Mission Statement

The mission of IMPMS is to make people aware of the great contributions of Islamic civilization to the West, and indeed to the whole world, by presentations and dissemination of written and audio-visual materials, and also through participation in academic conferences as well as by organizing

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Thought of the Day

PLEASE JOIN IMPMS TODAY

IMPMS goals are to disseminate information about Islamic civilization’s contribution to world civilization through presentations of lectures and seminars to students and teachers at all levels from Middle School to University and to establish a library of books, manuscripts,

Goal and Objectives of IMPMS

The main goal of the Institute of Medieval & Post-Medieval Studies (IMPMS) is to help generate a climate of mutual understanding and respect between Muslims and people of other faiths and cultures and make them aware of the Muslim contributions to the World civilization.

Goal and Objectives of IMPMS: The main goal of the Institute of Medieval & Post-Medieval Studies (IMPMS) is to help generate a climate of mutual understanding and respect between Muslims and people of other faiths and cultures and make them aware of the Muslim contributions to the World civilization. In this way, we aim to correct the concept of dark ages when Muslim scholars and scientist enlightened the world with their original scientific contribution and quell what has been labeled as a clash between Islamic and Western civilizations. In pursuit of this goal, IMPMS seeks to reach out to people of all ages with information about the great contributions and contributors of the Islamic world in many fields of knowledge and arts. This is done by giving talks to varied audiences, including students and teachers at schools and universities, congregations at churches, mosques, synagogues and other places of worship, and organizations promoting peace and non-violence, etc. We also circulate written materials, including a Newsletter, where we try to find opportunities to publish articles in newspapers and journals, and also take part in conferences.

Some Noteworthy IMPMS Activities

December 2009, Michael Hamilton Morgan, author of “Lost History: The Enduring Legacy of Muslim Scientists, Thinkers, and Artists”, gave the keynote address to a large gathering at the IMPMS annual dinner.

September 2010, IMPMS board members Basheer Ahmed, Edward Thomas and Muhsin Shaheed presented papers in an IMPMS session at the Texas Medieval Association (TEMA) annual conference at Southern Methodist University.

November 2010, Basheer Ahmed and Edward Thomas gave presentations at Texas A&M University as members of a panel on “Muslims Contributions on History of Science from Islamic Civilization.”

September 2011, Basheer Ahmed, Edward Thomas, Yushau Sodiq and Muhsin Shaheed gave presentations in an IMPMS session at TEMA conference, held at Baylor University TX.

June 2012, Dr. Ahmed presented a paper at international meeting on Renaissance at St. Louis University, Missouri on the influence of Ibn Rushd’s philosophy on the west.

June 2012, IMPMS arranged Screening of award-winning documentary film “Out of Cordoba” by Jack Bender outlining the influence of Ibn e Rushd and Maimonides on the western civilization.

March 2016 IMPMS presented a seminar on Life and work of Rumi, Prof. Ori Soltes of Georgetown university, Prof. Farid Younus California state university, Prof. Mahmoud Sadri Texas Womens university Prof. Hunt of SMU TX and Dr. Basheer Ahmed made the presentations. It was well attended and participants came from Oklahoma and Houston.

April 2016 IMPMS celebrated with Crescent foundation the “Year of Light” to commemorate the great Muslim Physicist Ibn e Haytam. Prof. Charles Falco of University of Arizona was the keynote speaker. IMPMS arranged an exhibit of great Muslim scholars at the venue-University of Texas Dallas.

Published Books: Dr. Basheer Ahmed, President Emeritus, edited two books, “Muslim Contributions to World Civilization” published by Association of Muslim Social Scientists & IIIT in 2005; “The Islamic Intellectual Heritage and its Impact on the West” published by IMPMS.
How Islamic Scholarship Birthed Modern Astronomy ~ Shannon Stirone

Around the 6th century AD, Europe entered what is known as the Dark Ages. This period of time from around 500 AD until the 13th century witnessed the suppression of intellectual thought and scholarship around the continent which were viewed to conflict with the religious views of the church.

