimal tuning in industrial process control using factorial experiment design// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 34-43.

#### Aguado José A.

Method of monitoring and detection of failures in PV system based on machine learning// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 26-43.

#### Alihosseini, Afshar

Analysis and comparison of metal-doped on graphene-genistein using QM/MM calculations// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 164-174.

#### Alonso Gómez, Victor

Electric power management in a microgrid analyzing photovoltaic arrays and a turbine-generator system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 129-139

#### Alvarado Torres, Pedro Nel

Simulation of methanol production from residual biomasses in a Cu/ZnO/Al<sub>2</sub>O<sub>3</sub> packed bed reactor// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 115-124.

#### Álvarez, María Isabel

Spatial coherence modulation using plane waves generated with a digital micromirror device// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 44-50

#### Amorocho Cruz, Claudia Milena

Evaluation of Lactic Acid Bacteria (LAB) against *Shigella sonnei* ATCC 25931// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 89-97.

#### Arévalo-Cordero, Paul

Method of monitoring and detection of failures in PV system based on machine learning// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 26-43.

#### Aristizábal Alzate, Carlos Esteban

Simulation of methanol production from residual biomasses

in a Cu/ZnO/Al<sub>2</sub>O<sub>3</sub> packed bed reactor// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 115-124.

#### Aristizábal, Edier

Rainfall-intensity effect on landslide hazard assessment due to climate change in north-western Colombian Andes// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 51-66.

#### Avendaño Rodríguez, Diego Fernando

Design and simulation of mechanical press for testing of coining tools with nanostructured coatings// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 53-70.

#### De Azevedo Ferreira, Maxwell

Renewable energy in sustainable supply chain: A review// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 152-167.

### B

#### Barboza Palomino, Gloria I.

Heavy metal removal by biopolymers-based formulations with native potato starch/nopal mucilage// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 44-50.

#### Becerra, Jaime Andrés

Separation of carvone by batch distillation from the mixture obtained from limonene oxidation// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 118-128.

#### Benavides, Darío Javier

Method of monitoring and detection of failures in PV system based on machine learning// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 26-43.

#### Blanco, Armando

Numerical modelling of the oscillatory flow effect around submarine pipelines// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 77-87.

#### Blanco Becerra, Luis C.

Association between particulate matter and respiratory symptoms in students in the municipality of Guachetá, Colombia// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 168-177.

#### Borja, Juan

Analytical performance evaluation of GFDM in underwater acoustic communication systems// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 20-32.

## Botero, Francisco

Hidroituango intake gate closure - Emergency conditions// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 140-151.

## Bravo Valero, Antonio José

A comprehensive study of a similarity criterion in cardiac computerized tomography images enhancement// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 51-61.

## Bruneau, Denis

A review of airflow rate estimation techniques for natural ventilation in buildings// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 83-100.

## Buendía Otero, María José

Chromatographic analysis of phytochemicals in the peel of *Musa paradisiaca* to synthesize silver nanoparticles// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 130-136.

## Burbano Hernández, Andrés

Effect of the opening and location ratio on the performance of an H-Darrieus VAWT// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 33-41.

## Bustamante, Roberto

Literature review of deploying small transmitters on a spectrum sharing scheme// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 116-129.

A fast method to seek the mean and variance of the summation of lognormal variables// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 37-46.

## C

## Caamaño de Ávila, Zulia Isabel

Chromatographic analysis of phytochemicals in the peel of *Musa paradisiaca* to synthesize silver nanoparticles// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 130-136.

## Caicedo, Carlos E.

Literature review of deploying small transmitters on a spectrum sharing scheme// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 116-129.

A fast method to seek the mean and variance of the summation of lognormal variables// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 37-46.

## Calvo Salcedo, Andrés Felipe

Human activity recognition using penalized support vector

machines and hidden Markov models// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 152-163.

## Calzadilla Dubras, Héctor

Analysis and optimization of the spin beam in the CCA-5000 Cuban sugarcane harvester// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 96-107.

## Cancino de la Fuente, Claudia Iveth

Buffer allocation problem in a shoe manufacturing line: A metamodeling approach// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 175-185.

## Cañón Ramos, Miguel

Water supply failure probability under influence of climate change - Balsillas river basin case study// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 9-19.

