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# A Legend of Computational Fluid Dynamics and an Eminent Mathematician: Professor Md. Anwar Hossain

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#### **OBITUARY**

Professor Md. Anwar Hossain (25 April 1943 - 27 May 2021) was a Bangladeshi mathematician and a legend of computational fluid dynamics. He was a professor of mathematics at the University of Dhaka, a Fellow of the Bangladesh Academy of Sciences. He was also a Senior Associate of the Abdus Salam International Center for Theoretical Physics (ICTP), Italy.

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## 1 Early Life and Education

Dr. Md. Anwar Hossain was born on 25 April 1943 in Chandpur, Bangladesh. His father is Md. Delwar Hossain, a railway engineer, and his mother is Nurunnahar Chowdhury. His grandfather is Bohorot Ali Khan, and his great grandfather, Omar Khan was a Jaminder in Chandpur, Comilla. Dr. Hossain lost his mother to cholera when he was only three months. Professor Hossain spent his early school years in Laksham and studied in Laksham A. Malek Institution, where he passed the Matriculation in 1960. He had a bright and curious mind and excelled at school. After that, he got admitted to Barishal B. M. College. Due to his uncle's job, he came to Dhaka and was admitted to Jagannath College, where he completed H.S.C in 1964.

Professor Md. Anwar Hossain received his B.Sc. from Jagannath College, Bangladesh in 1966, M.Sc. in Applied Mathematics from the University of Dhaka (DU) in 1969, M.Sc. in Pure Mathematics in 1971. He achieved his Ph.D. on "Infinite horizontal rolls under the effect of vertical and horizontal temperature gradients" under the supervision of Professor S. M. A. Haque in 1978 as a research fellow of Bose Center.

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Figure 1: Professor Anwar Hossain was born and grew up here archive-heritage, Chandpur, Bangladesh.



Figure 2: Professor Anwar Hossain's family and his great grandfather Jaminder niche in Chandpur, Comilla; another heritage.

#### 2 Academic Career

Soon after the completion of his Ph.D. study, Dr. Md. Anwar Hossain joined the Department of Mathematics, Dhaka University (DU) as a Lecturer in 1978 and was promoted to Assistant Professor in 1983, Associate Professor in 1989, and a full professor in 1993. Dr. Hossain worked as a Visiting Professor of the Department of Mathematics, COMSATS Institute of Information Technology Islamabad from 2005 to 2007, Foreign Professor from 2007 to 2009. He served as an Assistant Professor at Al-Fathah University, Tripoly, Libya from 1986 to 1989. Dr. Hossain became University Grant Commission (UGC) Professor of DU from 2015 to 2017 for his distinguished contributions to physical sciences. He was a Fellow of the Bangladesh Academy of Sciences, Senior Associate, Abdus Salam International Centre for Theoretical Physics, Trieste, Italy; Honorary Fellow, Australian Institute of High Energetic Materials, Australia since October 2011.

Professor Anwar Hossain was the founder Associate Editor of the GANIT: *Journal of Bangladesh Mathematical Society*. He had tremendous efforts in promoting mathematics education in Bangladesh. He played a pivotal role to initiate National Undergraduate Mathematics Olympiad in Bangladesh. He was the Co-Convener of the olympiad committee until his death. Professor Hossain was also the President of the Bangladesh Mathematical Society from 2012 to 2013. He was always active in organizing international conferences, workshops, research schools, etc. in different corners of Bangladesh. Professor Hossain was an amicable, kind-hearted, good soul in every sense of the term.

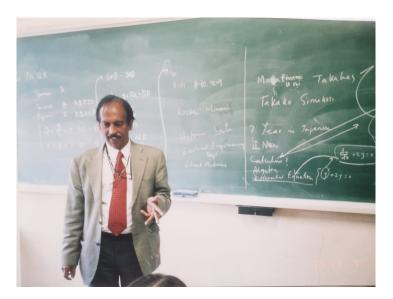


Figure 3: Professor Anwar Hossain.

Professor Hossain had a remarkable attempt to initiate a thesis group in the MSc program of the department of mathematics, DU, in 1981. He has supervised numerous undergraduate final year students, twenty Masters of Science students, and ten doctoral students and worked as a potential mentor for his students. Several of his graduates are now working as full professors in various academic institutions or as scientists in research institutions worldwide, e.g. Dr. Rowshan Ara Begum (University of Durban, South Africa), Dr. Md. Zulfiker Hafiz (IIT, DU), Dr. Bidyut Baran Saha (Kyushu University, Japan), Dr. K C Amanul Alam (East West University), Dr. Sushanta Kumar Das (Kettering University, USA), Dr. Abdul Alim (BUET), Dr. Zafor Iqbal Khan (BUET), Dr. Sarder Firoz Ahmed (Khulna University), Dr. Tahmina Akhter (Yorkville University, Canada), Dr. Akhtar Hossain (East West University), Dr. Manosh Chandra Paul (University of Glasgow, UK), Dr. Sreebash Chandra Paul (Ahsanullah University of Sci. & Tech.), Dr. Suvash Chandra Saha (University of Technology, Australia), Dr. Md. Mamun Molla (North South University), Dr. Asma Selim (Digital animation maker, BD), Dr. Shiddartha Bhowmik (Jagannath University), Dr. Md. Kamrujjaman (DU), Dr. Litan Kumar Saha (DU), and Dr. Nepal Chandra Roy (DU). Moreover, Professor Hossain was the Ph.D. supervisor of Professor Mostafa Kamal Chowdhury (BUET) and Dr. Sharmina Hussain (BRAC University).

#### 3 Publications

Professor Md. Anwar Hossain published more than 200 articles in top-notch peer-reviewed journals, such as Elsevier's journal, Springer's journals, Taylor & Francis's journal, Emerald's journals, Wiley & Son's journals, ASME's journals, etc. The total citations in the Research gate of his papers are 5056 with an RG score of 40.19 and *h*-index 37. The citations in Scopus are 3854, with an *h*-index of 32.

#### 4 Awards

Professor Hossain received numerous awards for his outstanding contributions to his research area. He was awarded Ibrahim Gold Medal (1985-86) for distinguished research works by the University of Dhaka, Dean's Award for the year 1999-2001 by the Faculty of Science, University of Dhaka, an award for contribution in physical Science for the year 2002 by the Physical Society of Bangladesh and University Grant Commission (UGC) Research and innovation in Physical Sciences award for 2002.



Figure 4: Memorandum and many achievements of Professor Hossain.

## 5 Death

Professor Md. Anwar Hossain breathed his last at the age of 78 on 27 May 2021 at his residence in Dhaka. His demise is undoubtedly an irreparable loss to the mathematics community. He is survived by his wife, Mrs. Rowshan Akhtar, and his only son, Mr. Iftekhar Anwar (Upal). He was buried at the Azimpur Koborsthan in Dhaka. Professor Md. Anwar Hossain will be remembered forever as an outstanding mathematician and researcher.



Figure 5: Azimpur Koborsthan (graveyard) where Professor Hossain is sleeping forever.

## Acknowledgments

The authors acknowledged to Iftekhar Anwar, Son of Professor Hossain for sharing the archive photos.

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