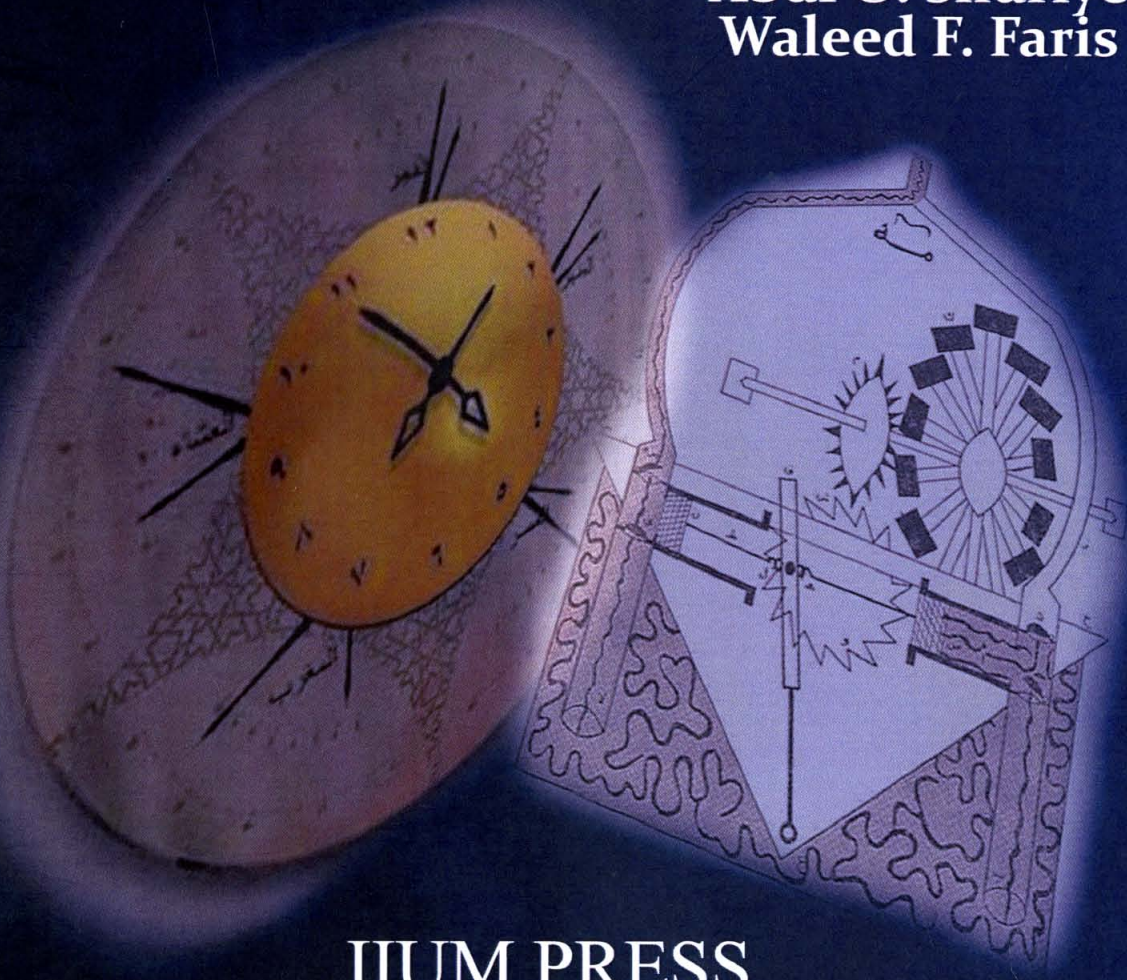


Contributions of Early Muslim Scientists to Engineering Studies and Related Sciences

Abdi O. Shuriye
Waleed F. Faris



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Editors

Abdi O. Shuriye
Waleed F. Faris



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CHAPTER TWENTY FIVE

ABBAS IBN FIRNAS'S CONTRIBUTION IN AVIATION

Suliman Mohamed Mohamed Ali Suliman, Mohamed E. S. Mirghani
Fac. of Eng., International Islamic Univ. Malaysia (IIUM), Jalan Gombak, 53100 Kuala Lumpur, Malaysia.

25.1 INTRODUCTION

Abbas Ibn Firnas (810–887 CE), who came to Córdoba from Baghdad to teach music theory at the court of Abd al-Rahman III. Ibn Firnas had worked in many fields, such as, chemistry, physics, astronomy, and as a poet. He designed a water clock, he worked to improve the way glass was made, have worked on eyeglasses to help those with weak vision. He devised a way to cut very hard quartz, or rock crystal, and fabricated a mechanical model to show the motions of planets and stars. In 875 CE, Ibn Firnas constructed a glider, and launched himself into the air. The flight was successful, and was viewed by a crowd of people. As an experimental vehicle. However, the landing was bad. The objective of this chapter is to describe, compare and discuss Ibn Abbas's Experimental theory in aviation science. The significance of this chapter to show how far he contributed in aviation. Comparison method had been used to evaluate Abbas's theory. The basic flight theory had been used as measurement. The chapter explores the contribution of Abbas Ibn firnas in aviation. The methodology of this chapter uses library based source such as books, journals and other relevant sources.

25.2 IBN FIRNAS'S THEORY

Abbas Ibn Firnas made several attempts to construct a flying machine. In 852 he jumped from the minaret of the Grand Mosque in Cordoba using a loose cloak stiffened with wooden struts. He tried to glide like a bird. He could not. But the cloak slowed his fall, creating what is thought to be the first parachute, and leaving him with minor injuries. In 875, aged 70, having perfected a machine of silk and eagles' feathers he tried again, jumping from a mountain. He flew to a significant height and stayed aloft for ten minutes. At end he crashed on landing. (John H. Lienhard .2004) "Abbas ibn Firnas was the first person to make a real attempt to construct a flying machine and fly," said Hassani (Historian scientist).

