

Mayken Stalin Espinoza-Andaluz

CONTACT INFORMATION

Nationality: Ecuadorian
DOB: 10 November, 1983
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Facultad de Ingeniería Mecánica y Ciencias de la Producción (FIMCP)
Campus Politécnico "Gustavo Galindo V."
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Centro de Energías Renovables y Alternativas (CERA).
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h-index Google scholar: 5
Scopus: 5

EDUCATION

Ph.D., Doctor of Philosophy
Micro- and Mesoscale characterization of Gas diffusion layers
Lunds Universitet, Department of Energy Sciences
Lund – Sweden, 2017

Ph.L., Licentiate of Philosophy**
Transport Phenomena, Porous media, Fuel Cells
Lunds Universitet, Heat Transfer Division,
Lund-Sweden, 2015

Mg., Master in Physics Teaching
Experimental Physics, Design and implementation
Espol – Escuela Superior Politécnica del Litoral. FCNM.
Guayaquil - Ecuador, 2012

Dipl., Diploma in Renewable Energy*
Electrolyzer , Hydrogen Production, Modeling
Fachhochschule Stralsund,
Stralsund - Germany, 2009

B. Eng., Engineer in Electronic and Telecommunications
Medical Electronic, Data acquisition, EKG
Espol - Escuela Superior Politécnica del Litoral, FIEC.
Guayaquil - Ecuador, 2006

**equivalent to half of a Master degree according to Bologna process.*

***equivalent to a Master of Philosophy of the British education system.*

AWARDS, GRANTS & HONORS

Scholarship for undergraduate studies, Equity and Excellence, VAEB,
Espol (2002 – 2005)

Top grades as Engineering in Electronic and Telecommunications student, VAEB, Espol (2001- 2002)

Recognition of excellent academic assistant, Institute of Physical Sciences, Espol (2004, 2005)

Awarded with a fellowship to study Renewable Energy in Germany, Espol (2008) (USD 7000)

Top grade 10% - Engineering in Electronic and Telecommunications studies (2010)

Top grades as Physics Teacher in Admission's Department / Espol (2010 - 2012)

Awarded as Physics and Physics Lab Teacher full position, Physics Department, Espol (2013)

Best grade – Master in Physics Teaching studies, 2nd Cohort (2013)

Awarded with a Scholarship for Doctoral Studies, Senescyt (2013 – 2017) (USD 100,000)

ÅFORSK, Travel Grant - Awarded funding to present a conference paper at the IMECE 2014: International Mechanical Engineering Congress & Exposition, Montreal, Canada in November 2014 (USD 3,000)

COST ACTION, Travel Grant - Awarded funding to attend the Training School as a Trainee: Lattice Boltzmann 2015, Madrid, Spain in May 2015 (USD 600).

Vinnova, Travel Grant - Awarded funding to visit Forschungszentrum Jülich, Germany in November 2015. (USD 1,000).

COST ACTION and Vinnova, Travel Grant - Awarded funding to give a presentation in conference: FLOWING MATTER 2016 11 - 15th JANUARY 2016, Porto, Portugal in January 2016. (USD 900).

COST ACTION, Travel Grant - Awarded funding to attend the Experimental School: Flowing Matter 2016, Istanbul, Turkey in April 2016 (USD 900).

Fysiografen, Travel Grant - Awarded funding to present a conference paper at the 5th International Conference on Mathematical Modeling in Physical Sciences, Athens, Greece in May 2016. (USD 1000).

Vinnova, Travel Grant - Awarded funding to visit Forschungszentrum Jülich, Germany in April 2016. (USD 1,000).

Civilingenjören Hakon Hanssons Stiftelse, Travel Grant - Awarded funding to present a conference paper at the 5th European Seminar on Computing. Pilsen, Czech Republic in May 2016. (USD 2,400).

Vinnova, Travel Grant - Awarded funding to attend the FC summer school. Graz, Austria in August 2016. (USD 1,000).

Vinnova, Travel Grant - Awarded funding to attend and present a conference paper in the 8th International Conference on Applied Energy ICAE 2016. Beijing, China in October 2016. (USD 2,500).