## Carvajal Muñoz, Juan S.

Analysis of beam-column elements on non-homogeneous soil using the differential transformation method// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 67-76.

## Castañeda, Claudia

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 29-36.

## Cervera, Sigifredo

Activated carbon from cassava peel: A promising electrode material for supercapacitors// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 88-95.

## Chaves Osorio, José Andrés

Hybrid algorithm for the detection of Pixel-based digital image forgery using Markov and SIFT descriptors// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 111-121.

## Chen-Austin, Miguel

A review of airflow rate estimation techniques for natural ventilation in buildings// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 83-100.

## Choupani, Marziyeh

Analysis and comparison of metal-doped on graphene-genistein using QM/MM calculations// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 164-174.

## Choque Quispe, David

Heavy metal removal by biopolymers-based formulations with native potato starch/nopal mucilage// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 44-50.

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 20-28.

## Choque Quispe, Yudith

Heavy metal removal by biopolymers-based formulations with native potato starch/nopal mucilage// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 44-50.

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 20-28.

## Coral Escobar, Euler E.

Activated carbon from cassava peel: A promising electrode material for supercapacitors// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 88-95.

## Correa, Nelson

Spatial coherence modulation using plane waves generated with a digital micromirror device// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 44-50.

## Correa Cuba, Odilon

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 20-28.

## Cortés Gaona, María del Pilar

Evaluation of Lactic Acid Bacteria (LAB) against *Shigella sonnei* ATCC 25931// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 89-97.

## Cortés Osorio, Jimmy Alexander

Hybrid algorithm for the detection of Pixel-based digital image forgery using Markov and SIFT descriptors// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 111-121.

## Cortina Góngora, Walter

Use of agro-industrial residues of plantain (*Musa paradisiaca*) in the adsorption of Ni (II)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 138-151.

## Cruz Riaño, Luis Javier

Fragmentation model for tensile behavior of intermingled hybrid composites and optimal mixing ratio// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 96-115.

## D

### Dadar, Sara

Optimization of water reservoir volume in an urban water supply system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 178-188.

## De Almeida Guimarães, Vanessa

Renewable energy in sustainable supply chain: A review// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 152-167.

SOFCEV: Conventional LCC reduction and NPV based on savings in fixed carbon by sugarcane// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 47-59.

## De Noronha Gonçalves, Bárbara

SOFCEV: Conventional LCC reduction and NPV based on savings in fixed carbon by sugarcane// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 47-59.

## Del Ángel Ramos, Jorge Arturo

Electric power management in a microgrid analyzing photovoltaic arrays and a turbine-generator system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 129-139.

## Díaz, José Alberto

Relationship between construction parameters and thermal loads in a building without internal gains// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 60-75.

## Díaz Navarro, Betty

Use of agro-industrial residues of plantain (*Musa paradisiaca*) in the adsorption of Ni (II)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 138-151.

## Donaires, Diego

Analytical performance evaluation of GFDM in underwater acoustic communication systems// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 20-32.

## Duarte, Freddy Santiago

Water supply failure probability under influence of climate change - Balsillas river basin case study// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 9-19.

## Duarte Jaramillo, Laura

Water quality in the municipalities of Sincerín and Gambote, Bolívar, Colombia (2017-2018)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 77-87.

## Durin, Bojan

Optimization of water reservoir volume in an urban water supply system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 178-188.

## Džeba, Tatjana

Optimization of water reservoir volume in an urban water

supply system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 178-188.

## E

### Espinosa, Eydy Michell

Water supply failure probability under influence of climate change - Balsillas river basin case study// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 9-19.

### Estrada Cingualbres, Roberto Andrés

Analysis and optimization of the spin beam in the CCA-5000 Cuban sugarcane harvester// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 96-107.

## F

### Farfán Martín, Arturo

Evaluation of different methodologies for the design of the wellfield in shallow geothermal systems// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 9-19.

### Feliciano, Manuel

Assessment of noise and ozone levels in a small industrial urban area// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 76-88.

### Ferreira, Ángela P.

Sustainability performance assessment of the transport sector in European countries// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 42-52.

### Ferrer, José Antonio

Relationship between construction parameters and thermal loads in a building without internal gains// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 60-75.

### Figueroa Fernández, Vicente

Buffer allocation problem in a shoe manufacturing line: A metamodeling approach// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 175-185.

