Irving Osiris Hernández López
Departamento de Ingenería Química y Metalurgia
Dirección postal: 83000
México

Intereses de la investigación

1.- Aprovechamiento de Energía Solar en Edificaciones
2.- Dinámica de Fluidos Computacional
3.- Predicción numérica del desempeño térmico de sistemas solares pasivos mediante dinámica de fluidos computacional.

Empleo

Departamento de Ingenería Química y Metalurgia

México
14 ene 2019 → present

Resultado de la investigación

Numerical and experimental study of heat transfer in a cubic cavity with a PCM in a vertical heated wall
Moreno, S., Hinojosa, J. F., Hernández-López, I. & Xaman, J., 1 sep 2020, En: Applied Thermal Engineering.

Computational fluid dynamics and experimental study of turbulent natural convection with surface thermal radiation in a cubic enclosure
Navarro, J. M. A., Hinojosa, J. F. & Hernández-López, I., 1 may 2020, En: International Journal of Modern Physics C. 31, 5, 2050064.

Acceleration of the numerical solution for the radiative transfer equation using a modified relaxation factor: X-factor method
Torres-Aguilar, C. E., Xamán, J., Moreno-Bernal, P., Hernández-Pérez, I., Zavala-Guillén, I. & Hernández-López, I. O., 22 ene 2020, En: Engineering Computations (Swansea, Wales). p. 1823-1847 25 p.

Thermal performance of a solar façade system for building ventilation in the southeast of Mexico
Hernández-López, I., Xamán, J., Zavala-Guillén, I., Hernández-Pérez, I., Moreno-Bernal, P. & Chávez, Y., 1 ene 2020, En: Renewable Energy. 145, p. 294-307 14 p.

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Hernández-López, I., Xamán, J., Zavala-Guillén, I., Hernández-Pérez, I., Moreno-Bernal, P. & Chávez, Y., 1 ene 2020, En: Renewable Energy. p. 294-307 14 p.

Thermal performance of walls with passive cooling techniques using traditional materials available in the Mexican market
Uriarte-Flores, J., Xamán, J., Chávez, Y., Hernández-López, I., Moraga, N. O. & Aguilar, J. O., 25 feb 2019, En: Applied Thermal Engineering. p. 1154-1169 16 p.

Ventilation potential of an absorber-partitioned air channel solar chimney for diurnal use under Mexican climate conditions
Zavala-Guillén, I., Xamán, J., Hernández-Pérez, I., Hernández-Lopéz, I., Jiménez-Xamán, C., Moreno-Bernal, P. & Sauceda, D., 25 feb 2019, En: Applied Thermal Engineering. p. 807-821 15 p.

Numerical study of laminar and turbulent flow with radiatively participating media
Alvarado-Juárez, R., Xamán, J., Hernández-López, I. & Álvarez, G., 2019, En: Thermal Science. 23, 3B, p. 1825-1835 11 p.

X-factor: A modified relaxation factor to accelerate the convergence rate of the radiative transfer equation with high-order resolution schemes using the Normalized Weighting-Factor method
Xamán, J., Hernández-López, I. & Hinojosa Palafox, J. F., 22 may 2018, En: Computer Physics Communications. 231, 1, p. 72-93 11 p., 1.

Numerical study of the optimum width of 2a diurnal double air-channel solar chimney
Zavala-Guillén, I., Xamán, J., Hernández-Pérez, I., Hernández-Lopéz, I., Gijón-Rivera, M. & Chávez, Y., 15 mar 2018, En: Energy. 147, p. 403-417 15 p.

Numerical study of the optimum width of 2a diurnal double air-channel solar chimney
Zavala-Guillén, I., Xamán, J., Hernández-Pérez, I., Hernández-Lopéz, I., Gijón-Rivera, M. & Chávez, Y., 15 mar 2018, En: Energy. p. 403-417 15 p.

Evaluation of the CPU time for solving the radiative transfer equation with high-order resolution schemes applying the normalized weighting-factor method
Xamán, J., Zavala-Guillén, I., Hernández-López, I., Uriarte-Flores, J., Hernández-Pérez, I., Macías-Melo, E. V. & Aguilar-Castro, K. M., 1 mar 2018, En: Journal of Quantitative Spectroscopy and Radiative Transfer. 208, p. 45-63 19 p.

Evaluation of the CPU time for solving the radiative transfer equation with high-order resolution schemes applying the normalized weighting-factor method
Xamán, J., Zavala-Guillén, I., Hernández-López, I., Uriarte-Flores, J., Hernández-Pérez, I., Macías-Melo, E. V. & Aguilar-Castro, K. M., 1 mar 2018, En: Journal of Quantitative Spectroscopy and Radiative Transfer. 208, p. 45-63 19 p.

Experimental thermal evaluation of building roofs with conventional and reflective coatings
Hernández-Pérez, I., Xamán, J., Macías-Melo, E. V., Aguilar-Castro, K. M., Zavala-Guillén, I., Hernández-López, I. & Simá, E., 1 ene 2018, En: Energy and Buildings. 158, p. 569-579 11 p.