RESEARCH EXPERIENCE

Renewable Energy, specific topic: The Behaviors of a 20kW electrolyser has to be simulating by Simulink based on practical data (research adviser: Prof. Dr. rer. nat. Jochen Lehmann, Komplexlabor, FH-Stralsund) (2008-2009)

Renewable Energy, specific topic: Solar thermal substitution of electric power for air conditioning and providing drinking water (research adviser: Dip. Torsten Olejnik)(2009-2010)

Renewable Energy, specific topic: Alternative electricity generation using fuel Hydrogen as for Domestic use (research adviser: M.Sc. Eduardo Mendieta, Master Jorge Ugarte, CERA, Guayaquil-Ecuador) (2009 – 2011)

Renewable Energy, Project: “Dimensionamiento de una micro-grid en la zona de Atahualpa-Provincia de Santa Elena como una solución de electrificación en viviendas a partir de Fuentes de Energía Limpia.”. (2015 – 2016) ULVR

Renewable Energy, specific topic: Analysis and characterization of porous media in fuel cells (Research adviser Prof. Bengt Sundén, Martin Andersson, Energy Sciences Department, Lund University) (2013 – 2017)

Renewable Energy, specific topic: Building and setup of a Fuel Cell stack in which the bipolar plates are mainly constructed. Project director. Mechanical Engineering and Science Production Faculty, FIMCP, Espol. (2017 – current).

Renewable Energy, specific topic: Analysis and characterization of porous media in fuel cells, Co-Director. Aforsk foundation (2017 – current)

RESEARCH INTERESTS

Design and simulation of Renewable Energy Systems.

Solar Energy and their applications for electrical energy and cooling systems.

Wind Energy and their applications for electrical energy.

Hydrogen technologies and their applications.

Theoretical Physics.

Process for teaching Fundamental Physics.

Fundamentals Physics in Fuel Cells (PEMFC, SOFC)

Lattice Boltzmann Method applied to Physical and Chemical Phenomena
Porous media

**COURSES, WORKSHOPS, CONGRESS
AND SIMPOSIUMS**

Habilitation teaching course, SNNA - Espol (April 2012)

Habilitation teaching course, Physics - Espol (December 2012)

How Things Work, University of Virginia (May 2013)*

Inter-American Conference of Physics Education, Espol, Physics Department (July 2013)

Physics 1 for Physical Sciences Majors, University of Colorado at Boulder (December 2013)*

Applications in Engineering Mechanics, Georgia Institute of Technology (December 2013)*

Principles of Written English, Berkeley University (December 2013)*

Introduction to Thermodynamics: Transferring Energy from Here to There, University of Michigan (April 2014)*

Engineering Systems in Motion: Dynamics of Particles and Bodies in 2D Motion, Georgia Institute of Technology (May 2014) *

Principles of Written English, Part 3, Berkeley University (May 2014)*

Big Data and Social Physics, Massachusetts Institute of Technology (May 2014) *

Advances In Medium and High Temperature Solid Oxide Fuel Cell, CISM, Udine - Italy (14 - 8 July 2014)

An introduction to parallel programming using Message Passing with MPI. Center for Scientific and Technical Computing. Lund – Sweden. (29-31 October 2014).

III ENCuentro de Estudiantes Ecuatorianos en Europa - Concurso de Reconocimiento a la Investigación Científica. Berlin – Germany. (18 - 20 October 2014).

21.Symposium. Nutzung regenerativer Energiequellen und Wasserstofftechnik, Energy Symposium: “Uso de fuentes de Energías Renovables y Tecnologías del Hidrogeno”. Stralsund-Germany. (6 - 8 November 2014).

ASME 2014 International Mechanical Engineering Congress & Exposition IMECE2014. Montreal-Canada. (14 - 20 November 2014).

Nobel Lecture in Physics 2014, Prof. Hiroshi Amano Nobel Prize Laureate 2014 "Blue LED:s - Filling the world with new light." (15 December 2014).