While Europe was in dark ages, the Islamic empire which stretched from Moorish Spain, to Egypt and even China, was entering its “Golden Age”. Astronomy was of particular interest to Islamic scholars in Iran and Iraq and until this time around 800 AD, the only astronomical textbook was Ptolemy’s Almagest, written around 100 AD in Greece. The major advances made by Arabs were rooted in the Greek, Persian and Hindu sources. The early Muslims showed remarkable open-mindedness to every source of knowledge and were quick learners who assimilated the existing knowledge, thereby expanded on it.

Astronomers like Ibn Yunus from Egypt found faults in Ptolemy’s calculations about the movements of the planets and their eccentricities. Ptolemy was trying to find an explanation for how these bodies orbited in the sky, including how the Earth moved within these parameters. Ptolemy calculated that the wobble of the Earth, or precession as we now know it, varied 1 degree every 100 years. Ibn Yunus found that Ptolemy was quite wrong and that in fact it was 1 degree every 70 years.

In the 8th century under Caliph al-Mamun al-Rashid, the first observatory was built in Baghdad and subsequent observatories were built around Iraq and Iran. Since this was before the telescope had been developed, the astronomers of the time invented observational sextants. These tools, some as large as 40 meters, were critical to the study of the angle of the sun, movement of the stars, and the understanding of the orbiting planets.

Abd al-Rahman al-Sufi, an Iranian astronomer, was also the first to observe the Andromeda galaxy and the Large Magellanic Cloud. These observations would have been made purely with the naked eye since the telescope hadn’t yet been created. Of course he didn’t know it was a galaxy at the time, he marked it down as a “cloud” in his notes. This work would later prove to be useful to famed Danish astronomer Tycho Brahe.

Later in the 13th century, scientist and philosopher Nasir al-Din al-Tusi created the famous Tusi Couple. The purpose of this couple was to explain the apparent linear motion of certain heavenly bodies on the basis of circular motion. But as we know now, the motions in the heavens are continuous and not stationary. Ptolemy had trouble explaining this phenomenon but the Tusi couple was able to demonstrate linear motion out of the opposing directions by placing a smaller circle within a larger one. The Tusi Couple would later become critical to Copernicus’ understanding of these motions during his work in the Renaissance.

Ibn-Haytham, who is also known as father of optics, figured out that the light traveled in a straight line into your eyes but not out. His work developed the camera obscura and eventually aided in the development of the modern telescope. Perhaps the most significant contribution Ibn al-Haytham made to the world of science was a methodical way of conducting experiments, repeatedly and diligently, in order to test a theory which became known as the scientific method, the foundation for science as we now know it.

Throughout this time, from the beginning of the Golden Age until the early Renaissance, many universities and madrasas, or schools were being constructed around the Islamic empire. In 859 AD the first university was built in Fez, Morocco. It was conceived of and started by Fatima al-Fihri, the daughter of a wealthy merchant. Scholars from all over the world including Christian and Jewish scientists travelled there to study astronomy, math and philosophy.

Many schools and mosques around this time were overseen and managed by Muslim women who themselves had been educated in subjects ranging from literature to algebra, a form of math also perfected by Islam. One of the most well known astronomical tools called an Astrolabe was created by the Greek thinker Hipparchus but was perfected by Islamic scientists, particularly women. Mariam al-Astrolabi was a Syrian female astrolab maker from the 10th century. She’s best known for perfecting the art of making these instruments which calculated the altitude of celestial bodies in the sky. In her honor, astronomer Henry E. Holt named a main belt asteroid after her in 1990.

Studying the cosmos is something more ingrained in the international culture than meets the eye. If you’ve ever stared at the belt of Orion or Alcor and Mizar, the binary stars in the Big Dipper, then you’ve gotten a small glimpse into the legacy created by Muslim scientists around the world.

Source: astronomy.com/news/2017/02/muslim-contributions-to-astronomy [abridged from original]

IMPMS goals are to disseminate information about Islamic civilization’s contribution to world civilization through presentations of lectures and seminars to students and teachers at all levels from Middle School to University and to establish a library of books, manuscripts, and other learning resources of and about major Medieval and Post-Medieval Muslim scholars in the Islamic World. If you like to support these activities, please become member of IMPMS and donate generously.

