

Islamization, Ethics and Values in Science and Technology

Suleyman Aremu Muyibi
Mohamed Elwathig
Saeed Mirghani
Waleed Fekry Faris
Abdi Omar Shuriye
Jamal Ibrahim Daoud
Ma'an Fahmi R. Alkhatib
Jalil Chebil

IIUM PRESS
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA



Islamization, Ethics and Values in Science and Technology

By

*Islamic Values and Ethics in Engineering Sciences Research Group
(IVEES-RG)*

International Islamic University Malaysia (IIUM)

Editors

Suleyman Aremu Muyibi

Mohamed Elwathig Saeed Mirghani

Waleed Fekry Faris

Abdi Omar Shuriye

Jamal Ibrahim Daoud

Ma'an Fahmi R. Alkhatib

Jalel Chebil



IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011
©IIUM Press, IIUM

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without any prior written permission of the publisher.

Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

Suleyman Aremu Muyibi
Islamization, Ethics and Values in Science and Technology
Suleyman Aremu Muyibi ... [et al.].
ISBN 978-967-0225-82-1

ISBN: 978-967-0225-82-1

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM
(Malaysian Scholarly Publishing Council)

IIUM PRINTING SDN.BHD.
No. 1, Jalan Industri Batu Caves 1/3
Taman Perindustrian Batu Caves
Batu Caves Centre Point
68100 Batu Caves
Selangor Darul Ehsan
Tel: +603-6188 1542 / 44 / 45 Fax: +603-6188 1543
EMAIL: iiumprinting@yahoo.com

**Islamic Values and Ethics in Engineering Sciences Research Group (IVEE-RG)
Members**

Abdi Omar Shuriye
Ahmad Tariq Jameel
Jalel Chebil
Jamal Ibrahim Daoud
Ma'an Fahmi R. Alkhateeb
Mohamed Elwathig Saeed Mirghani (Secretary)
Mohammed Saedi Jami (Coordinator)
Nassereldeen Ahmed Kabashi
Parveen Jamal
Raed Kafafy
Shihab A. Hameed
Souad A. Mohamad Albat'hi
Suleyman Aremu Muyibi
Waleed Fekry Faris

Authors:

Abdelaziz Berghout
Abdi Omar Shuriye
Abdul Haseeb Ansari
Ahmad Tariq Jameel
Ibrahim M. Zain
Jalel Chebil
Jamal Ibrahim Daoud
Ma'an Fahmi R. Alkhateeb
Mohamed Elwathig Saeed Mirghani
Mohammed Saedi Jami
Muaz Hawari
Nassereldeen Ahmed Kabashi
Omar H. J. Hajjaj
Othman Omran Khalifa
Parveen Jamal
Raed Kafafy
Sayed Desouky Hassan
Shihab A. Hameed
Souad A. Mohamad Albat'hi
Suleyman Aremu Muyibi
Waleed Fekry Faris

Short Bio-data for Authors

Assoc. Prof. Dr. Shihab A. Hameed

Is currently Associate Professor in department of electrical and computer engineering IIUM University Malaysia. He is Senior Member IEEE (Computer & Communications) and member of several International and Local professional societies. He is a member of curriculum committee and developing course outlines for many new courses in Computer and software engineering. He obtained his PhD in Software Engineering from UKM. He has three decades of industrial and educational experience. His research interest is mainly in the software engineering, Professional Ethics, Software quality, surveillance and monitoring systems, healthcare and Telemedicine. Dr. Hameed supervising many PhD and Master Students, Leading many funded research projects as well as leader or member of several research groups or unites. He published more than 100 papers in various international and national referred journals and conferences. Dr Hameed obtains Tens of Medals and rewards for his innovation and advanced research work. He is member of several editorial boards for referred journals as well as member of several organizing committees for international conferences.

Assoc. Prof. Dr. Waleed F. Faris

Waleed F. Faris is the Deputy Dean in the Office of Corporate Strategy & Quality Assurance in the International Islamic University Malaysia (IIUM), and also holds an appointment as an Associate Professor in the Mechanical Engineering Department and Mechatronics Department of the same University since 2004. He obtained his BSc in Mechanical Engineering from Zagazig University, Egypt, in 1989, his MSc from the same university in 1996, and his PhD from Virginia Tech, USA, in 2003 in Non-linear Dynamics. He has to his credit three books and more than 90 technical papers in reputed journals and refereed conferences in Vehicle, structural, and System Dynamics and Control and NVH and management and Islamization. He is a member of the Japanese Society of Automotive Engineers, and a technical committee member and reviewer of several international journals and conferences world-wide.

