



CONTENTS

- 1- Personal details
- 2- Research interests
- 3- Education
- 4- IT skills
- 5- Employment experience
- 6- Academic
- 7- Design skills
- 8- Publication
- 9- Future research
- 10- Certificates

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1- Personal Details:

Title : Dr. Arch.
Name : Mohammad Fahmy Abd El- Aleem Ramadan
Nationality : Egyptian
Date of Birth : April 9, 1973
Mailing address : 3 Al-Kawther Street, Sharara Residences, Nasr City, Cairo Egypt
Email : md.fahmy@live.com
Telephone No. : Mob: +2 (011) 20005511
Recent Position : Lecturer, Department of Architecture, Military Technical Collage, **MTC**, Cairo.

2- Research interests:

In the time of climate change, there is no choice but to adapt our communities for the near and future warming. These ideas are gaining more platforms for more closure to using different urban forms even using warm climates urban forms in the cold climate regions.

Basically, the complexity of urban climate interdisciplinary fields has prevented dedicating climate knowledge towards urban planning and applied design studies. This directed my research interests towards the built environment and its mutual effect with outdoor-indoor climate conditions with regards to neighborhood and urban village form design to assess their thermal impact on comfort provision, energy consumption and CO₂ emissions which means on some extent sustainability.

My PhD research thesis's title is:

"Interactive urban form design of local climate scale in hot semi-arid zone" where some key urban passive cooling tools for outdoor comfort provision have to be considered such as the fabric form, housing typology and population density. Therefore, CFD Numerical thermal performance modelling, solar and weather data analyses for urban form scenarios, urban trees microclimate, green structure...etc are of my research concern. Now, my investigations are going further for applying outdoor-indoor coupled studies to assess built environments using generated weather data for future climate urban forms and land uses generation by a developed regression model during my previous research. By this way, urban designers and planners might be able to anticipate their urban developments sketch designs and land uses on a climate basis.

My design expertise include different ranges and scales of buildings through many firms since 1995 until now. These range from residential and administrative buildings to resorts and urban developments in Egypt and the UK and reflects the functionality and employments of spaces to generate dynamic architecture and recently my research has extended this experience to include green architecture and energy efficient buildings. Designer of more than 50 residential buildings' projects, contributing to designing 3 coastal resort villages, mosque in Lebanon, 4 administrative buildings and a football stadium.

3- Education:

- **Doctor Philosophy** in Urban Environment Architecture, School of Architecture, University of Sheffield, August 2010 titled; ***"Interactive urban form design of local climate scale in hot semi-arid zone"***.
- **Master** in Architecture Engineering, Military Technical College, MTC, Cairo, Egypt, January 2002 with courses GPA of 3.83, it was titled; "Integration of solar energy application with the architectural design of residential buildings at hot arid zones of Arab Republic of Egypt".
- **Bachelor** in Architecture Engineering, Military Technical College, Cairo, Egypt, June 1995 with overall grade of ***"Excellent"***, and Cultural Centre as graduation design project with grade ***"Excellent"*** also, B.Arch. GPA. 3.56 of 4 and was ranked the 1st among my graduate colleagues.

4- IT skills:

- DesginBuilder3.0 indoor climate simulations and analysis for comfort, energy consumption and CO₂ emissions.
- ECOTECH2011 solar and weather data analysis.
- ENVI-met 3.1 numerical simulations for urban form thermal impacts.
- CCWorldWeatherGenTool, to predicting and assessing future urban developments' scenarios.
- EnergyPlus7.0 weather data conversion tool.
- ArcGIS9 using ready made digital maps for 3-D modelling and land use analysis.

5- Employments experience:

