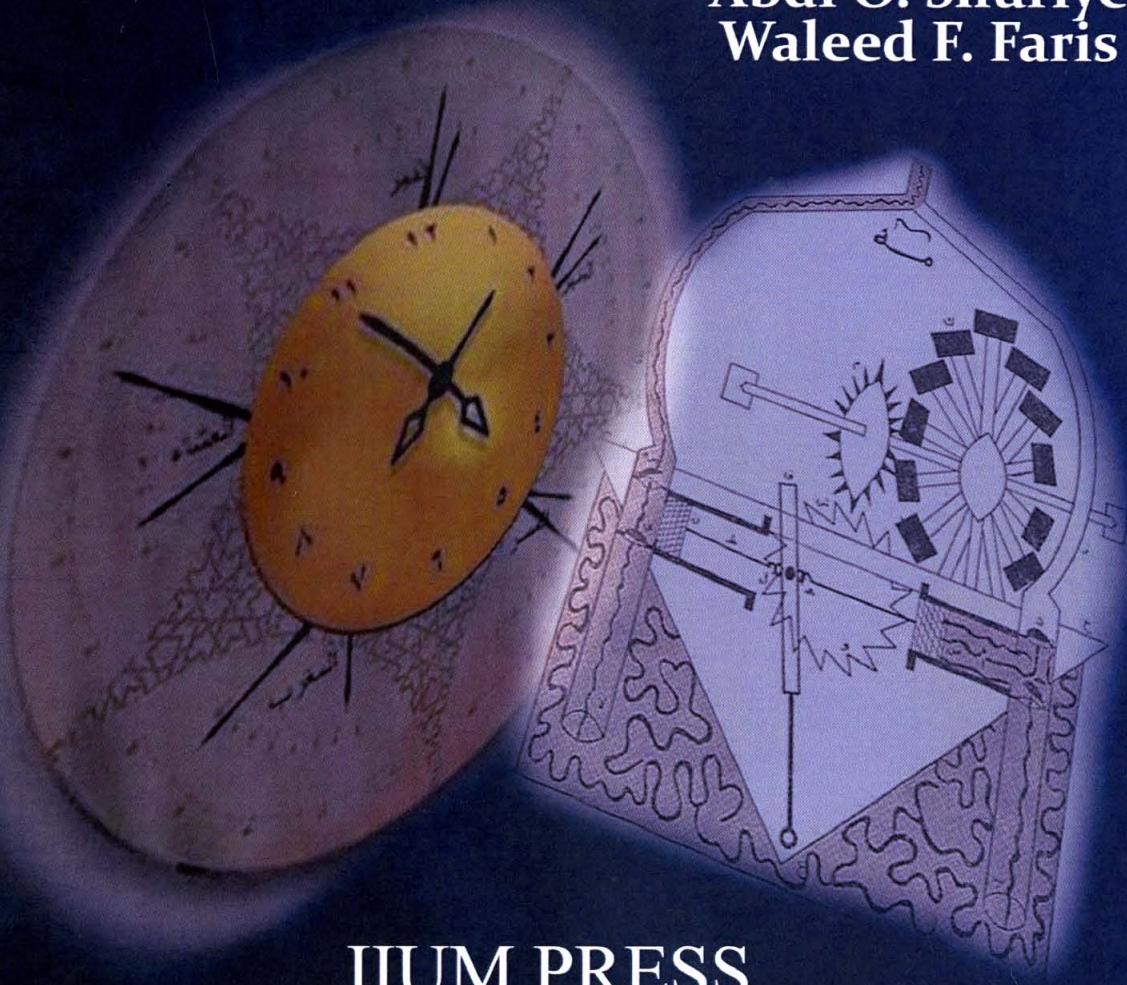


Contributions of Early Muslim Scientists to Engineering Studies and Related Sciences

