

## **Professor Izhar Husain - An inspiration for younger generation**

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Sorbonne University of Paris is one of the oldest institution in Europe for pursuing higher research in Sciences, Mathematics, Social Science, Literature, and Fine Arts, etc. Research scholars from all over the world come here for this purpose. Cite Universitaire (University residential city), situated near Sorbonne, connected by direct metro and buses, has the capacity to accommodate sixteen thousand students on its vast green campus - well equipped by a post office and hospital. This was a unique experiment by the French Government to allocate a big piece of land in many miles for students residences and playgrounds. The plots were allotted free of cost to various countries to build houses (hostels) in their particular architecture and take responsibility of their young folks. A full fledged International House was built by the government in the center with restaurants, coffee house, library, and theaters for weekly movies, dramas, music and other programmes.

In September 1957 after selection, the Government of France had offered six scholarships to Indian students for research in sciences and mathematics. I was one of them to do critical evaluation of the works of the French orientalist Garcin de Tassy and the other was Mr. Mahale from J.N.U. New Delhi for the research in French literature. The Indian student association of Paris, had organized a get-together in December for newcomers to introduce themselves to the rest of the Indian community, where we met our seniors and other fellows who recently came on French scholarship, three research scholars - Singhal, Narsimhan, Sheshadri, sponsored by T.I.F.R. (Mumbai) and Izhar Husain was on Government of India scholarship. All of them were doing higher research in mathematics at the Institute of Henri Poincare of Sorbonne. As till then Indian House had not been constructed (its foundation laid in June 60 by Mr. Humayun Kabir, the then Minister of Science and Technology, Government of India), we were living in different houses. Most of us were residing in American House, which was a spacious accommodation for 500 students, divided into two wings, each side of 250 rooms for girls and boys. Entrance halls, offices, drawing room and other facilities were common.

On the eve of Nauroz on March 21, 1958, I received a greeting card in my letter box, sent by Izhar Husain and this was the start of our acquaintanceship, the same

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\*About the Author: The author of this article Professor Surraiya Husain is the wife of late Prof Izhar Husain. This is written as her own personal remembrance and perspective of his life. Professor Surraiya Husain retired from AMU after being Provost of Abdullah Hall, Professor of Department of Urdu and Dean Faculty of Arts. She is currently with her daughters in USA.

evening we went together to dine at the International House restaurants, then to the coffee house sipping coffee and chatted for a while. He was known as Husain by his friends. I also started to call him Husain.

He was born in his ancestral town, Lucknow, which is famous for its historical importance, culture, urdu language, and poetry. His parents were residing in Bagh Mir Ishq, Rakabgunj, Lucknow. The locality was reputed due to its residents, descending from Mir Anees, Mir Ishq, and other poets. He was brought up in a traditional Lucknawi way. Environment plays an important role in ones thinking and shaping the personality. He was simple, polite, tolerant and never spoke ill to, or of anyone. His early education started in a religious school, later on moved to Government Hussainabad High school, passed his metric examination from U.P. board with flying colors. Later he studied in Lucknow Christian college and did his Intermediate in science with distinction in 1951. He obtained his B.Sc. degree from Lucknow University in 1953, receiving gold medals for Physics, Mathematics, and Chemistry. Then he was admitted in M.Sc Mathematics, scoring record high marks which still stand.

One of his teachers, Dr. R.S. Mishra from Lucknow University was doing research in Riemannian Geometry and he was helping him in this work. Then Professor Mishra moved to Delhi University and Husain joined his PhD program on the Theory of Relativity with him at Delhi University. He worked hard and with brilliance, published research papers in International Journals and submitted his dissertation. Before the viva - voce could be arranged and PhD degree awarded, he received the Government of India scholarship for higher research and proceeded to Paris towards the end of 1957.

After reaching there, he published his research paper within three months in a French Mathematical Journal 'Comptes Rendus'. Everybody was astonished. Actually this paper was in continuation of his earlier research work on Einstein's Theory of Relativity and its application. Albert Einstein was his ideal scientist and mathematician.

He worked for three years on his research day and night relentlessly and studied many new branches, solving different mathematical problems and acquired deep knowledge of the subject. He had an urge to know more and more, his supervisor Prof. Andre Lichnerowicz was very impressed by his talent, involvement, and creativity. Izhar Husain was awarded the prestigious "Docteur de Science" degree from Sorbonne.

