

Erich Arturo Saettone Olschewski
Member
Lima University
IDIC - Scientific Research Institute
Circular Economy Research Group
Technological solutions for Environment Research Group
Industrial Engineering School
Type of address: Postal address.
Av. Javier Prado Este 4600
15023
Santiago de Surco
Peru
Email: ESAETTON@ULIMA.EDU.PE



Qualifications

PhD, PhD in Physics, Universidade de São Paulo

Research outputs

Critical Evaluation of Emerging Technologies for Microplastic Removal: A Comprehensive Review from Technological, Environmental Perspectives and Economic Performance

Sanoja López, K. A., Oscar Navia-Pesantes, O., Aguilar Ascon, E. A., Juño, R., Saettone Olschewski, E. A., Pérez Almeida, I. B., Quino-Favero, J., Villagarcía Garate, H. E., Piedra Bonilla, E. B. & Ponce Álvarez, S. P., Apr 2026, (Submitted) In: SN Applied Sciences. 52 p.

Learning Data-Driven Control Policies for pH Regulation in a Closed-Loop Hydroponic System Using Random Forest

Paredes H, F., Saettone Olschewski, E. A. & Castillo-Sequera, J., Mar 2026, (Submitted) In: Artificial Intelligence in Agriculture. 15 p.

Increasing the productivity of the value chain using precision agriculture

León Chávez, A. A. & Saettone Olschewski, E. A., Nov 2025, p. 708-717. 9 p.

Algoritmos Difusos para el control del tratamiento del agua en zona rurales de Perú con escasos recursos hídricos

Paredes H, F., Saettone Olschewski, E. A. & Castillo-Sequera, J., 2025, *20th Iberian Conference on Information Systems and Technologies (CISTI): Iberian Proceedings of CISTI 2025*. Information and Technology Management Association (ITMA), p. 365-368 475 p.

Comparative Analysis of pH -Control Algorithms for Water.

Paredes H, F., Saettone Olschewski, E. A., Villanueva, U. R. & Sequera, J. L. C., 2025, (Submitted) In: International Journal of Fuzzy Systems.

Experimental Study of the Effects of Air Bubbling in a Cascade and Pyramidal Solar Distillers

Saettone Olschewski, E. A., Paredes H, F. & Bustamante, A., 2025, (Submitted) In: Applied Water Science.

The Effect of Temperature on the Rate of Oxygen Evolution Reaction during Ferrate(VI) Synthesis by Anodic Dissolution of Iron in highly alkaline media

Quino-Favero, J., Gutarra Espinoza, A. A., Saettone Olschewski, E. A., Yacono Llanos, J. C. & Paredes H, F., 29 Jul 2024, In: Heliyon. 10, e35414.

Retos de la gestión: seis casos peruanos: Innovación inclusiva. Agua potable con energías renovables en la costa norte del Perú

Goñi Delion, J. C., Mlodzianowska, S., Paredes Larroca, F. H. & Saettone Olschewski, E. A., Aug 2023, *Retos de la gestión: seis casos peruanos: Innovación inclusiva. Agua potable con energías renovables en la costa norte del Perú*. Anderson, M. (ed.). 1 ed. Lima: Fondo Editorial de la Universidad de Lima, Vol. 1. p. 25-27 3 p.

Acquisition and analysis of floc images by machine learning technique to improve the turbidity removal process

Larroca, F. P., Quino-Favero, J., Villanueva, U. R. & Olschewski, E. S., Apr 2023, In: Desalination and Water Treatment. 292, p. 60-68 9 p.

Assessment of the Application of Ferrate(VI) in the Treatment of Agricultural Irrigation Water: Presence of Metals and Escherichia coli in Fresh Produce

Gutiérrez, K. A. V., Meza, M. E. R., Larroca, F. P., Olschewski, E. S. & Quino-Favero, J., 14 Feb 2023, In: Water.

Energy and economic evaluation of a middle-sized CSP parabolic field in an agro-industrial company

Torres Vidaurre, A. V. & Saettone, E., 7 Feb 2022, *Journal of Physics: Conference Series*. 1 ed. IOP Publishing, Vol. 2180 . p. 1-7 7 p. 012003. (Journal of Physics: Conference Series).

Water treatment plant prototype with ph control modeled on fuzzy logic for removing arsenic using fe(VI) and fe(III)

Larroca, F. P., Olschewski, E. S., Quino-Favero, J., Huamaní, J. R. & Sequera, J. L. C., 1 Oct 2020, In: Water (Switzerland). 12, 10, 2834.