Time & Stress Management Seminar, Doctoral Student Section, Lund University, Lund, Sweden. (11 March 2015)

International Workshop, Methanol as Fuel & Energy Storage. A CO-ARRANGMENT BY ENERGIPORTALEN AND MOT-2030. Lund, Sweden. (17 March 2015).

Lattice Boltzmann Training School. Madrid-Spain. (11 – 13 May 2015).

European Technical School on Hydrogen and Fuel Cells 2015. Crete-Greece. (22 - 26 June 2015).

Solving large problems efficiently through parallel computing in Matlab. Swedish National Infrastructure for Computing (SNIC) training, Lund University, Lund, Sweden. (30 September 2015).

Grammar and Punctuation by University of California, Irvine on Coursera (6 October 2015)*

How to write popular science and reach out to the society with your research, Doctoral Student Section, Lund University, Lund, Sweden. (9 October 2015).

IEEE R8 Nordic SYPWIE (Student/Young Professional/Women in Engineering) Congress 2015. (6 – 8 November 2015).

Visiting Scholar at Forschungszentrum Jülich (IEK-3), Germany (9 – 14 November 2015).

FLOWING MATTER 2016. Porto, Portugal (11 – 15 January 2016)

COMSOL 5.0 and Application Builder - Multiphysics applications, Ideon Science Park. Lund, Sweden (19 January 2016).

Training school: "Experimental techniques for Flowing Matter", Sabanci University, Istanbul, Turkey. (13 - 15 April 2016).

Visiting Scholar at Forschungszentrum Jülich (IEK-3), Germany (25 – 29 April 2016).

5th International Conference on Mathematical Modeling in Physical Sciences. Athens, Greece. (23 – 26 May 2016).

5th European Seminar on Computing ESCO 2016. Pilsen, Czech Republic. (5 – 10 Jun 2016).

9th International Summer School on PEFCs. Graz University of Technology, Austria. (28 August – 3 September 2016).

2nd International Workshop on Hydrogen and Fuel Cells. 31 August 2016. Graz University. Graz, Austria.

8th International Conference on Applied Energy (ICAE2016). Beijing, China. (8 October – 11 October 2016).

Digital Society symposium. Lund, Sweden. (25 – 26 April 2017). Volunteer.

Hydrogen, Fuel Cell and Batteries, Department of Energy Sciences. Lund, Sweden. (Spring 2017).

Quantum Mechanics: Wavefunctions, operators, and expectation values. MITx. (November 2017)*

“Definición Estratégica, Organizativa, Programática y Operativa del Plan de Investigación hacia la Innovación de la ESPOL”. (28 – 29 November, 2017). Decanato de Investigación, ESPOL

**MOOCs: Massive Open Online Courses, i.e., Coursera and Edx.*

TEACHING EXPERIENCE

Teaching Assistant: Physics for undergraduate courses in engineering, 2002-2006. (Physics I, Physics II, Physics III, Experimental Physics I, Experimental Physics II, Physics A, Laboratory of Physics A)

Coordinator - Teaching Assistant: Physics for undergraduate courses in engineering, 2005

Physics Lectures: High School (Liceo Naval Guayaquil), 2006

Physics and Mathematics Lectures: High School (Ecomundo Centro de Estudios), 2007

Basics Physics and Geometry Lectures: University (Universidad Politécnica Salesiana), 2011

Statistics Lectures: Technical Institute (TES), 2011

Physics and Mathematics Lectures: High School (Liceo Los Andes), 2012 – 2013

Physics I and Physics II Lectures: Technical Institute (ITSBRP), 2011 – 2013

Fundamental Physics Lectures: University (SNNA - Espol), 2010 – 2013

Physics A, Physics Lab A, B, D: Espol, 2013

Numerical Heat Transfer: Department of Energy Sciences, Lund University, 2015 – 2016

Heat Transfer: Department of Energy Sciences, Lund University, 2016 – 2017

Hydrogen Fuel Cell and Batteries, Supervision activities. Lund University, 2017.

Mechanical Engineering, Supervision activities. ESPOL, 2017 – I.