Assoc. Prof. Dr. Mohamed Elwathig Saeed Mirghani

A Sudanese, currently Associate Professor in the Department of Biotechnology Engineering, Kulliyah (Faculty) of Engineering, IIUM. He obtained his first degree from Cairo University, Cairo, Egypt; the 2nd degree from University of Gezira, Medani, Sudan and the PhD from University Putra Malaysia (UPM). He is member of several International and Local professional societies such as AOCS, AFOCS, SCS, etc. He is registered as consultant for Sudanese Agricultural Engineers Union. He honoured many awards locally and at international level. He published more than 90 papers in various international and national referred journals and conferences proceedings. He is member of several editorial boards and organizing committees for international conferences.

Prof. Dr. Abdul Haseeb Ansari

Professor Dr. Abdul Haseeb Ansari obtained his B.Sc. from Gorakhpur University, India and LL.M., Ph.D. from Banaras Hindu University, India. He has special interest in revenue law, environmental law, international law and comparative jurisprudence. He has extensively contributed on different aspects of environmental law. He has a long experience of teaching and guiding research in these subjects. He has extensively contributed to the knowledge by publishing eighty over articles and a book. He is Editor-in-Chief of Journal of Islamic Law Review. Professor Ansari has membership of some of the international institutions of high repute. He is presently working as a Professor at the International Islamic University, Malaysia. In 2005, he got the best researcher award of the university. In 2008, was honored with the outstanding researcher award of the university.

Assoc. Prof. Dr. Parveen Jamal

Associate Professor Dr. Parveen Jmal obtained her degrees from Aligarh Muslim University, India. She joined International Islamic University in 1997. Her areas of expertise are: natural product processing, optimization for bioactive compounds, secondary metabolites and their applications, bioconversions of natural product and organic residues to value-added products. In these areas, she has completed several projects and has published a large number of articles in various national and international journals.

Prof. Dr. Abdelaziz Berghout

Abdelaziz Berghout, an Algerian, is a Professor of Civilization, Islamic Studies and Creative Thinking, Faculty of Revealed Knowledge and Human Sciences, International Islamic University, Malaysia. He has obtained the Best Lecturer Award (2003), Best Researcher Award (2006) and Outstanding Researcher Award (2007). Currently, serves as the Dean, (Corporate Strategy and Quality Assurance), International Islamic University Malaysia. He also served as Director of Co-curricular Activity Centre Covering Director of Student Development Division. He serves as advisor and consultant to many organisations in Malaysia, USA, Morocco, Turkey, Australia and Singapore...etc. He published many books, among which are, Prophetic Methodology and Social Change (1995) . Civilizational Thought: Need for Transformation of Man, Thought, Education and Culture (2003), Islamic Discourse in a Multi-Religious and Multi-Cultural Society (2005/ 2008), Foundations of Civilizational Renewal and its Universal Dimensions: A Study on Malik Bennabi's Thought (2006), The Islamic Worldview and Renewal: A Civilizational Approach (2006), Towards an Islamic Theory for Civilizational Development: the Contribution of Said Nursi (2006), Islam and the Civilizational Project in contemporary World, (2007), Strategic Thinking to Enhance Human Capital Development, Co-author, Kingdom of Saudi Arabia, 2009. He also published many articles in local and International Journals. He Lectured extensively throughout the world, among other places, the UK, Holland, Australia, Algeria, Malaysia, Singapore, Turkey, the Phillipiens, Brunie, Saudi Arabia, Qatar, Kawait, Syria, United Arab Emarates, Bahrin, Oman, Jordan...etc. The scope of his lectures cover area such as, Islamic thought, culture, civilisation, globalisation, education, quality , strategic planning in higher education, worldview, creative and critical thinking, civilisational dialogue...etc.

Assist. Prof. Dr. Jamal I. Daoud

Dr. Jamal I. Daoud obtained his B.Sc. (1981) degree from University of Baghdad, Iraq, PhD (1992) from State Academy of Management, Moscow, Russia. His interests are in Regression Analysis, Experimental Design and Statistical Inference. He has published a number of papers on the application of regression and experimental design and many other papers in statistics and mathematics as well. Dr Jamal is co-author of four books in experimental design, inferential

statistics and regression analysis. He has presented papers at several international conferences. He is presently working at the International Islamic University Malaysia.