### Foliaco Romero, Blanca Luz

Control scheme selection and optimal tuning in industrial process control using factorial experiment design// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 34-43.

### Furst, Leonardo

Assessment of noise and ozone levels in a small industrial urban area// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 76-88.

## G

### Galán Ávila, Johan Andrés

Design and simulation of mechanical press for testing of coining tools with nanostructured coatings// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 53-70.

### García, Edwin F.

Rainfall-intensity effect on landslide hazard assessment due to climate change in north-western Colombian Andes// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 51-66.

### Giancola, Emanuela

Relationship between construction parameters and thermal loads in a building without internal gains// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 60-75.

### Giraldo, William

Hidroituango intake gate closure - Emergency conditions// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 140-151.

### Gómez, Federico

Rainfall-intensity effect on landslide hazard assessment due to climate change in north-western Colombian Andes// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 51-66.

### Gonçalves, Artur

Assessment of noise and ozone levels in a small industrial urban area// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 76-88.

### González, Luis G.

Method of monitoring and detection of failures in PV system based on machine learning// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 26-43.

### González Aguilera, Diego

Evaluation of different methodologies for the design of the wellfield in shallow geothermal systems// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 9-19.

### González Álvarez, Álvaro

Water quality in the municipalities of Sincerín and Gambote, Bolívar, Colombia (2017-2018)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 77-87.

### Graciano Uribe, Jonathan

Effect of the opening and location ratio on the performance of an H-Darrieus VAWT// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 33-41.



## Grave de Peralta, José Martínez

Analysis and optimization of the spin beam in the CCA-5000 Cuban sugarcane harvester// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 96-107.

## Gruetzmacher, Sarah B.

Sustainability performance assessment of the transport sector in European countries// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 42-52.

## Guzmán Martínez, Juan

Rainfall-intensity effect on landslide hazard assessment due to climate change in north-western Colombian Andes// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 51-66.

## H

### Henao Baeona, Carlos Alberto

Human activity recognition using penalized support vector machines and hidden Markov models// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 152-163.

### Hernández Callejo, Luis

Electricity demand forecasting in industrial and residential facilities using ensemble machine learnings// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 9-25.

Method of monitoring and detection of failures in PV system based on machine learning// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 26-43.

Small wind turbines study and integration in a peri-urban microgrid// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 108-117.

Electric power management in a microgrid analyzing photovoltaic arrays and a turbine-generator system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 129-139.

SOFCEV: Conventional LCC reduction and NPV based on savings in fixed carbon by sugarcane// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 47-59.

## H

### Hernández González, Salvador

Buffer allocation problem in a shoe manufacturing line: A metamodeling approach// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 175-185.

### Hernández Hernández, Jesús Israel

Three-Bar structure optimality criterion using the linear resizing rule// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 101-107.

## Hernández Vázquez, José Israel

Buffer allocation problem in a shoe manufacturing line: A metamodeling approach// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 175-185.

## Hernández Vázquez, José Omar

Buffer allocation problem in a shoe manufacturing line: A metamodeling approach// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 175-185.

## Herrera Ramírez, Jorge

Spatial coherence modulation using plane waves generated with a digital micromirror device// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 44-50.

## Hilario Tacuri, Alexander

Analysis of diesel engine oils from 2.5L engine pick-up trucks by means of X-ray fluorescence// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 20-32.

## Hincapié, Diego

Effect of the opening and location ratio on the performance of an H-Darrieus VAWT// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 33-41.

## Huérfano, Yoleidy

A comprehensive study of a similarity criterion in cardiac computerized tomography images enhancement// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 51-61.

## I

### Il'yaschenko, Dmitry

On the issue of automatic form accuracy during processing on CNC machines// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 88-95.

## Izquierdo Monge, Óscar

Small wind turbines study and integration in a peri-urban microgrid// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 108-117.

## J

### Jamed Boza, Luis Omar

Electric power management in a microgrid analyzing photovoltaic arrays and a turbine-generator system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 129-139.

## Jaramillo Colorado, Beatriz Eugenia

Water quality in the municipalities of Sincerín and

Gambote, Bolívar, Colombia (2017-2018)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 77-87.

## Jiménez Corzo, Deisy Julieth

Chromatographic analysis of phytochemicals in the peel of *Musa paradisiaca* to synthesize silver nanoparticles// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 130-136.