Vector Mechanics, Teaching activities. ESPOL, 2017 – 2018

Physics I, Teaching activities. ESPOL, 2017 - 2018

PUBLICATIONS

[1] Bibliographic Production (2008): Author - *Physical essential for technical baccalaureate*. ISBN 13 / Cód Barra:9789978357132.

[2] Thesis paper (2010): *Converting a PC in three channels heart monitor*, M. Espinoza, C. Gencón, C. and M. Yapur.
<http://www.dspace.espol.edu.ec/handle/123456789/11082>

[3] Conference paper (2010): *Solar-thermal substitution of electric power for air conditioning and providing drinking water - A cooperation between Ecuador and Stralsund*. T. Olejnik, J. Vasquez, M. Espinoza et al.
https://www.etde.org/etdeweb/details.jsp?&query_id=1&page=0&osti_id=21391270&printerfriendly=true ISBN 978-3-9813334-1-1

[4] Divulcation paper (2011): *DEVELOPMENT & APPLICATIONS Quantum Physics*, M. Espinoza, P. Iza.
<http://www.iyd.espol.edu.ec/index.php/investigacion-y-desarrollo-2011-18>

[5] Conference paper (2014) – *Lattice Boltzmann Modeling From the Macro- to the Microscale - An Approximation to the Porous Media* - M. Espinoza, B. Sundén and M. Andersson. REGWA Symposium 2014 Renewable Energy and Hydrogen Technology Symposium, November 6-8, 2014, Stralsund, Germany.

[6] Conference paper (2014): *Analysis of Porosity and Tortuosity in a 2D Selected Region of Solid Oxide Fuel Cell Cathode Using the Lattice Boltzmann Method*, M. Espinoza, B. Sundén, M. Andersson

and J. Yuan. Fuel Cell Seminar & Energy Exposition, November 10-13, 2014. Westin Bonaventure, Los Angeles CA, USA.

Also included in ECS Transactions (2015)

ECS Trans. 2015 volume 65, issue 1, 59-73

DOI: 10.1149/06501.0059ecst

[7] Conference paper (2014): *Highlights of Fuel Cell Modeling From a Lattice Boltzmann Method Point of View*. M. Espinoza, B. Sundén, and M. Andersson. Proceedings of the ASME 2014 International Mechanical Engineering Congress & Exposition IMECE2014, November 14-20, 2014, Montreal, Quebec, Canada.
DOI:10.1115/IMECE2014-37010.

[8] Journal paper (2015): *Compress Effects on Porosity, Gas-phase Tortuosity and Gas Permeability in a Simulated PEM Gas Diffusion Layer*. M. Espinoza, M. Andersson, J. Yuan and B. Sundén. Int. J. Energy Res., 39:1528–1536.
DOI: 10.1002/er.3348

[9] Thesis (2015): *On Microstructural Analysis of Porous Media Existing in Fuel Cells Using the Lattice Boltzmann Method*. M. Espinoza
ISRN: LUTMDN/TMHP-15/7093-SE
ISSN: 0282-1990
ISBN: 978-91-7623-593-5

[10] Conference paper (2015): *Sizing Photovoltaic Irrigation Systems using Meteorological Data*. D. Matamoros, J. Barzola, M. Espinoza. Proceedings of 8th International Conference on Energy Planning, Energy Saving, Environmental Education, November 2015, Rome, Italy. pp. 220-227

[11] Conference paper (2015): *On parameters testing of an innovative mortar made of rice husk to be used for housing walls*. J. Barzola, F. Cabrera, M. Espinoza. ISES Solar World Congress 2015. Daegu, Korea. November 8th -12th, 2015.
DOI: <https://doi.org/10.18086/swc.2015.08.05>

[12] Conference paper (2016): *Potential of Lattice Boltzmann method to determine the ohmic resistance in porous materials*. M. Espinoza, M. Andersson, and B. Sundén. 5th International Conference on Mathematical Modeling in Physical Sciences. Athens, Greece. 23 – 26 May, 2016.

