Hayder M. Khan

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Personal Summary: A competent thermal engineer with comprehensive knowledge of building air-conditioning systems, natural ventilation and green building. I have conducted a number of researches during my study, which have included thermal modelling to reduce the energy consumption in buildings and simulations of the air flow in and around buildings using computational fluid dynamics (CFD) as part of a study on sustainability and CO₂ reduction in buildings. Furthermore, I have worked as an air-conditioning engineer for many years in the Middle East, and this work has included the design, installation and operation of HVAC systems for various building types. Before that, I worked as an air-conditioning and refrigeration engineer in a soft-drinks factory. In addition, I taught mechanical engineering at a technical university for several years. In these jobs, I worked as an individual and within teams that included engineers and technicians. I have worked in various roles that included design, maintenance and operation and the transference of knowledge to others.

Education and Qualifications:

- Doctor of Philosophy in Mechanical Engineering, 2015 University of Manchester, UK. Included research on passive cooling and air quality.
- Master's Degree in Mechanical Engineering, 2006 University of Technology, Baghdad. Included speciality in air conditioning and refrigeration, and the research was on an alternative cooling system for buildings.
- Bachelor's Degree in Mechanical Engineering, 2001– University of Technology, Baghdad. Specialising in air conditioning and refrigeration, including a graduation project on the design of an air-conditioning system for housing.

Work Experience:

- Assistant professor in Sultan Qaboos University since mid-2018.
- Working as a consulting engineer for HVAC and Sustainable building from 2016 to 2018 at a local office.
- Research on natural ventilation, green building and thermal mass using numerical modelling as part of MSc and PhD research.
- Part-time teaching assistant at the University of Manchester from 2011 to 2015.
- Teaching at the College of Technology of Sulaimania (Kurdistan Region) from 2008 to 2011.
- Supplying air-conditioning equipment and designing air-conditioning systems for buildings in the Alsard group from 2006 to 2011.

• Mechanical engineer, carrying out installations, supervision and maintenance for refrigeration plan and air compressors for a Baghdad soft-drinks company (Pepsi-Cola Iraq) from 2002 to 2006.

Professional Membership:

- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- Chartered Institution of Building Services Engineers (CIBSE)
- Energy Institute

Additional skills:

- Use of cooling-load software and other HVAC applications.
- Proficient user of STAR CCM+ software (CFD), ENERGY PLUS (dynamics simulation modelling for building) and other programming languages.
- User of Microsoft Office package, including PowerPoint, Word and Excel.

Conferences attended:

- CLIMA 2013 Congress by REHVA member of Czech Society of Environmental Engineering (STP).
- STAR Global Conference 2014 by STAR ADEPCO.
- ROOMVENT 2014 by SCANVAC.

Conference Papers:

- Use of Numerical Modelling to Improve the Performance of Night Ventilation, 2014
- Study of Geometric Parameters Affecting Night Cooling in Courtyard Houses, 2014
- Study of Air Quality and Night Ventilation inside the Courtyard House, 2014
- Modelling Study of Factors Affecting Air Flow around Traditional Courtyard Houses, 2013

Personal Information:

Date and location of birth: 19/04/1979 in Baghdad, Iraq

Nationality: Iraqi

Languages: English, Arabic and basic spoken Kurdish