## Jurado, Francisco

Method of monitoring and detection of failures in PV system based on machine learning// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 26-43.

## K

## Kari Ferro, Aydeé

Heavy metal removal by biopolymers-based formulations with native potato starch/nopal mucilage// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 44-50.

## L

## Ligarda Samanez, Carlos A.

Heavy metal removal by biopolymers-based formulations with native potato starch/nopal mucilage// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 44-50.

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 20-28.

## López Meraz, Raúl Alberto

Electric power management in a microgrid analyzing photovoltaic arrays and a turbine-generator system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 129-139

## López Robayo, Cristian David

Hybrid algorithm for the detection of Pixel-based digital image forgery using Markov and SIFT descriptors// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 111-121.

## M

## Mancebo Boloy, Ronney Arismel

Renewable energy in sustainable supply chain: A review// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 152-167.

SOFCEV: Conventional LCC reduction and NPV based on savings in fixed carbon by sugarcane// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 47-59.

## Manrique Hidalgo, Yeison Fabián

A comprehensive study of a similarity criterion in cardiac computerized tomography images enhancement// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 51-61.

## Marín, Roberto J.

Rainfall-intensity effect on landslide hazard assessment due to climate change in north-western Colombian Andes// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 51-66.

## Marín Hernández, Juan José

Electric power management in a microgrid analyzing photovoltaic arrays and a turbine-generator system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 129-139.

## Marques, Eduardo

Renewable energy in sustainable supply chain: A review// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 152-167.

## Márquez, Rafael A.

Control surface design for radio-controlled aircraft. Case: SAE aero design micro-class prototype// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 71-82.

## Martín Jiménez, Gonzalo

Small wind turbines study and integration in a peri-urban microgrid// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 108-117.

## Martín Nieto, Ignacio

Evaluation of different methodologies for the design of the wellfield in shallow geothermal systems// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 9-19.

## Martínez, José J.

Esterification of levulinic acid via catalytic and photocatalytic processes using fluorinated titanium dioxide materials// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 29-36.

## Martínez, Manuel J.

Control surface design for radio-controlled aircraft. Case: SAE aero design micro-class prototype// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 71-82.

## Martínez, Miguel A.

Control surface design for radio-controlled aircraft. Case: SAE aero design micro-class prototype// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 71-82.

## Medina Rojas, Kelly

Analysis of diesel engine oils from 2.5L engine pick-up

trucks by means of X-ray fluorescence// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 9-19.

## Melhorance Barboza, Alexandre

Molecular dynamics simulations of the mechanical behavior of nanostructured and amorphous  $Al_{80}Ti_{15}Ni_5$  alloy// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 20-33.

## Mena Rentería, Darwin

Water supply failure probability under influence of climate change - Balsillas river basin case study// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 9-19.

## Mendoza Atencio, María Angélica

Water quality in the municipalities of Sincerín and Gambote, Bolívar, Colombia (2017-2018)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 77-87.

## Mesa, Andrés

Esterification of levulinic acid via catalytic and photocatalytic processes using fluorinated titanium dioxide materials// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 29-36.

## Mojica Nava, Eduardo

Distributed optimal control for distribution systems with microgrids// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 98-110.

## Monajjemi, Majid

Analysis and comparison of metal-doped on graphene-genistein using QM/MM calculations// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 164-174.

## Mora, Dafni

A review of airflow rate estimation techniques for natural ventilation in buildings// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 83-100.

## Muñoz Navarro, Samuel Fernando

Study of mechanisms responsible for foaming-agent loss in porous media at high-temperature conditions// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 62-76.

## N

## Napoleão Bastos, Ivan

Molecular dynamics simulations of the mechanical behavior of nanostructured and amorphous  $Al_{80}Ti_{15}Ni_5$  alloy// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 20-33.

## Nekrasov, Roman

On the issue of automatic form accuracy during

processing on CNC machines// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 88-95.

## Nesmachnow, Sergio

Electricity demand forecasting in industrial and residential facilities using ensemble machine learnings// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 9-25.

## Noguera Polania, José Fernando

Control scheme selection and optimal tuning in industrial process control using factorial experiment design// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 34-43.

## O

## Ortega Toro, Rodrigo

Use of agro-industrial residues of plantain (*Musa paradisiaca*) in the adsorption of Ni (II)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 138-151.