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For membership please send name, address, phone number, e-mail address and $25 annual membership fee to IMPMS: 10 Home place Ct. Arlington TX 76016.
In summer 2012 when we set out early morning to visit the rediscovered observatory built by famous Muslim Astronomer of 15th century. It was a moving experience of my lifetime. Ulugh Beg was a grandson of great conquer Timor who ruled from Samarkand. Ulugh Beg was primarily a scientist, a mathematician and an astronomer. In 1417 he started building Madrasas primarily for teaching science, maths, and astronomy. He attracted many competent scholars such as Alkashi, Qadizadi from Iran, Turkey and Baghdad. He started building an observatory in Samarkand which was completed in 1440.

He was one of the first to advocate and build permanently mounted astronomical instruments. His catalogue of 1018 stars was the only such undertaking carried out between the times of Claudius Ptolemy (ca. 170 A.D.) and Tycho Brahe (ca. 1600). A number of instruments were used for the observations of the planets and for determining the relative positions of the stars. The largest instrument in Samarkand was the so-called Fakhri sextant. The Fakhri sextant was by far the largest meridian instrument ever built. Such an instrument was used to determine the transit altitudes of stars (i.e. their maximum angular distances above the horizon).

Ulugh Beg's Catalogue of the stars,( Zij-i Sultani,) devised rules for predicting eclipses and measure the stellar year to within one minute of modern electronic calculations. Observations made at the Observatory brought to light a number of errors in the computations of Ptolemy which had been accepted without question up to that time. Data from his Observatory allowed Ulugh Beg to calculate the length of the year as 365 days 5 hours 49 minutes 15 seconds, a fairly accurate value. He produced data relating to the Sun, the Moon and the planets. His data for the movements of the planets over a year was very accurate.

Ulugh Begs became the ruler of Samarkhand in 1447 after the death of his father. He was not a politician and his primary interest was in doing research and teaching. He was unable to retain power and he was deported to Makkah by his own son and other family members. While he was enroute to Makkah he was assassinated and at the instigation of fundamental religious leaders who oppose to western education, his head was displayed on the top of the observatory and subsequently the observatory was totally destroyed. Luckily all the scientist he brought from the different parts of the world gathered all the research material produced in his institutions and took it to other institutions in Turkey and Iran. Thus they were able to preserve his work and legacy. His work was translated in European languages and he was regarded as one of the leading astronomers of the time.

Two centuries before Galileo, Ulugh Beg challenged religious orthodoxy with statement of bold secularity. saying “religions dissipate like fog, kingdoms vanish but the works of scientist remain for eternity”. Although Ulugh Beg was supported by the official clergy and built various religious institutions and mosques, he failed to diffuse the growing hostility and power of religious fanatics. Ulugh Beg’s observatory remained underground until it was rediscovered in 1908 by a Russian archeologist. In 1999, Uzbekistan celebrated 600th anniversary of the birth of Ulug Beg by re-

Sources
Photographs taken on visit to Samarkhand.
Astronomy from the Greeks to the Renaissance, thanks to the Muslims
Prof. Kevin Krisciunas

Dr. Krisciunas did his undergraduate work at the University of Illinois and completed his doctorate degree (Ph. D) from the University of Washington in Seattle in 2000. He has been a faculty member at Texas A&M University in College Station, Texas, since 2006. He teaches astronomy to undergraduate students. He spent 3 years as a Research Associate at Cerro Tololo Inter-American Observatory and Las Campanas Observatory, in La Serena, Chile, then was a research professor at Notre Dame. At Texas A&M his research on Type Ia supernova has been supported in part by the National Science Foundation since 2007. He has been first author or a coauthor of more than 100 refereed scientific papers. He appeared in Episode 1 of the 6 part PBS series, The Astronomers. He has expertise on the history of astronomy, including the Muslim contributions to the astronomical sciences.