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Hernández-Pérez, I., Xamán, J., Macías-Melo, E. V., Aguilar-Castro, K. M., Zavala-Guillén, I., Hernández-López, I. & Simá, E., 1 ene 2018, En: Energy and Buildings. 158, p. 569-579 11 p.

Optical thickness effect on natural convection in a vertical channel containing a gray gas
Zavala-Guillén, I., Xamán, J., Salinas, C., Ismail, K. A. R., Hernández-Pérez, I. & Hernández-López, I., 1 abr 2017, En: International Journal of Heat and Mass Transfer. 107, p. 510-519 10 p.

Optical thickness effect on natural convection in a vertical channel containing a gray gas
Zavala-Guillén, I., Xamán, J., Salinas, C., Ismail, K. A. R., Hernández-Pérez, I. & Hernández-López, I., 1 abr 2017, En: International Journal of Heat and Mass Transfer. p. 510-519 10 p.

Thermal performance of a hollow block with/without insulating and reflective materials for roofing in Mexico
Xamán, J., Cisneros-Carreño, J., Hernández-Pérez, I., Hernández-López, I., Aguilar-Castro, K. M. & Macias-Melo, E. V., 1 ene 2017, En: Applied Thermal Engineering. 123, p. 243-255 13 p.

Thermal performance of a hollow block with/without insulating and reflective materials for roofing in Mexico
Xamán, J., Cisneros-Carreño, J., Hernández-Pérez, I., Hernández-López, I., Aguilar-Castro, K. M. & Macias-Melo, E. V., 1 ene 2017, En: Applied Thermal Engineering. p. 243-255 13 p.

Thermal performance of a room with a double glazing window using glazing available in Mexican market
Aguilar, J. O., Xamán, J., Olazo-Gómez, Y., Hernández-López, I., Becerra, G. & Jaramillo, O. A., 1 ene 2017, En: Applied Thermal Engineering. 119, p. 505-515 11 p.

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Aguilar, J. O., Xamán, J., Olazo-Gómez, Y., Hernández-López, I., Becerra, G. & Jaramillo, O. A., 1 ene 2017, En: Applied Thermal Engineering. p. 505-515 11 p.

Thermal energy storage and losses in a room-Trombe wall system located in Mexico
Hernández-López, I., Xamán, J., Chávez, Y., Hernández-Pérez, I. & Alvarado-Juárez, R., 15 ago 2016, En: Energy. 109, p. 512-524 13 p.

Thermal energy storage and losses in a room-Trombe wall system located in Mexico
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Computational fluid dynamics for thermal evaluation of a room with a double glazing window with a solar control film
Xaman, J., Olazo-Gomez, Y., Chavez, Y., Hinojosa, J. F., Hernandez-Perez, I., Hernandez-Lopez, I. & Zavala-Guillen, I., ago 2016, En: Renewable Energy. 94, p. 237-250

Analysis of LAMINAR and TURBULENT natural, mixed and forced convection in cavities by heatlines
Hernández-López, I., Xamán, J., Álvarez, G., Chávez, Y. & Arce, J., 1 ene 2016, En: Archives of Mechanics. 68, 1, p. 27-53 27 p.

Analysis of LAMINAR and TURBULENT natural, mixed and forced convection in cavities by heatlines
Hernández-López, I., Xamán, J., Álvarez, G., Chávez, Y. & Arce, J., 1 ene 2016, En: Archives of Mechanics. 68, 1, p. 27-53 27 p.

Pseudo transient numerical study of an earth-To-Air heat exchanger for different climates of México
Xamán, J., Hernández-López, I., Alvarado-Juárez, R., Hernández-Pérez, I., Álvarez, G. & Chávez, Y., 15 jul 2015, En: Energy and Buildings. 99, p. 273-283 11 p.

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Xamán, J., Hernández-López, I., Alvarado-Juárez, R., Hernández-Pérez, I., Álvarez, G. & Chávez, Y., 15 jul 2015, En: Energy and Buildings. p. 273-283 11 p.

Numerical study of heat and mass transfer in a solar still device: Effect of the glass cover
Alvarado-Juárez, R., Xamán, J., Álvarez, G. & Hernández-López, I., 2 mar 2015, En: Desalination . 359, p. 200-211 12 p.

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Numerical study of conjugate heat and mass transfer in a solar still device
Alvarado-Juárez, R., Álvarez, G., Xamán, J. & Hernández-López, I., 16 sep 2013, En: Desalination . 325, p. 84-94 11 p.

Numerical study of conjugate heat and mass transfer in a solar still device
Alvarado-Juárez, R., Álvarez, G., Xamán, J. & Hernández-López, I., 16 sep 2013, En: Desalination. p. 84-94 11 p.

Distinciones

Candidato a Investigador Nacional
Hernández López, Irving Osiris (Beneficiario), 1 ene 2017

Investigador Nacional Nivel 1
Hernández López, Irving Osiris (Beneficiario), 1 ene 2020

Cursos

FUENTES RENOVABLES DE ENERGÍA

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