He returned to India in December 1960 after getting his D.Sc. degree from Sorbonne. Prof. R.S. Mishra his former teacher was Head of the department in Gorakhpur University and Husain worked there as pool officer for a few months. Then he joined the department of mathematics, Gujarat University, Ahmedabad. Prof. P. C. Vaidya, its chairman was a friend of Prof. Andre Lichnerowicz, as both were attending a conference at T.I.F.R., Mumbai, he asked for his help to find a suitable

candidate for the department. Upon his recommendation, Husain was appointed as reader with many increments. He stayed there for five years and developed the newly built University department by putting modern courses at M.Sc. level and organized research activities.

On 28th October 1961 we were married at my home town Nehtaur District Bijnore (U.P.). Our elder daughter, Deeba, was born in Ahmedabad. He came from there to work as Professor in mathematics, department of Regional Engineering College, Srinagar (Kashmir) in 1965. Later in October 1970, he got an assignment in Tabriz University (Iran) as a visiting Professor and stayed for two years. I also took sabbatical leave from Aligarh Muslim University and joined him there.

During the summer vacations of 1972, he was offered an Italian fellowship and he went with his family for three months to Trieste, which is picturesque port city on the Mediterranean sea. 'International Center for Theoretical Physics' at Trieste is the hub for higher research in Physics and Mathematics. Its Director Prof. Abdus Salam (1929-1996), the famous Physicist and Nobel laureate was the first muslim who got the Nobel Prize in Dec 1979 for his original work. At the center he was always seen working in his cabin and was the role model for the young researchers of the east and the west.

Husain joined Aligarh Muslim University in the end of 1972 as the Head and Professor Mathematics department. From the beginning he was himself involved in teaching and research activity at the department. He introduced courses at various levels in the department in order to make the students at par with other students in India and abroad. He encouraged his colleagues to study new branches of Mathematics and participate in different mathematical conferences and present their research papers and also to motivate young research scholars. He played a prominent role in building the bond between the Department of Mathematics, Aligarh Muslim University and I.C.T.P., Trieste, Italy. This resulted in the exchange of scholars between the two, Prof Abdus Salam visited AMU twice (once in 1981 and then in 1989). The teachers of the AMU Mathematics department used to visit Trieste every year regularly. He also developed academic relationships in Mathematics between Aligarh and German institutions.

Andre' Weil (1906-1998) was a great French Mathematician and was a teacher at A.M.U. from 1930 to 1932. During his stay he organized the courses and teaching of Mathematics. He has written an interesting chapter on Aligarh in his autobiography. After reading it, Husain was of the opinion that the link between such a brilliant mathematician like Andre' Weil and the department be revived and nurtured. This would boost the enthusiasm of the members and research scholars of the department, but it was not possible for him to undertake such a long journey from Princeton University, NJ, USA to Aligarh Muslim University, Aligarh, India.

Husain had invited scholars from different parts of India and abroad to the Department of Mathematics. Many Mathematicians of repute from Canada, England,

Europe and USA came to deliver the series of lectures on the different branches of mathematics at Aligarh Muslim University and interact with research scholars and teachers of the department. The status of the department was enhanced as a Department of Special Assistance during Husain's tenure. Husain regularly participated in seminars and conferences at home and abroad (France, Germany, England and Italy).

Apart from being a member of National Council on Educational Research and Training (NCERT) and University Grants Commission (U.G.C.), he was the member of the Atomic Energy Commission, Tata Institute of Fundamental Research (TIFR), Mumbai and National Board of Higher Mathematics for 12 years, where he suggested for the participation of Indian students in International Mathematical Olympiad. He was appointed as National Coordinator to train young brilliant students of higher secondary selected from all over India on a competitive basis in Bangalore Camp. The team participated in 1990 Olympiad held in China and won many prizes. He suffered from a heart attack and was hospitalized. After 3 months, he recuperated and led the teams to China and Turkey for two consecutive years, then he entrusted the responsibility to other professors. The Bangalore Olympiad Camp has installed 4 prizes in his memory.

Husain never involved himself in petty politics, had a cordial and congenial relationship with everyone- not only the colleagues, but also research scholars, students, staff and administration. He maintained his friendship with his school mates, friends and colleagues till the end of his life.

He was a gentleman, had complete control over his temper. He had a strong personality but never showed arrogance and/or harsh attitude. If he had any disagreements regarding academic issues, then he used to discuss the matter politely but didn't compromise on principles. He used to often say that he is lucky to have his passion and profession in the same subject. He found aesthetics in mathematics. He often spent hours in solving mathematical problems.