Professor Engr. Dr. Suleyman Aremu Muyibi

He earned his BS Engineering (*cum laude*) with major in environmental control from the University of Central Florida USA. MEng (Civil Engineering) majoring in Water Resources and Environmental Engineering from the University of Benin, Nigeria PhD in Environmental Engineering from the University of Newcastle, UK and Diploma in Islamic Studies (DIS) from the International Islamic University Malaysia. He is a member of Islamic Values in Engineering and Ethics in Engineering Research Group, a member of the Nigerian Society of Engineers (NSE), a Registered Civil Engineer (COREN, Nigeria), a member of the Malaysian National Committee on Irrigation and Drainage (MANCID), a member of Nigerians in Diaspora Science and Technology Committee (DINISAT), member of Moringa News Network, Coordinator of the Bioenvironmental Engineering Research Unit (BERU) at the International Islamic University Malaysia and member of Malaysian Water Association (MWA). His area of expertise and interest is in water resources and environmental management with special emphasis on Islamic perspectives. He have authored and co-authored more than 150 publications in journals, conferences, technical reports, and a book.

Assoc. Prof. Dr. Hamzah Mohd. Salleh

Hamzah Mohd. Salleh received his tertiary education from the University of Waterloo, Canada from 1982–1986 (BSc), 1986–1988 (MSc) and 1989–1994 (PhD). He completed his post-doctoral training at the University of Michigan, USA in 1995. He has extensively contributed in the development of the Faculty of Engineering by serving in different committees and holding administrative positions from 1995 to 2008. His current interests include biological and catalytic properties of enzymes including enzyme technology and engineering; biotransformation; values and ethics in science and technology; and *halal* science.

Associate Professor Dr. Nassereldeen Ahmed Kabbashi Abuelfutouh

Dr. Nassereldeen Ahmed Kabbashi Abuelfutouh obtained his PhD from University of Putra Malaysia 2002 in Environmental Engineering. Dr. Kabbashi area of interest is in Composting; Process Control; Strategic planning and Management, Bioethanol and Biodiesel production and Management; Environmental Engineering; Technology Management; Solid Waste Management; Production & Application of Nanotechnology for wastewater treatment; and Water and Wastewater Treatment and Management. Dr Kabbashi is a member of Biotechnology Engineering Research Unit in the Biotechnology Engineering Department under Kulliyah Engineering IIUM.

Assistant Prof. Dr. Souad A. Mohamad

Assistant Prof. Dr. Souad A. Mohamad is currently an academic staff at department of manufacturing and materials engineering, faculty of engineering, IIUM. She obtained her BSc. from Basra University, Iraq, M.Sc. Baghdad University, Iraq and PhD, Malaya University, Kuala Lumpur, Malaysia, in materials science. Her area of interest is solar energy and Solar Cells, green technology, thin films, semiconductors and polymers, electro-photochemical sensitization, food science and islamization of knowledge. She has a long experience of teaching and supervising students in these subjects. In 2005 and 2007 she got the best teacher awards at center for foundation studies of IIUM. In 2010 she has been selected as a reviewer for Asia-Pacific Journal of Chemical Engineering and IIUM Engineering Journal.

Assistant Prof. Dr. Ma'an Fahmi R. Alkhatib

Dr. Ma'an Alkhatib obtained his B.Sc. in chemical engineering from University of Jordan and M.Sc. in chemical and process engineering from the National University of Malaysia, while his PhD was obtained from University Putra Malaysia in Environmental Engineering. In 2007, he joined the International Islamic University Malaysia as a lecturer in the Department of Biotechnology Engineering. His research interest is on activated carbon, nanomaterials, bioadsorbents and alternative fuels. Dr. Ma'an has published many papers in journals and conferences. He also won many awards in local and international exhibitions.