Ultraviolet Concentration Factor of a Truncated Compound Parabolic Concentrator under Different Weather Conditions

Saettone, E., Paredes, F., Quino, J., Ponce, S. & Eyzaguirre, R., 1 Mar 2020, In: Applied Solar Energy (English translation of Geliotekhnika). 56, 2, p. 99-106 8 p.

Development of a Fuzzy Logic-Based Solar Charge Controller for Charging Lead-Acid Batteries

Paredes Larroca, F., Saettone Olschewski, E., Quino Favero, J., Rosales Huamaní, J. & Castillo Sequera, J. L., 1 Jan 2020, *Advances and Applications in Computer Science, Electronics and Industrial Engineering -Proceedings of the Conference on Computer Science, Electronics and Industrial Engineering CSEI 2019*. Nummenmaa, J., Pérez-González, F., Domenech-Lega, B., Vaunat, J. & Oscar Fernández-Peña, F. (eds.). Springer, p. 168-183 16 p. (Advances in Intelligent Systems and Computing; vol. 1078).

Treatment of irrigation water infested with nematodes using a solar photoreactor

Inga López, J., Meza Contreras, V., Rodríguez Delfín, A., Ponce Álvarez, S., Paredes Larroca, F., Eyzaguirre Pérez, R., Quino Favero, J. & Saettone Olschewski, E., 1 Jan 2020, In: Desalination and Water Treatment. 174, p. 161-170 10 p.

CARGADOR DE BATERIAS DE PLOMO-ACIDO CON ALARMA DE VISUALIZACION DEL NIVEL DE CARGA Y MEDIOS PARA CONTROLAR LA CARGA MEDIANTE LOGICA DIFUSA

Paredes Larroca, F. H. (Inventor), Saettone Olschewski, E. A. (Inventor) & Goni Delion, J. C. (Inventor), 7 Jan 2019, IPC No. H02J 7/00, H02J 7/10, Patent No. 002294-2018/DIN, Priority date 31 Oct 2018, Priority No. PE2018002294U

Proceso práctico para la deposición efectiva de nanopartículas de óxido de titanio en fase anatasa sobre acero inoxidable de calidad 316L

Ponce Alvarez, S. P. (Inventor), Paredes Larroca, F. H. (Inventor), Quino Favero, J. M. (Inventor) & Saettone Olschewski, E. A. (Inventor), 26 Dec 2018, IPC No. C23C 22/80, Patent No. 002293-2018/DIN, Priority date 31 Oct 2018, Priority No. PE2018002293

Equipo solar de iluminación para la captura de insectos tipo mosquitero

Paredes Larroca, F. H. (Inventor), Saettone Olschewski, E. A. (Inventor) & Quino Favero, J. M. (Inventor), 13 Jul 2017, IPC No. A01M 1/04, Patent No. 002782-2016/DIN, Priority date 27 Dec 2016, Priority No. PE2016002782U

Reactor solar-fotocatalítico de alta turbulencia para la desinfección de agua

Eyzaguirre Perez, R. H. (Inventor), Paredes Larroca, F. H. (Inventor), Saettone Olschewski, E. A. (Inventor), Quino Favero, J. M. (Inventor) & Ponce Alvarez, S. P. (Inventor), 13 Jul 2017, IPC No. C02F 1/14, B01J 35/00, Patent No. 002787-2016/DIN, Priority date 27 Dec 2016, Priority No. PE2016002787U

Preliminary overview and evaluation of a stepped solar distiller with internal reflective walls and borosilicate vacuum tubes

Saettone, E., Valencia-Tovar, Y. & Gómez-de-la-Torre-Gastello, A., 1 Jan 2017, In: Desalination. p. 136-143 8 p.

Comparison between solar distillers with and without solar concentrator

Saettone, E. & Valencia, Y., 1 Apr 2016, In: Applied Solar Energy (English translation of Geliotekhnika). p. 131-136 6 p.

DESTILADOR SOLAR TIPO CASCADA MODIFICADO

Saettone Olschewski, E. A. (Inventor), 18 Mar 2016, IPC No. C02F 1/14, Patent No. 001864-2015/DIN, Priority date 4 Sep 2015, Priority No. PE2015001864U

Design and construction of a Fresnel linear distiller

Saettone, E., 1 Oct 2014, In: Applied Solar Energy. p. 238-243 6 p.

Desalación de agua marina: nuevas alternativas utilizando concentradores solares

Saettone Olschewski, E. A., 1 Jan 2013, In: Default journal.

Desalination using a parabolic-trough concentrator

Saettone, E., 1 Oct 2012, In: Applied Solar Energy (English translation of Geliotekhnika). 48, 4, p. 254-259 6 p.