## Ospina Quiroga, Melissa

Distributed optimal control for distribution systems with microgrids// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 98-110.

## Ospino, Julie

Activated carbon from cassava peel: A promising electrode material for supercapacitors// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 88-95.

## Ovsyannikov, Victor

On the issue of automatic form accuracy during processing on CNC machines// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 88-95.

## P

## Palacio, Carlos A.

Analysis of diesel engine oils from 2.5L engine pick-up trucks by means of X-ray fluorescence// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 9-19.

## Palacios González, Jordi Rafael

Water supply failure probability under influence of climate change - Balsillas river basin case study// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 9-19.

## Pamplona Berón, leidy Esperanza

Human activity recognition using penalized support vector machines and hidden Markov models// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 152-163.

## Parra Barraza, Juliana Paola

Activated carbon from cassava peel: A promising electrode material for supercapacitors// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 88-95.

## Patiño Arcila, Iván David

Fragmentation model for tensile behavior of intermingled hybrid composites and optimal mixing ratio// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 96-115.

## Peña Carro, Paula

Small wind turbines study and integration in a peri-urban microgrid// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 108-117.

## Pérez Pupo, Juan Rafael

Analysis and optimization of the spin beam in the CCA-5000 Cuban sugarcane harvester// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 96-107.

## Pineda Triana, Yaneth

Analysis of diesel engine oils from 2.5L engine pick-up trucks by means of X-ray fluorescence// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 9-19.

## Plantak, Lucija

Optimization of water reservoir volume in an urban water supply system// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 178-188.

## Porteiro, Rodrigo

Electricity demand forecasting in industrial and residential facilities using ensemble machine learnings// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 9-25.

## Putilova, Ulyana

On the issue of automatic form accuracy during processing on CNC machines// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 88-95.

## Q

## Quispe Quispe, Yadyra

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 20-28.

## R

## Ramírez Monares, José Alfredo

Three-Bar structure optimality criterion using the linear resizing rule// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 101-107.

## Ramos Pacheco, Betsy S.

Heavy metal removal by biopolymers-based formulations with native potato starch/nopal mucilage// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 44-50.

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 20-28.

## Restrepo, Juan B.

Chromatographic analysis of phytochemicals in the peel of *Musa paradisiaca* to synthesize silver nanoparticles// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 130-136.

## Rincón Montenegro, Adriana Fernanda

Control scheme selection and optimal tuning in industrial process control using factorial experiment design// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 34-43.

## Rodrigues de Moraes, Danielle

SOFCEV: Conventional LCC reduction and NPV based on savings in fixed carbon by sugarcane// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 47-59.

## Rodríguez Aliaga, Luis César

Molecular dynamics simulations of the mechanical behavior of nanostructured and amorphous  $Al_{80}Ti_{15}Ni_5$  alloy// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 20-33.

## Rodríguez Pantoja, Yulian Fernando

Study of mechanisms responsible for foaming-agent loss in porous media at high-temperature conditions// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 62-76.

## Romero, Felipe

Assessment of noise and ozone levels in a small industrial urban area// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 76-88.

## S

## Saavedra, Bárbara J.

Association between particulate matter and respiratory symptoms in students in the municipality of Guachetá, Colombia// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 168-177.

## Sáez Blázquez, Cristina

Evaluation of different methodologies for the design of the wellfield in shallow geothermal systems// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 9-19.

## Sakhaeinia, Hossein

Analysis and comparison of metal-doped on graphene-geneistein using QM/MM calculations// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 164-174.

## Saldarriaga Molina, Julio C.

Analysis of beam-column elements on non-homogeneous soil using the differential transformation method// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 67-76.

## Sanjuan Mejía, Marco Enrique

Control scheme selection and optimal tuning in industrial process control using factorial experiment design// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 34-43.

## Sempey, Alain

A review of airflow rate estimation techniques for natural ventilation in buildings// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 83-100.

## Sepúlveda, Andrés F.

Association between particulate matter and respiratory symptoms in students in the municipality of Guachetá, Colombia// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 168-177.

## Sierra, Ronal J.

Association between particulate matter and respiratory symptoms in students in the municipality of Guachetá, Colombia// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 168-177.

## Solano Reynoso, Aydeé M.

Water pollution index of high Andean micro-basin of the Chumbao River, Andahuaylas, Peru// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 20-28.

