



### **Michel El Hayek**

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## **Biography**

Dr. El Hayek joined Notre Dame University-Louaize as Assistant Professor in the Department of Mechanical Engineering in 1998 and is currently a Professor of Mechanical Engineering in the same department. He chaired the Department of Mechanical Engineering from 2006 to 2012, and was the Dean of the Faculty of Engineering from 2012 to 2020.

Dr. El Hayek is regularly teaching courses in the areas of fluid mechanics, heat transfer, thermodynamics, computational methods, fluid power technology, etc. He is conducting research in his areas of expertise and contributing to scholarly activities at both local and international scales as reviewer, committee member and organizer of international conferences, etc.

Dr. El Hayek is member of ASHRAE and is currently the Chair of the Scholarship Trustees (2020-2021) as well as the Chair of the RAL Student Competition Committee of the ASHRAE Region-At-Large (2019-2021). He was the President of the Lebanese ASHRAE Chapter between 2012 and 2014. He is also member of ASEE and the Order of Engineers and Architects, Tripoli.

## **Peer-reviewed Journals**

### **International**

- M. HAYEK, J. ASSAF, & W. LTEIF: Experimental Investigation of the Performance of Evacuated-Tube Solar Collectors under Eastern Mediterranean Climatic Conditions, *Energy Procedia (Elsevier)*, Vol.6, pp.618-626, 2011.
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- M. EL HAYEK, J. HENRIETTE, Th. VAN DER MEER: Effects of time scale ratio in turbulent diffusion flames modelling, *European Journal of Mechanical and Environmental Engineering*, 41, pp.3-10, 1996.
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- M. EL HAYEK, J. HENRIETTE: Turbulent convective heat transfer predictions with two-equation scalar turbulence model, *ICHEME Symposium Series N°.129*, IChemE & Hemisphere Publishing Corporation, London (UK), pp.955-961, 1992.

## **Peer-reviewed Conference Proceedings**

### **Local**

- M. EL HAYEK: Themofluid engineering education in the computer era, *Proceedings of Conference on the Use of Information Technology in Higher Education in Arab Universities*, pp.95-104, Notre Dame University Press (Lebanon), 2001.

## Regional

- M. ZABLOUK, F. HANNA, M. HAYEK: Experimental investigation of direct-contact heat transfer in isopentane/water, Proceedings of the Sixth Jordan International Chemical Engineering Conference, pp. 254-261, 2012.
- M. EL HAYEK: Prediction of Heated Turbulent Jet Flow using Advanced Scalar Turbulence Models; paper IMEC2004-3002 in the Proceedings of IMECE2004 "Recent Advances and Applications in Fluid Mechanics"; Part I, pp.15-32, Kuwait Society of Engineers, 2004.

## International

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- S. MELKI, M. HAYEK: Building Simulation Tools and Their Role in Improving Existing Building Designs, Proceedings of ACTEA09, Notre Dame University, Lebanon, pp. 503-507, 2009.
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- M. EL HAYEK: Thermal Performance of Stone-Built Old Lebanese Houses as Revealed by Modern Advanced Numerical Methods, Proceedings of PLEA2005 "Environmental Sustainability: The Challenge of Awareness in Developing Countries"; Vol.2, pp.791-796, Notre Dame University (Lebanon), 2005.
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- M. EL HAYEK, J. HENRIETTE: Elliptic predictions of heated turbulent jets using advanced turbulence closures, Eurotherm Seminar N°53, 8-10 October 1997, Mons (Belgium).
- J. HENRIETTE, M. EL HAYEK, M. ZAOUI: Simulation of premixed combustion in gaseous turbulent flow. Comparison of different algorithm, Proceedings of the workshop "New Concept in the Energy Sector"; Zakopane (Poland), 16-21 June 1997, R.A. Bialecki & Z. Rudnicki (ed.).
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### International