Abdi O. Shuriye
Waleed F. Faris



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Editors

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Contents

TITLE

Preface	v
Acknowledgment	vi
Lists of Contributors	vii
Introduction	1
Chapter 1 Al-Battani's Contribution to Astronomy	3
Chapter 2 Safiha by Al-Zarqali	8
Chapter 3 Ibn Al Shatir's Influence on Modern Astronomy	12
Chapter 4 I-Zarqali on Instrumentation	19
Chapter 5 Contributions of Al-Razi on Alchemy in Terms of Metal and Substance	24
Chapter 6 Jabir Ibn Hayyan's Work on Sulphur-Mercury Theory	30
Chapter 7 The Contribution of Hassan Al-Rammah to Gunpowder and Rocket Technology	36
Chapter 8 The Contribution of Ibn Al-Awwam in Botany and Agriculture	41
Chapter 9 Al-Battani Contributions in Astronomy and Mathematics	45
Chapter 10 Al-Biruni's Views on the Discovery of the Spherical Earth	49
Chapter 11 Al-Kashi and Access to the Arithmetic & Astronomy	53
Chapter 12 Nasir Al-Din Al-Tusi's Understanding of Trigonometry	58
Chapter 13 Al-Biruni's Experimental Scientific Methods in Mechanics	65
Chapter 14 Al-Haytham's Understanding of Physical Nature of Light	70
Chapter 15 Contributions of Ibn Al-Haytham on Optics	74
Chapter 16 Energy Particle-Physics: The Efforts of Abdel Nasser Tawfik	80
Chapter 17 Mahmoud Hessaby's Contribution to the Infinitely Extended Particles Theory in Quantum Physics	86
Chapter 18 The Contribution of Ibn Ishaq Al-Kindi to Light, Optics and Cryptology	91
Chapter 19 The Contribution of Ibn Sahl in Refraction of Light	95
Chapter 20 Al Kindi on Pharmacology	103
Chapter 21 Contributions of Kerim Kerimov in Aerospace Engineering	110
Chapter 22 Fazlur Rahman Khan's Understanding of Tube Structural System of Skyscrapers	115

Chapter 23	Contribution of Lofti Asker Zadeh to Fuzzy Logic	121
Chapter 24	The Nano World of Munir Nahfey	127
Chapter 25	Abbas Ibn Firnas's Contribution in Aviation	135
Chapter 26	Al- Jazari Contribution to the Development of Water Supply System	139
Chapter 27	Contribution of Tipu Sultan to Rocket Technology	143
Chapter 28	The Contributions of Al - Khazini in the Development of Hydrostatic Balance and its Functionality	147
Chapter 29	The Contribution of Banu Musa Brothers in the Self Changing Fountain	155
Chapter 30	The Invention of the Helium-Neon Gas Laser by Ali Javan	160
Chapter 31	Al-Jazari on Automata	165

CHAPTER SIXTEEN

ENERGY PARTICLE-PHYSICS: THE EFFORTS OF ABDEL NASSER TAWFIK

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16.1 INTRODUCTION

Particle physics has impacted the philosophy of science greatly. It is a branch of physics that studies the existence and interactions of particles that are the constituents of what is usually referred to as matter or radiation. Abdel Nasser Tawfik, Egyptian-born German particle physicist has made his mark in this field. He has the award of Who's Who in Science and Engineering and aims at simplifying scientific issues for public and finding nexus between science and religion. Dr. Tawfik has been providing seminars on various scientific issues. The objective of this chapter is to discuss his contribution to energy particle specifically in the area of Quantum Chromo-Dynamics (QCD). It is of note that the significance of this chapter is appreciating efforts of Islamic Thinkers and Scientists like Tawfik and his QCD phase diagram contribution to the field of energy particle-physics. The method of research adopted is based on library materials, internet sources and academic discussions. The theory and the research framework are limited to focusing mainly on reviewing the person of Abdel Nasser Tawfik, energy particle physics and the Tawfik's outstanding contribution.

16.2 THE WORLD OF ABDEL NASSER TAWFIK

Born in Egypt on 22nd June, 1967, Abdel Nasser Tawfik graduated from Assiut University in 1989. He obtained his Master Degree (M.Sc) in Theoretical Physics from the same University before his change to the University of Marburg, Germany for his Ph.D. in High Energy Physics. Abdel Nasser Tawfik is a professor of physics at the Modern University for Technology and Information (MTI) in Cairo, Egypt and founding director of the Egyptian Center for Theoretical Physics (ECTP).

Dr. Tawfik has worked at numerous universities and research institutes. He joined Hiroshima University in 2005-2006 and has been an Associate Member of the Institute of Nuclear Physics of the Uzbekistan Academy of Sciences (UZAS) since 2009. Presently, Tawfik is trying to lay the groundwork for transforming his research group into an international center of excellence for cosmology and high energy particle physics. Tawfik observed that science

"can only flourish in a free and open society that promotes rigorous debate, embraces transparency and competition, and rewards excellence. If Egypt places these principles at the center of its political and social discourse, science cannot help but benefit. No one can predict the future, but I firmly believe that the coming months and years will be brighter