Tokamak turbulence at the scrape-off layer in TCABR with an ergodic magnetic limiter

Heller, M. V. A. P., Caldas, I. L., Ferreira, A. A., Saettone, E. A. O. & Vannucci, A., 1 Jun 2007, In: Journal of Plasma Physics. p. 295-306 12 p.

Monte Carlo simulation for fragment mass and kinetic energy distributions from the neutron-induced fission of ^{235}U
Montoya, M., Saettone, E. & Rojas, J., 1 Jan 2007, In: Revista Mexicana de Fisica. 53, 5, p. 366-370 5 p.

Magnetic field structure in the TCABR tokamak due to ergodic limiters with a non-uniform current distribution: Theoretical and experimental results

Pires, C. J. A., Saettone, E. A. O., Kucinski, M. Y., Vannucci, A. & Viana, R. L., 1 Oct 2005, In: Plasma Physics and Controlled Fusion. p. 1609-1632 24 p.

Scrape-off layer turbulence modulated by Mirnov oscillations

Heller, M. V. A. P., Caldas, I. L., Ferreira, A. A., Saettone, E. A. O., Vannucci, A., Nascimento, I. C. & Severo, J. H. F., 1 Mar 2005, p. 265-270. 6 p.

Not completely flattened radial profile of the electron temperature in the vicinity of magnetic islands in Tokamak Chauffage Alfvén Brésilien

Fonseca, A. M. M., Tsypin, V. S., Galvão, R. M. O., Kuznetsov, Y. K., Nascimento, I. C., Da Silva, R. P., Saettone, E. A. & Vannucci, A., 1 Jan 2005, In: Physics of Plasmas. p. 1-7 7 p.

Effect of the vacuum vessel on magnetic measurements in TCABR tokamak

Kucinski, M. Y., Kuznetsov, Y. K. & Saettone, E. A. O., 1 Nov 2004, In: Review of Scientific Instruments. p. 5038-5040 3 p.

Runaway discharges in TCABR

Kuznetsov, Y. K., Galvão, R. M. O., Bellintani, V., Ferreira, A. A., Fonseca, A. M. M., Nascimento, I. C., Ruchko, L. F., Saettone, E. A. O., Tsypin, V. S. & Usuriaga, O. C., 1 May 2004, In: Nuclear Fusion. p. 631-644 14 p.

Magnetic islands and plasma rotation in the Tokamak Chauffage Alfvén Brésilien tokamak

Severo, J. H. F., Nascimento, I. C., Tsypin, V. S., Kuznetsov, Y. K., Saettone, E. A., Vannucci, A., Galvão, R. M. O., Tendler, M. & Mikhailovskii, A. B., 1 Jan 2004, In: Physics of Plasmas. p. 846-848 3 p.

Plasma cleaning and analysis of archeological artefacts from Sipán

Saettone, E. A. O., Da Matta, J. A. S., Alva, W., Chubaci, J. F. O., Fantini, M. C. A., Galvão, R. M. O., Kiyohara, P. & Tabacniks, M. H., 7 Apr 2003, In: Journal of Physics D: Applied Physics. p. 842-848 7 p.

Magnetic coil system for the TCABR tokamak

Saettone, E. A., Vannucci, A., Degasper, F. T., Galvão, R. M. O., Kuznetsov, Y., Sanada, E. K. & Nascimento, I. C., 1 Jan 2002, p. 30-33. 4 p.

The analysis of Alfvén wave current drive and plasma heating in TCABR tokamak

Ruchko, L. F., Lerche, E. A., Galvão, R. M. O., Elfimov, A. G., Nascimento, I. C., De Sá, W. P., Sanada, E., Elizondo, J. I., Ferreira, A. A., Saettone, E. A., Severo, J. H. F., Bellintani, V. & Usuriaga, O. N., 1 Jan 2002, p. 57-64. 8 p.

New regime of runaway discharges in Tokamaks

Galvão, R. M. O., Kuznetsov, Y. K., Nascimento, I. C., Sanada, E., Campos, D. O., Elfimov, A. G., Elizondo, J. I., Fagundes, A. N., Ferreira, A. A., Fonseca, A. M. M., Lerche, E. A., Lopez, R., Ruchko, L. F., De Sá, W. P., Saettone, E. A., Severo, J. H. F., Da Silva, R. P., Tsypin V. S., Valencia, R. & Vannucci, A., 1 Sep 2001, In: Plasma Physics and Controlled Fusion. p. 1181-1190 10 p.