CONTENTS

Short Bio-data for Authors	vi
Preface	1
Synopsis	2
Chapter 1	3-15
VALUES AND EDUCATION WITHIN THE FRAMEWORK OF ISLAMISATION OF KNOWLEDGE Abdelaziz Berghout	
Chapter 2	16-26
ETHICAL ISSUES IN ENVIRONMENTAL MANAGEMENT AND RESOURCE CONSERVATION FROM ISLAMIC PERSPECTIVE Suleyman Aremu Muyibi & Hamzah Mohd Salleh	
Chapter 3	27-45
RELIGIOUS TOLERANCE AND DIALOGUE IN VIEW OF GÜLEN'S GLOBALIZED WELTANSCHAUUNG Abdi O. Shuriye	
Chapter 4	46-54
TOWARDS AN ISLAMIC THEORY OF DEVELOPMENT BASED ON QURANIC APPROACH: SURAH QURAIISH AS A CASE STUDY Sayed Desouky Hassan, Waleed F. Faris & Raed Kafafy	
Chapter 5	55-76
RIGHT TO A HEALTHFUL ENVIRONMENT IN ISLAM: AN EXPOSITORY STUDY Abdul Haseeb Ansari & Parveen Jamal	
Chapter 6	78-91
EARLY MUSLIM CONTRIBUTIONS TO ASTRONOMY Abdi O. Shuriye & Nasrelddeen Kabashi	
Chapter 7	92-99
ETHICS OF THE STUDENT AND PROFESSOR: ABOUT THE CHARTER OF THE MORAL FROM ISLAMIC PROSPECTIVE Mohamed Elwathig Saeed Mirghani & Ma'an Fahmi R. Alkhatib	
Chapter 8	100-110
MUSLIM CONTRIBUTIONS TO PHYSICS Abdi O. Shuriye & Waleed Faris	

Chapter 9 E-WASTE: PROBLEMS, ISLAMIC PERSPECTIVE AND SOLUTIONS Waleed F. Faris, Othman O. Khalifa and Muaz Hawari	112-124
Chapter 10 HARMFUL DATA THAT AFFECT ETHICAL, RELIGIOUS, AND SOCIAL VALUES OF INTERNET USERS IN EDUCATION PROCESS Shihab A. Hameed	125-142
CHAPTER 11 USE AND ABUSE OF TECHNOLOGY: INTERNET AS A CASE STUDY Waleed F. Faris & Jamal I. Daoud	143-156
Chapter 12 ISSUES ON ETHICS AND VALUES IN ENGINEERING PRACTICES Abdi . O. Shuriye	157-165
Chapter 13 CAN ISLAMIC BANKING INDUSTRY ETHICAL FRAME SAVE THE FINANCIAL SAVE THE WORLD FINANCIAL SYSTEM: THE RESPONSE OF ISLAMIC BANKS IN 2008 FINANCIAL CRISIS Hassanuddeen A. Aziz	166-176

ETHICAL ISSUES IN ENVIRONMENTAL MANAGEMENT AND RESOURCE CONSERVATION FROM ISLAMIC PERSPECTIVE

Suleyman Aremu Muyibi
&
Hamzah Mohd Salleh

Introduction:

Environmental philosophy based on the Qur'an and Prophetic Traditions (Sunnah) is that there is a fundamental link and interdependency between all natural elements which is based on the premise that if man abuses or exhausts one element, the natural world as a whole will suffer direct consequences. The holistic principle of environmental management as applied by the Prophet Muhammad (SAW) is based on three important principles made up of the concepts of *tawhid* (unity), *khilafah* (stewardship) and *amanah* (trustworthy). The Islamic approach to maintaining a balance between material development and responsibility will be explored as applied in resource conservation and sustainability. The utilization of all natural resources – land, water, air, fire (energy), forests, oceans – are considered the right and the joint property of the entire humankind and all creation of Allah on earth. Since Man is *Khalifatullah* (the vicegerent of Allah) on earth, he should take every precaution to ensure the interests and rights of others, and regard his mastery over his allotted piece of land as a joint ownership with the next generation. Furthermore the Islamic nation has been termed as (*ummatan wasatan*) the moderate nation in the Qur'an, a nation that avoids excesses in all things. Thus, Muslims in particular have to utilize the resources provide on earth by Allah (SWT) responsibly for their benefit, honestly maintain and preserve it, use it considerately and moderately, and pass it on to future generations in an excellent condition.

Ethical issues in environmental management and resource conservation from Islamic perspective based on the Qur'an and Prophetic Traditions (Sunnah) expounds that there is a fundamental link and interdependency between all natural elements which is based on the premise that if man abuses or exhausts one element, the natural world as a whole will suffer direct consequences. The holistic principle of environmental management and resource conservation as applied by the Prophet Muhammad (SAW) is based on three important principles made up of the concepts of *Tawhid* (unity), *Khilafah* (stewardship) and *Amanah* (trustworthy). The Islamic approach to maintaining a balance between material development and responsibility is explored as applied in resource conservation and sustainability¹³.

¹³ Suleyman A. Muyibi and Hamzah M. Salleh Environmental and Waste Management Issues from Islamic Perspectives in Islamic Engineering Ethics- Foundation Integration and Practice Abdi O. Suriye, Mohamed H.