Also included in: Journal of Physics: Conference Series

Volume 738, Number 1

DOI: [dx.doi.org/10.1088/1742-6596/738/1/012090](https://doi.org/10.1088/1742-6596/738/1/012090)

[13] Conference paper (2016): *Computational Time and Domain Size Analysis of Porous Media Flows Using the Lattice Boltzmann Method*. M. Espinoza, M. Andersson, and B. Sundén. 5th European

Seminar on Computing ESCO 2016. Pilsen, Czech Republic. 5 – 10 Jun 2016.

Also included in CAMWA. (2017)
DOI:10.1016/j.camwa.2016.12.001

[14] Publication (2016): ***Incidencia del diámetro de las partículas sobre la tortuosidad en un medio poroso usando lattice Boltzmann method.*** M. Espinoza, M. Andersson, and B. Sundén. Revista Tecnológica-ESPOL, 29(1), pp. 77-87.

[15] Journal paper (2016): ***A review of cell-scale multiphase flow modeling, including water management, in polymer electrolyte fuel cells.*** M. Andersson, S.B. Beale, M. Espinoza, Z. Wu, and W. Lehnert. Applied Energy, 180, 757-778.
DOI: 10.1016/j.apenergy.2016.08.010

[16] Conference paper (2016): ***A detailed analysis of Hispanic learners' use of YouTube as a tool to reinforce the learning process in higher education.*** M. Espinoza, J. Barzola, and J. Flores. The Fourteen LACCEI International Multi-Conference for Engineering, Education, and Technology: “Engineering Innovations for Global Sustainability”, At San José, Costa Rica. July 20 - 22, 2016. pp. 1-6.
DOI: 10.18687/LACCEI2016.1.1.361

[17] Conference paper (2016): ***Hybrid Solar-Wind Renewable Energy System for Off-Grid Rural Electrification in Ecuador.*** J. Barzola, M. Espinoza, C. Pavón, and F. Cabrera. The Fourteen LACCEI International Multi-Conference for Engineering, Education, and Technology: “Engineering Innovations for Global Sustainability”, At San José, Costa Rica. July 20 - 22, 2016. pp. 1-7.
DOI: 10.18687/LACCEI2016.1.1.056

[18] Journal paper (2016): ***Analysis of Hybrid Solar/Wind/Diesel Renewable Energy System for off-grid Rural Electrification.*** J. Barzola, M. Espinoza, and F. Cabrera. International Journal of Renewable Energy Research (IJRER), 6(3), 1146-1152.

[19] Conference paper (2016): ***Impact on Diffusion Parameters Measurement in Gas Diffusion Layers, Considering the Land/Channel Region, Using the Lattice Boltzmann Method.*** M. Espinoza, M. Andersson, and B. Sundén, at Honolulu, Hawaii USA. October 2 – 7, 2016. PRIME 2016.

Also included in ECS Transactions (2016)
ECS Trans. 2016 volume 75, issue 14, 521-530
DOI: 10.1149/07514.0521ecst

[20] Journal paper (2016): ***Predicting transport parameters in PEFC gas diffusion layers considering micro-architectural variations using the Lattice Boltzmann method.*** M. Espinoza, M. Andersson, and B. Sundén. Int. J. Energy Res., 41:565–578.

DOI: 10.1002/er.3361

[21] Conference paper (2016): *Modeling of a gradient porosity SOFC anode anode*. M. Espinoza-Andaluz, M. Andersson, and B. Sundén. At Beijing, China. October 8 – 11, 2016. ICAE 2016.

Also included in Energy Procedia (2017)

Energy Procedia 105C (2017) pp. 1333-1339

DOI: 10.1016/j.egypro.2017.03.484

[22] Journal paper (2017): *Comparing through-plane diffusibility correlations in PEFC gas diffusion layers using the lattice Boltzmann method*. M. Espinoza-Andaluz, M. Andersson, and B. Sundén. International Journal of Hydrogen Energy, International Journal of Hydrogen Energy 42.16 (2017): 11689-11698

DOI: 10.1016/j.ijhydene.2017.02.096

[23] Doctoral Dissertation (2017): *On Diffusion Transport Properties in Fuel Cell Gas Diffusion Layers Using the Lattice Boltzmann Method*. M. Espinoza-Andaluz.