## Soler, Paula Carolina

Water supply failure probability under influence of climate change - Balsillas river basin case study// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 9-19.

## Soncco, Leonel

Analytical performance evaluation of GFDM in underwater acoustic communication systems// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 20-32.

## Soutullo, Silvia

Relationship between construction parameters and thermal loads in a building without internal gains// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 60-75.

## Suárez, Byron H.

Hidroituango intake gate closure - Emergency conditions// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 140-151.

## Suárez, Bladimir

Hidroituango intake gate closure - Emergency conditions// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 140-151.

## T

### Taípe, Pardo Fredy

Heavy metal removal by biopolymers-based formulations with native potato starch/nopal mucilage// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 44-50.

### Tejada Tovar, Candelaria

Use of agro-industrial residues of plantain (*Musa paradisiaca*) in the adsorption of Ni (II)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 138-151.

### Torres, Juan Guillermo

Literature review of deploying small transmitters on a spectrum sharing scheme// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 116-129.

A fast method to seek the mean and variance of the summation of lognormal variables// redin-Revista Facultad de Ingeniería. No. 105. (Oct-Dec); pp. 37-46.

### Torres López, Edwar

Effect of the opening and location ratio on the performance of an H-Darrieus VAWT// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 33-41.

## U

### Uribe Pérez, Juliana

Conceptual design of an alignment device for transfemoral prosthesis// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 108-114.

## V

### Valera Llanes, Rafael

Analysis and optimization of the spin beam in the CCA-5000 Cuban sugarcane harvester// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 96-107.

### Vanegas Jaramillo, Juan David

Fragmentation model for tensile behavior of intermingled hybrid composites and optimal mixing ratio// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 96-115.

## Vargas Ceballos, Óscar Andrés

Activated carbon from cassava peel: A promising electrode material for supercapacitors// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 88-95.

## Vargas Ramírez, Andrés Felipe

Simulation of methanol production from residual biomasses in a Cu/ZnO/Al<sub>2</sub>O<sub>3</sub> packed bed reactor// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 115-124.

## Vásquez, Ana Isabel

Conceptual design of an alignment device for transfemoral prosthesis// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 108-114.

## Vaz, Clara B.

Sustainability performance assessment of the transport sector in European countries// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 42-52.

## Vega Posada, Carlos A.

Analysis of beam-column elements on non-homogeneous soil using the differential transformation method// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 67-76.

## Vera, José David

Hidroituango intake gate closure - Emergency conditions// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 140-151.

## Vera, Miguel Ángel

A comprehensive study of a similarity criterion in cardiac computerized tomography images enhancement// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 51-61.

## Verdeza Villalobos, Arnaldo

Control scheme selection and optimal tuning in industrial process control using factorial experiment design// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 34-43.

## Verkhoturova, Elena

On the issue of automatic form accuracy during processing on CNC machines// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 88-95.

## Villa, Aída Luz

Separation of carvone by batch distillation from the mixture obtained from limonene oxidation// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 118-128.

## Villalobos Correa, Daniel Eduardo

Design and simulation of mechanical press for testing of coining tools with nanostructured coatings// redin-Revista Facultad de Ingeniería. No. 104. (Jul-Sep); pp. 53-70.

## Villabona Ortiz, Ángel

Use of agro-industrial residues of plantain (*Musa paradisiaca*) in the adsorption of Ni (II)// redin-Revista Facultad de Ingeniería. No. 103. (Apr-Jun); pp. 138-151.

## Villaquirán Vargas, Ana Paula

Study of mechanisms responsible for foaming-agent loss in porous media at high-temperature conditions// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 62-76.

## Y

## Yegres, Marian

Numerical modelling of the oscillatory flow effect around submarine pipelines// redin-Revista Facultad de Ingeniería. No. 102. (Jan-Mar); pp. 77-87.

# Guide for authors

1. Our journal accepts unpublished and state-of-the-art papers. All papers must be submitted with a cover letter stating it is an unpublished article which is not undergoing current publishing processes elsewhere. It should also specify that all authors agree with contents therein and they give the publishing rights to Revista Facultad de Ingeniería (REDIN) from Universidad de Antioquia.