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## Specialized Reports

### Local

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- M. EL HAYEK, P. LYBAERT: Simulation de l'écoulement de l'acier dans un répartiteur de coulée continue, Rapport final, Contrat FPMs-Coeckerill-Sambre n° 9606/0704, 31 pages, décembre 1996.
- M. EL HAYEK, H. MEUNIER: Modélisation du rayonnement - Détermination du facteur d'absorption par une technique "somme des gaz gris", Rapport d'avancement, Convention RW-FPMs n° 3186 - Visa 96/42701, 4 pages, octobre 1996.
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- M. EL HAYEK: Modélisation des échanges thermiques par convection forcée dans des conduits de section constante, Rapport interne N°.TEC-R88/3, Faculté Polytechnique de Mons, 1988, 35 pages.
- M. EL HAYEK, J. HENRIETTE, P. LYBAERT: Modélisation de la convection forcée laminaire dans des conduits de section constante, Rapport interne N°.TEC-R88/2, Faculté Polytechnique de Mons, 1988, 77 pages.

## International

- M. EL HAYEK, P. LYBAERT, H. MEUNIER: EX-LIBRIS - Expert System for Energy Efficiency and Pollution Abatement in Industry, 4th Progress Report, CEE-JOULE, Contract JOE3-CT95-0040, 12 pages, January 1998.
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- M. EL HAYEK, P. LYBAERT, H. MEUNIER: EX-LIBRIS - Expert System for Energy Efficiency and Pollution Abatement in Industry, 1st Progress Report, CEE-JOULE, Contract JOE3-CT95-0040, 13 pages, July 1996.
- P. LYBAERT, E. TASSIGNON, M. EL HAYEK, H. MEUNIER: Recommendations for a more energy efficient design of ceramic furnaces - Selection of a case study, Improvement of energy efficiency in glass-melting furnaces, cement kilns and baking ovens, Deliverable D23, CEE-JOULE, Contract JOU2-CT92-0107, 9 pages, April 1996.
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## Esteemed indicators

- ASHRAE Scholarship Trustees: Member for 2018-2019, Vice-Chair for 2019-2020, and Chair for 2020-2021
- Regional Vice-Chair, ASHRAE Region-at-Large, 2016-2019
- Member of Student Activities Committee, ASHRAE, 2016-2019
- Chapter President, ASHRAE Lebanese Chapter, 2012-2014
- Chapter President Elect, ASHRAE Lebanese Chapter, 2010-2012
- Chapter Student Activities Chair, Lebanese ASHRAE Chapter, 2009-2016
- Delegate /Alternate, Lebanese ASHRAE Chapter, Various Chapter Regional Conferences (CRCs)
- Treasurer and Secretary of the Lebanese ASEE Branch, 2014-2018
- Editorial Board Member, Lebanese Science Journal, CNRS, 2017-2019
- Chair and/or member of all committees, International Conference on Advances in Computational Tools for Engineering Application (ACTEA) Series, Notre Dame University (Lebanon), 2009-.
- Honorary Co-Chair, International Conference on Renewable Energies for Developing Countries (REDEC) Series, Beirut (Lebanon), 2014-2019
- Organizing Committee, 9th World Congress on Engineering Education (2013) & 10th World Congress on Engineering Education (2015) organized by the Committee on Engineering Education of the World Federation of Engineering Organizations (WFEO), Beirut (Lebanon).
- Co-Chair and member of all committees of the International Conference on Advanced Research and Applications in Mechanical Engineering (ICARAME11), Notre Dame University (Lebanon), 13-15 June 2011.
- Invited Lecturer, Order of Engineers and Architects - Beirut (April 2015, Beirut, Lebanon), EcOrient Conference (2013, Beirut, Lebanon), etc.
- Reviewer, ASHRAE Annual Meetings & Conferences, Experimental Thermal and Fluid Sciences, etc.
- Thesis Supervisor / Committee Member, NDU, AUB, BAU, Uni. Angers, etc.
- Student Activities Achievement Award, AHSRAE, 2019
- Chapter Service Award, ASHRAE, 2015
- Macquet-Houzeau de Lehaie Prize, AIMS (Association des Ingénieurs de la Faculté Polytechnique de Mons), 1992.

## CV

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