Alfvén wave heating and runaway discharges maintained by the avalanche effect in TCABR

Galvão, R. M. O., Bellintani, V., Bengtson, R. D., Elfimov, A. G., Elizondo, J. I., Fagundes, A. N., Ferreira, A. A., Fonseca, A. M. M., Kuznetsov, Y. K., Lerche, E. A., Nascimento, I. C., Ruchko, L. F., De Sá, W. P., Saettone, E. A., Sanada, E., Severo, J. H. F., Da Silva, R. P., Tsypin, V. S., Usuriaga, O. C. & Vannucci, A., 1 Jan 2001, In: Plasma Physics and Controlled Fusion.

Activities

XXX Simposio Peruano de Energía Solar

Saettone Olschewski, E. A. (Organizer)

20 Nov 2023 → 24 Nov 2023

Taller de Elaboración de Propuestas de Investigación

Saettone Olschewski, E. A. (Participant)

2 Oct 2023 → 20 Nov 2023

XXIX Simposio Peruano de Energía Solar

Saettone Olschewski, E. A. (Organizer)

14 Nov 2022 → 18 Nov 2022

CONCYTEC-PERU (External organization)

Saettone Olschewski, E. A. (Member)

18 May 2022 → 18 May 2024

LABVIEW: PROGRAMACIÓN GRÁFICA PARA CIENCIAS EINGENIERÍA

Saettone Olschewski, E. A. (Participant)

14 Dec 2021 → 17 Dec 2021

Microredes Eléctricas y Electromovilidad

Saettone Olschewski, E. A. (Participant)

15 Nov 2021 → 16 Nov 2021

Microredes y Generación Distribuida

Saettone Olschewski, E. A. (Participant)

15 Nov 2021

XXVIII Simposio Peruano de Energía Solar

Saettone Olschewski, E. A. (Speaker)

15 Nov 2021 → 19 Nov 2021

XXVIII Simposio Peruano de Energía Solar

Saettone Olschewski, E. A. (Organizer)

15 Nov 2021 → 19 Nov 2021

Cleaner Engineering and Technology (Journal)

Saettone Olschewski, E. A. (Reviewer)
2021

Instrumentacion en Energias Renovables y Medio Ambiente

Saettone Olschewski, E. A. (Participant)
16 Nov 2020 → 17 Nov 2020

XXVII Simposio Peruano de Energía Solar

Saettone Olschewski, E. A. (Organizer)
16 Nov 2020 → 30 Nov 2020

Asesor de tesis de pregrado

Saettone Olschewski, E. A. (Examiner)
28 Sep 2020

ONG EcoSwell

Saettone Olschewski, E. A. (Consultant)
1 Jun 2020 → 10 Jan 2024

Applied Solar Energy (English translation of Geliotekhnika) (Journal)

Saettone Olschewski, E. A. (Reviewer)
2020

Desalination (Journal)

Saettone Olschewski, E. A. (Reviewer)
2020

Secadores e invernaderos solares

Saettone Olschewski, E. A. (Participant)
18 Nov 2019 → 19 Nov 2019

Sistemas de almacenamiento de energía renovable

Saettone Olschewski, E. A. (Participant)
18 Nov 2019 → 19 Nov 2019

XXVI Simposio Peruano de Energía Solar

Saettone Olschewski, E. A. (Organizer)
18 Nov 2019 → 22 Nov 2019

Encuentro y Exposición Mundial de Energías Renovables, SunWorld 2019

Saettone Olschewski, E. A. (Speaker)
12 Nov 2019 → 14 Nov 2019

Coloquios de Física 2019-2

Saettone Olschewski, E. A. (Speaker)
7 Nov 2019

IV Encuentro Internacional de Ciencia y Tecnología

Saettone Olschewski, E. A. (Invited speaker)
5 Nov 2019 → 7 Nov 2019

XXV Simposio Peruano de Energía Solar

Saettone Olschewski, E. A. (Speaker)
12 Nov 2018 → 16 Nov 2018

XII Congreso Iberoamericano de Energía Solar

Saettone Olschewski, E. A. (Speaker)
20 Jun 2018 → 22 Jun 2018

Asesoría de tesis de pregrado

Saettone Olschewski, E. A. (Examiner)
15 Dec 2017

Asociación Peruana de Energía Solar y del Ambiente (APES) (External organization)

Saettone Olschewski, E. A. (Member)
15 Nov 2010

Projects

HAMNCD: Avances en Hidroponía: Automatización y Manejo Sostenible de Soluciones Nutritivas para Cultivos de Alto Desempeño

Paredes Larroca, F. H. (PI) & Saettone Olschewski, E. A. (Col)
1/04/25 → 31/03/26