In the cover letter, the authors must provide the following information: Signature, Name, Academic degree, Institutional affiliation, E-mail, Areas of Interest, ORCID, Identification number, Nationality

2. Research papers should not exceed 20 Letter-sized pages written with 12-pt. Times New Roman font in single space, and with symmetric margins of 2,5 cm. All lines of the paper must be numbered to facilitate the reviewing process. All papers shall contain: title in English (Maximum 15 words) and Spanish, abstract (maximum 230 words) in English and Spanish, keywords (maximum 5 words) in English and Spanish, introduction, experimentation, results and discussion, conclusions, acknowledgements (optional), and references. Tables and figures must be inserted and placed along the text.

State-of-the-art papers should preferably not exceed 30 Letter-sized pages written with 12-pt. Times New Roman font in single space, and with symmetric margins of 2,5 cm. All papers shall contain: title in English and Spanish, abstract in English and Spanish, keywords in English and Spanish, introduction, subject development, conclusions, acknowledgements (optional), and references. Tables and figures taken from other sources must be referenced in footnote. The main author of a state-of-the-art paper must relate five publications of his own on the same subject in the cover letter and copyright transfer agreement. Tables and figures must be inserted and placed along the text. State-of-the-art papers may have a maximum of five self-citations in the last five years and must report at least 50 references.

In order to standardize the keywords and improve the visibility of the articles published in the Journal, it is suggested the use of the Thesaurus tool to select appropriately these words (maximum 5 words). Similarly, as far as possible, title tags should not be repeated in keywords.

Authors using Word format may download this template

Authors using a LATEX format may download these templates and follow the guidelines.

To compile in XeLatex, no other compilers should be used.

The .bib file sent by redin- shall be used.

The IEEETran bibliography style shall be used, and citations must be numbered sequentially.

Upon request, please send the .tex files during the style

process.

Use Eref to cite the equations in label, the floating files as Fig1, Fig2.

In case of generating figures using TKIZ package, please attach figures individually in PDF format.

At the end of each paragraph, use a line break.

3. The Editorial Board reserves the right to make adjustments to the paper in order to preserve the style of the journal.

4. Authors should provide the next information: citation name (in the paper), ORCID, mailing address, e-mail, work institution, and phone number including country code. This contact author must have the consent from all authors for publishing the paper.

5. The contact author is responsible for communicating with the journal and must include those who contributed as authors, to ensure that all authors agree with the contents of the paper and that all changes made (e.g. order of appearance for the authors, addition or deletion of authors) have been approved by each author. The contact author is also responsible for informing the co-authors on the state of the paper before and after publishing. The concept of author in the scientific publications is applied to those who write the original and, at the same time, contribute significantly to the research development. To be listed as author implies to accept public responsibility for the contents of the paper.

6. Papers should be submitted only through the Journal's website, following the instructions on the software.

7. Special instructions for typing:

a. Text should be typed without format, in Times New Roman, 12 pt.

b. Paragraphs must be justified, without line spacing between them and without splitting words.

c. A single space should be used between words, as well as after a comma, colon, semi-colon, parenthesis, and period.

d. To add a line break at the end of the paragraph.

e. Please write dashes next to the attached word, and prefer hyphens without a space when connecting two words or numbers (e.g. physical-chemical, 1999-2000.)

For equations, use the MathType equation editor, which can be downloaded for free from the WEB. This application has the same use as any equation editor. Select Cambria Math font, size 14, using the options Style/define/Cambria Math/Apply and Size/define/full 14/Apply. Copy and paste the equation to Word

f. Figures, Tables and Equations (use the complete words) should be cited in the paper, in strict order and should have a footnote with a descriptive title. Photographs, charts, and maps are to be referred to as

figures.

g. Figure captions should be typed as a normal paragraph outside and below the image. Figures should be submitted as single additional files in their original format, different from the submitted manuscript file, uploaded one by one to the OJS system as supporting files as the same way as the letter. To ensure visual quality, set images resolution at 350 dpi; they should be at least 8.5 cm wide and not exceed 17cm. They must contain the file name numbering to identify its location in the document in PDF, PNG or JPG formats.

h. The text for the figures should be Times New Roman, 11 pt.

i. Uppercase must not be used in the figure captions.

j. Pictures should not be included; only tables, which should be automatically created using the word processor without fillets. Tables should not duplicate results presented elsewhere in the paper, for example in figures.

k. Decimals should be written with a dot (.), thousands and millions should be written with a comma (,).

l. SI units, dimensions, and symbols must be used.

m. Figures may be colored, but the author must be aware that printing will be made in gray scale.

n. Quoted bibliographical references are to be inserted within the text, using a number in brackets at the level of the text, and separated with a space from the previous word. At the end, references are numbered in that exact ascending order. [1-4], [3,5,8]. You should avoid naming the authors in the citations, it could be written at the end of the idea.

o. All equations should be numbered in sequential order.