ISBN 978-91-7753-236-1 (print)

ISBN 978-91-7753-237-8 (pdf)

ISRN LUTMDN/TMHP-17/1129-SE

ISSN 0282-1990

[24] Conference paper (2017): *Pore-Scale Analysis of Diffusion Transport Parameters in Digitally Reconstructed SOFC Anodes with Gradient Porosity in the Main Flow Direction*. Espinoza-Andaluz, M., Sundén, B., & Andersson, M.

ECS Transactions, 78(1), 2785-2796.

[25] Conference paper (2017): *Applicability of the lattice Boltzmann method to determine the ohmic resistance in equivalent resistor connections*. Mayken Espinoza-Andaluz, Julio Barzola, Víctor H. Guarochico-Moreira and Martin Andersson.

Journal of Physics: Conference Series, Volume 936, Number 1

PRESENTATIONS

Modeling of 20KW Electrolizer (Presented in FH-Stralsund, February 2009)

Speaker – *Alternative electric generation for households using hydrogen fuel*. First Renewable Energy Symposium organized by CERA (Centre for Renewable and Alternative Energy, Guayaquil-Ecuador) (17 – 19 October 2011)

Speaker* – *ARSM, Algebraic Reynolds Stress Model and Impingement Jet applications*, Turbulence Theory and Modeling. (Lund University, Energy Sciences Department, Fluids Mechanics Division) (10-12 December 2013).

Speaker* - *Lattice Boltzmann Method applied to SOFC modeling.* (Lund University, Energy Sciences Department) (12 March 2014)

Speaker – *Renewable Energies. Solar, Hydrogen and Fuel Cell Applications.* (Lund University, Energy Sciences Department) (24 April 2014)

Poster presentation – *Evaluation of Tortuosity in High Porosity Media Using the Lattice Boltzmann Method.* (Udine University, Udine – Italy, CISM-Advanced Professional Training School) (14 July 2014)

Speaker* – *Tortuosity comparison in two different porous materials using LBM.* (Lund University, Energy Sciences Department) (28 August 2014)

Speaker – *LBM as a powerful tool for solving transport equations.* (Lund University, Energy Sciences Department) (22 September 2014)

Speaker – *An Analysis about Micro Temperature Sensor in PEMFC.* (Lund University, Energy Sciences Department) (28 November 2014)

Speaker – *Compression Effects over micro-structure parameters in Proton exchange membrane Fuel Cells.* (Lund University, Energy Sciences Department) (17 December 2014)

Speaker – *On Microstructural Analysis of Porous Media Existing in Fuel Cells Using the Lattice Boltzmann Method.* (Lund University, Energy Sciences Department) (10 June 2015)

Poster presentation – *Fluid Behavior Through a Simulated PEMFC Gas Diffusion Layer.* (Ulster University, Crete – Greece, European Technical School on Hydrogen and Fuel Cells 2015) (22 – 26 June 2015)

Poster presentation – *Test Results of a Mortar Made of Crushed Rice Husk Used for Housing Walls.* (Latin American and Caribbean Consortium of Engineering Institutions, Santo Domingo – Dominican Republic, LACCEI 2015) (29 – 31 July 2015)

Poster presentation – *Fuentes de Energías Renovables como potencial de producción eléctrica en zonas rurales del Ecuador.* (Latin American and Caribbean Consortium of Engineering Institutions, Santo Domingo – Dominican Republic, LACCEI 2015) (29 – 31 July 2015)

Speaker – *Lattice Boltzmann modeling applied to porous media from 2d to 3D.* (Lund University, Energy Sciences Department) (24 November 2015)

Speaker – *LBM application to SOFC, an approach to the experimental data.* (Denmark Technical University, Department of Energy Conversion) (21 December 2015)

Speaker – *Incidence of the particle size over the tortuosity in a porous medium using the lattice Boltzmann method.* (Flowing Matter 2016, Universidade do Porto, Portugal) (12 January 2016)