CPPTA: Comparación de métodos de control para la automatización de una planta piloto de tratamiento de agua

Paredes Larroca, F. H. (PI), Saettone Olschewski, E. A. (Col) & Villanueva, U. R. (ECol)
Universidad de Lima
1/04/23 → 31/03/24

ModSolar: Desarrollo de un módulo solar para producción de agua y energía eléctrica

Saettone Olschewski, E. A. (PI) & Paredes Larroca, F. H. (Col)
1/04/24 → 10/04/25

AGPE: Desarrollo e implementación de un aerogenerador vertical con tecnología piezoeléctrica

Saettone Olschewski, E. A. (PI)
1/04/24 → 10/04/25

Design and construction of an autonomous water treatment unit based on ferrate (VI) ions powered by photovoltaic panels

Quino Favero, J. M. (PI), Paredes Larroca, F. H. (Col), Saettone Olschewski, E. A. (Col) & Eyzaguirre Pérez, R. (Col)
1/04/19 → 31/03/20

Destilador solar tipo pirámide con elemento calefactor y sistema de burbujeo con aire caliente

Saettone Olschewski, E. A. (PI)
1/04/26 → 31/03/27

ReFSTA: Development of a prototype high-turbulence solar photocatalytic reactor with thio2 nanoparticles immobilized in steel for water disinfection for agricultural use

Saettone Olschewski, E. A. (PI), Ponce Álvarez, S. P. (Col), Quino Favero, J. M. (Col), Paredes Larroca, F. H. (Col), Eyzaguirre Pérez, R. (Col), Meza Contreras, V. (Col) & Rodríguez Delfin, A. (Col)
FONDECYT, Universidad Nacional Agraria La Molina
20/01/16 → 31/12/18

Evaluation of contaminants in aeroponically irrigated vegetables with water from the Surco river treated with Ferrate(VI)

Paredes Larroca, F. H. (PI), Quino Favero, J. M. (Col) & Saettone Olschewski, E. A. (Col)
Universidad de Lima
1/04/22 → 31/03/23

IACF: Implementation of an artificial intelligence control system of the coagulation-flocculation process with ferrate ions (VI) based on image recognition.

Paredes Larroca, F. H. (PI), Quino Favero, J. M. (Col) & Saettone Olschewski, E. A. (Col)

Universidad de Lima

1/04/21 → 31/03/22

Implementation of automated irrigation and improvement of the quality of unsafe water for agriculture through a water treatment system with ferrate ions (VI) at the La Molina Experimental Center and the Moquegua Agrarian Experimental Station

Vargas Gutiérrez, K. A. (PI), Saettone Olschewski, E. A. (Col), Quino Favero, J. M. (Col), Paredes Larroca, F. H. (Col), Eyzaguirre Pérez, R. (Col) & Ponce Álvarez, S. P. (Col)

20/01/16 → 20/01/19

MONIPEZAPP: monitoring prototype to optimize the artisanal capture processes, in real time, in order to improve the productivity of the artisanal fisherman in the creek cove

Bedón Monzón, H. M. (PI), Carhuancho Lucen, C. A. (Col), Garcia Lopez, Y. J. (Col) & Saettone Olschewski, E. A. (Col)

Programa Nacional de Innovación en Pesca y Acuicultura

1/11/18 → 31/07/21

AquAmypeApp: Real-time water quality monitoring prototype to improve the productivity of Rainbow trout, *Oncorhynchus mykiss*, in AMYPE's in the Amazon region

Bedón Monzón, H. M. (PI), Saettone Olschewski, E. A. (Col), Garcia Lopez, Y. J. (Col) & Grados Licham, B. (PI)

Programa Nacional de Innovación en Pesca y Acuicultura

13/11/19 → 31/12/21

Transformation of shrimp waste for the production of feed for tilapia and polymers for seed coverage applicable to organic agriculture

Quino Favero, J. M. (PI), Sanabria Villanueva, J. C. (Col), Ponce, S. (Col), Paredes Larroca, F. H. (Col), Eyzaguirre Pérez, R. (Col), Saettone Olschewski, E. A. (Col), Yacono Llanos, J. C. (Col) & Villagarcía Garate, H. E. (Col)

Programa Nacional de Innovación en Pesca y Acuicultura

1/11/18 → 31/03/21

Uso de concentradores solares para incrementar la generación de energía eléctrica en paneles fotovoltaicos convencionales

Saettone Olschewski, E. A. (PI), Paredes Larroca, F. H. (Col), Zanesco, I. (ECol) & Moehlecke, A. (ECol)

1/04/26 → 31/03/27