## 8. References according to document type

### Books

Author's first initial + last name, Book title. Edition number. City, country: Publisher, year, page.

B. Klaus and P. Horn, Robot Vision. 2nd ed. Cambridge, USA: MIT Press, 1986, pp. 123-135.

### Book chapters

Author's first initial + last name, "Chapter title", in Book title, edition number, editor's or main author's first initial + last name, city, country: Publisher, year, page.

G. Young, "Synthetic structure of industrial plastics", in Plastics, 2nd ed., J. Peters, New York, USA: McGraw-Hill, 1964, pp. 15-64.

### Scientific Journal

Papers Author's first initial + last name, "Paper title", Journal name, volume, number, page, year.

S. Azodolmolky et al., "Experimental demonstration of an impairment aware network planning and operation tool for transparent/translucent optical networks", J. Lightw. Technol., vol. 29, no. 4, pp. 439-448, 2011.  
Conferences

Author's first initial + last name, "Conference title", in Conference name, city, country, year, page.

S. Bingulac, "On the compatibility of adaptive controllers", in Proc. 4th Annu. Allerton Conf. Circuit and Systems Theory, New York, USA, 1994, pp. 8-16.  
Thesis (M.S. and Ph.D.)

Author's first initial + last name, "Thesis title", Ph.D. dissertation or M.S. thesis, university, city, country, year.

J. Williams, "Narrow-band analyzer", Ph.D. dissertation, Dept. Elect. Eng., Harvard Univ., Cambridge, USA, 1993.  
N. Kawasaki, "Parametric study of thermal and chemical nonequilibrium nozzle flow", M.S. thesis, Dept. Electron. Eng., Osaka Univ., Osaka, Japan, 1993.  
Reports

Author's first initial + last name, "Report title", Organization or University, city, country, Tech. Rep., month, year.

E. Reber, R. Michell and C. Carter, "Oxygen absorption in the earth's atmosphere", Aerospace Corp., Los Angeles, USA, Tech. Rep. TR-0200 (4230-46)-3, Nov. 1988.  
Patents

Author's first initial + last name, "Patent title", U.S. Patent x xxx xxx, month, day, year.

K. Sandhage, R. Unocic, M. Dickerson, M. Timberlake and K. Guerra, "Method for Fabricating High-Melting, Wear-Resistant Ceramics and Ceramic Composites at Low Temperatures", U.S. Patent 6 598 656, July 29, 2003.  
Standards

Organization that assumes the authorship, Standard title, Standard number, year.

Institute of Electrical and Electronics Engineers (IEEE), IEEE Criteria for Class IE Electric Systems, IEEE Standard 308, 1969.

### Online references

Author's first initial + last name (or organization that assumes the authorship), Reference title, year. [Online]. Available: URL, Accessed on: month, day, year.

Antcom, Antenna Products, 2011. [Online]. Available: <http://www.antcom.com/documents/catalogs/L1L2GPSAntennas.pdf>, Accessed on: Feb. 12, 2014.

### 9. Avoid footnotes.



10. When using acronyms or abbreviations, spell out the complete name first, and then write the acronym or abbreviation in parenthesis. Use only the acronym or abbreviation thereafter.

11. All papers submitted to this journal must be unpublished and should not be undergoing current publishing processes elsewhere. If the paper is accepted, it should not be published in another journal or book even if it is in another language. Being this a peer-reviewed journal, the Editorial Board approves the publication of papers based on the concept of specialized

peer reviewers.

Revista Facultad de Ingeniería -redin-  
Universidad de Antioquia  
Ciudad Universitaria  
Calle 67 N.º 53-108. Bloque 21, oficina 105.  
Medellín, Colombia.  
Sudamérica.  
Teléfono: (574) 219 2020  
e-mail: [revistaingenieria@udea.edu.co](mailto:revistaingenieria@udea.edu.co)