- Sept2010- Now**
- 1- Lecturer for Sustainable Design, Passive Architecture and Urban Environment in the department of Architecture, Military Technical Collage, MTC.
 - 2- Visiting Lecturer in the department of Architecture, Arab Academy for Science, Technology & Maritime Transport 2010 - 2011.
 - 3- Visiting Lecturer in the department of Civil Engineering, Arab Academy for Science, Technology & Maritime Transport 2011 - 2012.
 - 4- Energy efficient and sustainable urban form design expert for the National Housing and Building Construction Research Center, HBRC, 2011 – now.
 - 5- Member of the specialized panel of environmental principles for urban harmony, 2012.
- 2007-Aug 2010**
- 6- Reseach consultant, urban form design group, URSULA project, university of Sheffield, <http://www.ursula.ac.uk/> .
 - 7- Lecturer for postgraduate master degree in the School of Architecture\Univeristy of Sheffield, UK.
 - 8- PhD researcher, School of Architecture, Univeristy of Sheffield.
- 2004 - 2007:**
- 9- Associate Lecturer, Department of Architectural Engineering, group of arch. Design & environmental control, MTC, Military Technical College of Egypt.
 - 10- Architecture design officer of the MTC projects consulting office.
 - 11- Private work in design and supervising residential buildings' construction, as a joint venture with; <http://www.archhouse.com.eg/> .
- 2001 - 2004:**
- 12- Field and technical office Engineer for residential projects at Ismaillia, Egypt.
 - 13- Member of Architectural design group for residential, religious and administration buildings; <http://www.elafificonsultant.com>.
- 1996 - 2001:**
- 14- Demonstrator, Department of Architectural Engineering, group of arch. Design & environmental control, Military Technical College, Cairo.
 - 15- Member of Architectural design group for coastal touristic villages consulting office, Cairo.
- 1995 - 1996:**
- 16- Field and technical office Engineer for quantities and specifications.
 - 17- Scale model builder for urban planning projects in a consulting office for touristic villages at the Mediterranean north western coast of Egypt.
 - 18- Official and demonstration training in the Military Technical Collage.

6- Academic:

Undergraduates, 2001-2012:

- Tutor for different Architecture undergraduates in 2004 and 2005 and the 1st year in 2012, **MTC**.
- Board member for the Architectural Graduation projects' viva and supervision 2011, **MTC**.
- Architectural design courses for 1st to final year Arch., **MTC**.
- Planning and Town planning for the 3rd and final year, **MTC**.
- Environmental Control for the 2nd year Arch., **MTC**.
- Working drawing and shop details courses for the 1st and final year Arch., **MTC**.
- Execution DesignII, Department of Architecture and Environmental Design, Course Code; AR456, **Arab Academy for Science, Technology & Maritime Transport, AASTMT, 2010-2011**.
- Environmental Control and Energy in Buildings, Course Code; CB533, **AASTMT, 2011-2012**.
- Sustainable Cities, Course code ASE 443sc, **MSA, 2012**.

Postgraduates & research, 2009-2012:

- Manager and founder of the Egyptian Society for Energy in Buildings & Environmental Design Research, EEER; <http://eer-society.wikispaces.com/Introduction>
- President of IBPSA-EGYPT branch; http://www.ibpsa.org/m_affiliates.asp, 2012-now.
- Member in the peer review panel for Building and Environment Journal , elsevier, 2009.
- Member in the peer review panel for Landscape & Urban planning Journal , elsevier, 2012.
- Master degree lecturer in the School of Architecture, **University of Sheffield, UK, 2010**.
- Research consultant, URSULA project, **University of Sheffield, UK, 2010**.
- Master degree supervisor, Architecture Department, **Military Technical Collage, Cairo, 2010-now**.
- PhD degree supervisor, Architecture Department, **Asiut University, Asuit, 2010-2011**.
- PhD viva examiner, Architecture Department, **Asiut University, Asuit, 2011**.
- Master degree lecturer, Department of Architecture and Environmental Design, **AASTMT, 2011-2012**.

7- Design skills:

- Energy efficient neighborhood and urban village planning for present and climate change scenarios.
- Passive and Green Architectural design.
- Environmental thermal impact assessment for built environments.

8- Publications:

- Six published papers in the MTC conferences 1998-2008, *research assistant in a project studying construction regulations effects on Dubai urban form 2001*, research assistant in *thermal properties enhancement project for rice ash brick 2003*. Recent international publications 2008-2011 are as following:
 1. Fahmy M. and Sharples S. (2008b). The need for an urban climatology applied design model. *The online newsletter of the international association of urban climatology*, IAUC(28); <http://www.urban-climate.org/IAUC028.pdf>
 2. Fahmy M. and Sharples S. (2008c). Passive design for urban thermal comfort: a comparison between different urban forms in Cairo, Egypt. *PLEA 2008 – 25th Conference on Passive and Low Energy Architecture*. University College of Dublin, Dublin, 22nd to 24th October 2008; http://architecture.ucd.ie/Paul/PLEA2008/content/papers/poster/PLEA_FinalPaper_ref_307.pdf
 3. Fahmy, M., and Sharples, S. (2009a). On the development of an urban passive thermal comfort system in Cairo, Egypt. *Building and Environment*, 44: 1907-1916.
 4. Fahmy, M., and Sharples, S. (2009b). Once upon a climate: arid urban utopia of passive cooling and the diversity of sustainable forms. SUE-MoT2009 Second International Conference on Whole Life Urban Sustainability and its Assessment. Loughborough University April 22-24;
 5. Fahmy, M., S. Sharples, and M. Yahiya. (2010). LAI based trees selection for mid latitude urban developments: A microclimatic study in Cairo, Egypt. *Building and Environment*, 45(2): 345-357.
 6. Fahmy M., Sharples S. and Eltrapolsi A. (2009). Dual Stage simulations to study foliage microclimatic thermal effects on comfort levels in residential building, Cairo, Egypt. *11th International Building Performance Simulation Association Conference*. University of Strathclyde, Glasgow July 27-30; http://www.ibpsa.org/proceedings/BS2009/BS09_1730_1736.pdf.
 7. Fahmy M., Sharples S. (2011). Urban form, thermal comfort and building CO₂ emissions – a numerical analysis in Cairo. *Building Services Engineering Research and Technology*, (1); 1-12.
 8. Fahmy, M., Hathway, A., Pattachini, L (2011). Environmental thermal impact assessment of regenerated urban form in Sheffield, UK. *World Renewable Energy Congress, WREC2011*, Linköping, Sweden during May 8-13, 2011.
 9. Akmal, T., Fahmy, M (2011). Rice-straw based cement brick thermal performance analysis in Cairo, Egypt. *World Renewable Energy Congress, WREC2011*, Linköping, Sweden during May 8-13, 2011.
 10. Elwan A., Peng C., and Fahmy M. (2011). Towards a unifying visualization modelling platform for supporting climate change conscious urban neighbourhood design. *World Renewable Energy Congress, WREC2011*, Linköping, Sweden during May 8-13.
 11. Fahmy M. (2012). Numerical assessment for urban developments on a climate change basis; A case study in New Cairo, Egypt. 2nd International Conference on quality of life, Modern University for Technology & Information, 18-19 March 2012, Cairo, Egypt.
 12. Fahmy M, Mokhtar H, Gira A. (2012). Adaptive urban form design on a climate change basis; a case study in Nubia, Egypt. *Proceeding of International Conference of Urban Climate, ICUC8*, University College of Dublin, Dublin, 6th – 10th of August.
 13. Fahmy, M. Climate change adaptation for mid-latitude urban developments. *PLEA 2012 – 28th Conference on Passive and Low Energy Architecture*. Ponticia Universidad Catolica, LIMA, Peru, 9th – 11th of November.

9- Future research:

- Fahmy, M (2013). Introducing Urban Trees chapter to the Egyptian code for improving energy consumptions in buildings.
- Fahmy, M. (2014). Improvement and validation of URPLA neighborhood land uses prediction model.

10- Certificates:

Please check the following pages.

Arab Republic of Egypt

Ministry of Defence
Military Technical College



جمهورية مصر العربية

وزارة الدفاع
الكلية الفنية العسكرية

CERTIFICATE

Military Technical College hereby confirms that

Eng. \ *Mohamed Fahmy Abd El - Aleem Ramadan*

Born in

Cairo

On

9

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4

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1973

has been conferred upon the degree of

Bachelor of Science

in *Architect* Engineering on *July, 1995*

(*Architect*)

with the grade (*Excellent*).



(El Samy M)

Maj. Gen. Dr. M. Samy Gamal Eldin
Director of The Military Technical College

Cairo in 18-12-1999

ARAB REPUBLIC OF EGYPT
MINISTRY OF DEFENSE
MILITARY TECHNICAL COLLEGE
GRADUATE STUDY AFFAIRS



CERTIFICATE

It is hereby certified that :
Engineer : *Mohamed Fahmy Abd El-Aleem Ramadan*
Who was born on : *9/4/1973* in : *Cairo*

has Submitted the Ms.C. thesis titled:
*"Integration of Solar Energy Application with The Architectural
Design (An Analytical Studies for Residential Buildings at Hot
Climate Zones In Arab Republic of Egypt)"*

Specialization
in

ARCHITECT ENGINEERING

from the **MILITARY TECHNICAL COLLEGE** on : *1/10/2000*

The following courses were passed with the indicated grades :

No.	Course Title	Grade
1	Environmental Studies	Excellent
2	Computer Aided Design for Architects	Excellent
3	Design Studio (I)	Excellent
4	Environmental Planning	Very Good
5	Building Materials (I)	Excellent
6	Building Economy	Excellent

Cairo on : *15/1/2001*



S. El-Shamarka
Maj. Gen. Dr. Salman El Shamarka
Commandant of the M.T.C.

GS Reg. No . 647/2000

جمهورية مصر العربية
وزارة الدفاع
الكلية الفنية العسكرية
شئون الدراسات العليا

شهادة مؤقتة

تشهد الكلية الفنية العسكرية بأن
السيد النقيب / محمد فهمي عبدالعليم رمضان
المولود في القاهرة في ٩ أبريل ١٩٧٣ قد ناقش بنجاح
رسالة الماجستير بعنوان:

" تكامل تطبيقات الطاقة الشمسية مع التصميم المعماري
(دراسات تحليلية للمباني السكنية في المناطق الحارة في
جمهورية مصر العربية)"
تخصص: هندسة معمارية

وذلك بالكلية الفنية العسكرية يوم الأحد الموافق ٢٠٠٠/١٠/١



التوقيع ()
لواء د. / سلمان العزب الشارقة
مدير الكلية الفنية العسكرية

تحريراً في: ٢٠٠١/١/١٣



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www.sheffield.ac.uk/ssid

5 November 2010

Student Reference Number: 070115233

To Whom it may concern:

This is to certify that

Mr Mohamad Fahmy Abdelaleem Ramadan

Date of Birth: 09/04/1973

was a Full Time Postgraduate student of this University from 1 August 2007 to 12 October 2010 reading for the degree of Doctor of Philosophy in the Faculty of Social Science, School of Architecture. Mr Ramadan submitted a thesis for the degree titled "Interactive Urban Form Design Of Local Climate Scale In Hot Semi-Arid Zone" and after due examination was awarded the Doctor of Philosophy on 1 November 2010. The degree will be formally conferred at a later date.

Official Stamp of the Institution



Dr Philip Harvey
Registrar and Secretary





The University of Sheffield

It is hereby certified that

Mohamad Fahmy Abdelaleem Ramadan

*having fulfilled the requirements prescribed by Ordinances
and after due examination was awarded the degree of*

Doctor of Philosophy

*of this University
on 1 November 2010*



Keith Burnett

Professor Keith Burnett
Vice-Chancellor

Philip K Harvey

Dr Philip K Harvey
Registrar and Secretary



The University of Sheffield
School of Architecture

*Interactive urban form design of local
climate scale in hot semi-arid zone*

Mohamad Fahmy A. Ramadan

Thesis submitted as a partial requirement for the award of
Doctor of Philosophy

Supervisor
Professor Stephen Sharpels



Major subject: Urban Environment

August 2010





The
University
Of
Sheffield.

Department Of
Civil &
Structural
Engineering.

To whom it may concern

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Sir Frederick Mappin Building
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Telephone: 0114 2225702
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Email: A.Hathway@sheffield.ac.uk

4th August 2010

Dear Sir,

Reference for Dr Ramadan

This letter is issued to inform that Dr. Mohamad Fahmy Ramadan from the Department of Architecture of the Military Technical Collage, Cairo Egypt, has been consulted as a research consultant by the project URSULA^{1,2}, Urban River Corridors and Sustainable Living Agendas which is funded by EPSRC³, Engineering and Physical Sciences Council. This consultation extended from the 21st of May until the 4th of August 2010 for a fee of £2250.

His consultation for the design group of URSULA was dedicated towards generating sustainable urban forms for river corridors to deliver high quality urban environment. His duties included applying research methodologies developed by himself for modeling trees and calculating neighborhood reference averaged weather data to quantitatively assess different urban forms on a climate basis.

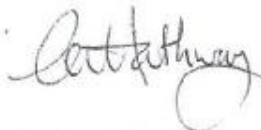
The methods and software used by Dr. Ramadan were as following;

- ENVI-met3.1 BETA4 numerical simulations for urban form thermal impact assessment.
- ECOTECT2010 for solar path diagram and weather data analysis.
- ArcGIS9.2 for land use and urban geometry analysis.
- EnergyPlus4.0 for weather data conversion.
- PolygonPlus1.0 for averaging reference neighborhood weather data.
- Photoshop7.0 for meteorological maps editing.
- Sketchup7.0 to process 3-D models of design alternatives.
- Microsoft word and Excel.



Dr. Ramadan completed all his tasks in a timely and conscientious manner, reporting his results in a good standard of English. He brought his own, useful, ideas to the project and provided valuable advice and modelling expertise. The initial contact was for two stand alone case studies which we extended to a third due to the consistent output he generated, and I would happily employ him for further studies in this area.

Yours sincerely,



Dr Abigail Hathway

URSULA Project Researcher / Lecturer in Architectural Technologies

¹<http://www.ursula.ac.uk/research/design>

²<http://gow.epsrc.ac.uk/ViewGrant.aspx?GrantRef=EP/F007388/1>

³<http://www.epsrc.ac.uk/Pages/default.aspx>