Speaker – *Fluid flow through porous media and transport phenomena parameters.* (Lund University, Energy Sciences Department) (19 February 2016)

Speaker – *Fluid flow through porous media and applications in Fuel Cells.* (Forschungszentrum Jülich -IEK3, Germany) (27 April 2016)

Speaker - *Modeling of a gradient porosity SOFC anode anode.* (8th International Conference on Applied Energy, Beijing, China) (11 October 2016)

Speaker - *Transport phenomena in porous media related to Fuel Cells from a Lattice Boltzmann method point of view.* Invited speaker to a Fuel Cells lecture at the “University of Electronic Science and Technology” Chengdu, China. (12 October 2016)

Speaker – *Fluid flow through porous media and transport phenomena parameters.* (Lund University, Energy Sciences Department) (20 October 2016)

Speaker – *El método de Lattice Boltzmann en la resolución de problemas en Ciencias e Ingeniería.* Facultad de Ciencias Naturales y Matemáticas, Espol. 4 de agosto 2017

Speaker – *El método de Lattice Boltzmann en la resolución de problemas en Ciencias e Ingeniería.* Instituto Tecnológico Superior Babahoyo (ITSB). 4 de Octubre 2017

Speaker – *Keynote – La importancia de la enseñanza de las Ciencias.* Universidad Estatal de Guayaquil. 15 de Diciembre de 2017.

Speaker – *La Ciencia detrás de la Energía Limpia – Una vista microscópica a las Fuel Cells-.* ESPOL, Club de Física. 15 de Enero de 2018.

MEMBERSHIP & SOCIETIES

Spanish Hydrogen Association (AEH2) – 2013

International Solar Energy Society (ISES) – 2014

American Association of Physics Teachers (AAPIT) – 2014

European Physical Society (EPS) – 2014

Swedish Association of Graduate Engineers (Sveriges I) – 2015, 2016

COST Act. MP1305. Materials, Physics and Nanosciences – 2015 - 2017

COST Act. TU1401. Ren. Energy and Landscape Quality – 2015 - 2016
American Society of Thermal and Fluid Engineers (ASTFE) – 2016
International Association for Hydrogen Energy (IAHE) – 2015, 2016
**American Physical Society (APS) – 2015- 2017*
**Electrochemical Society (ECS) – 2015, 2016*
**Institute of Electrical and Electronics Engineers (IEEE) – 2014 - 2017*
**American Society of Mechanical Engineers (ASME) – 2014 - 2017*
**Society for Industrial and Applied Mathematics (SIAM) – 2015 - 2017*

**PEER
REVIEWER**

- Asme Conference, International Mechanical Engineering Conference & Exposition (IMECE) – 2014
- International Journal of Energy and Power Engineering (IJEPE) – 2015
- International Journal of Sustainable and Green Energy (IJSGE) – 2015
- 8th International Conference on Energy Planning, Energy Saving, Environmental Education (EPESE) – 2015
- WSEAS Transactions on Heat and Mass Transfer – 2015
- American Journal of Physics and Applications (AJPA) – 2015
- 6th International Conference on Automotive and Transportation Systems – 2015
- 14th International Conference on Instrumentation, Measurement, Circuits and Systems – 2015
- International Journal of Renewable Energy Research – 2016
- I Jornada Pedagógica de Investigación en Enseñanza de la Carrera de Físico-Matemáticas – 2016
- LACCEI – 2016
- 20th World Multi-Conference on Systemics, Cybernetics and Informatics, 2017
- Computer and Mathematics with Applications, 2017
- CINESI, 2017
- FUEL, 2017

**EDITORIAL
BOARD**

- Science Journal of Energy Engineering – 2015
- American Journal of Electromagnetics and Applications – 2015
- American Journal of Physics and Applications – 2015
- YACHANA Journal, a publication of ULVR – 2015

**LANGUAGE
SKILLS**

Spanish (Native)
English (Professional proficiency)
Swedish (Elementary proficiency)
German (Elementary proficiency)