He was also much interested in fine arts. He fondly read and remembered a lot of couplets of Hindi, Urdu and Persian poets. Kalidas, Kabir, Umar Khayyam, Hafiz, Ameer Khusro, Ghalib, Anees and Arzoo Lucknawi, etc. were his favorite poets. Listening to Indian classical music, ghazals and other forms of expression were his hobbies. He was open minded and large hearted person. Once, when he was a member of the Faculty of Theology for a year, he suggested a common syllabus for Shia and Sunni students so they could come closer and understand each others views, and the controversial issues should be explained in the footnotes of the course book. But this was not implemented, It reminds me the same attitude of Sir Syed Ahmed Khan, the founder of Aligarh Muslim University, who started the practice of offering prayers of both sects in the University Mosque. This practice is still being followed at AMU.

Husain was an affectionate and caring father. He loved children Both our daughters, Deeba and Seema were attached to him. He wanted his daughters to get the

best quality of science education and motivated them towards the science stream and fortunately they fulfilled his dreams. Deeba Husain completed her MBBS from Jawaharlal Nehru Medical College, AMU with honors and specialized in Ophthalmology. She moved to USA for higher education and after a fellowship in Retina at Mass Eye and Ear Infirmary, Harvard Medical School, has distinguished herself in the field of Retina. She serves as Director Retina Services, Boston University Medical Center, Boston, MA. Her husband Ali Rizvi did MBA from USA and is running a bio-chemical business in USA. Seema Husain has done M.Sc. and PhD. in Biochemistry from AMU and now a researcher in the University of Medicine and Dentistry of New Jersey. She is settled in New Jersey, USA with her husband Farhan Ismail, a software engineer.

Husain took keen interest in constructing our house "PHOOLBAN" at Anoopshahr Road, Aligarh. He had designed its plan himself with the help of his engineer friends, Prof. Aslam Qadir and Prof. S. M. Mazahir. In this area, mostly University teachers are living and he named it as "Kabir Colony".

Husain fell ill in July 1993 and was diagnosed with pancreatic cancer. After about a month, he was operated at the Tata Memorial Hospital, Mumbai. He knew that the disease was incurable and fatal, but accepted it as inevitable and faced it boldly. The same year in November, he was invited to Sorbonne University, Paris to attend an International Conference. Though we were deeply concerned about his deteriorating health, but he told me in a determined voice not to stop him from going as it is a rare chance and he assured me that nothing would go wrong, the academic environment of Paris would be beneficial to his health, and he would come back with improved health. Deeba accompanied him to France. He gave the inaugural address there and participated actively in all academic activities. After a month, he returned to India and was happy.

On April 30, 1994, our younger daughter Seema's wedding ceremony was solemnized. He invited all his friends from Lucknow, colleagues of the University and intermingled with them till late in the evening. He knew he was close to death. His days were numbered, but he never showed any signs of anxiety or worry. He was meeting people and talked to them in his usual style and with humor. The next day we went to Lucknow for the reception, where many friends showed up and he enjoyed the evening to his content and satisfaction. On May 19th, his long time intimate friend, S.M. Wasi came to see him with his family. The morning of May 20th, his condition became critical and he was shifted to the J. N. Medical College, where he breathed his last at six in the evening. Next day on May 21st, he was laid to rest at 9:30 am at the Aligarh Muslim University graveyard (Minot E).

Husain's death was mourned by various institutes and universities. Several condolence meetings were held in India and abroad. Prof. P. C. Vaidya of Gujarat University, Ahmedabad paid a glorious tribute as, "Prof. Izhar Husain started his career from our department of Mathematics and remained associated with it for 5 years. He

undertook several changes in the syllabi, he introduced modern geometry and made it so popular that scholars still solve the complicated problems as he set it. We had a strong bond with him and he always advised us whenever we sought his help”.

Immediately after the meeting, Izhar Husain Memorial Fund was founded and it was decided to award a merit stipend for M.Sc. students. At AMU, two merit scholarships are awarded each year to M.Sc students since 1996.

His death was received with shock and disbelief by his friend and colleagues at TIFR and Atomic Energy Commission. His supervisor from Paris, Prof. Andre Lichnezowicz wrote a letter to me, expressing his grief, “Izhar Husain did not give any hint about his illness during his recent visit in January 1994. Never showed any sign of tiredness. One could never think that he was struggling with such a dreadful disease. He worked hard from morning till evening, interacted with his colleagues and researchers and was seen always in a cheerful mood”.

Husain is remembered by his colleagues, friends and family members as a man of conviction, having tremendous will power and endurance to face all sorts of challenges in life with courage and dignity. He was a firm believer in the idiom, survival-of-the-fittest and throughout his academic career he passionately searched for the excellence of knowledge and always encouraged younger people to achieve with devotion the excellence in their respective fields of interest.

Here, I would like to pen a translation of a couplet from Hafiz, which is befitting:

The foot-steps of the blessed people of God become  
the source of inspiration and light for generations to come.