



***"Once Upon a Christmas Cheery,
In the Lab of Shakhashiri . . ."***

***7:30 p.m., Monday, December 7, 1987
Samuel P. Langley Theater
National Air and Space Museum
Washington, D.C.***





About Bassam Z. Shakhashiri

Bassam Z. Shakhashiri is Assistant Director of the National Science Foundation for Science and Engineering Education. As the principal education officer of the Foundation, he is responsible for developing policy for federal and national strategic leadership in science, mathematics, and engineering education. The NSF science and engineering educational annual budget of \$100 million supports numerous activities including graduate fellowships, college science instrumentation, instructional materials development and teacher enhancement programs for elementary and secondary schools, and informal science education.

Prior to joining NSF in June of 1984, Dr. Shakhashiri was Professor of Chemistry and Director of the Institute for Chemical Education at the University of Wisconsin-Madison. Every year since 1970, he has conducted a special Christmas Lecture full of demonstrations for his chemistry students and their friends. This program quickly expanded to an event eagerly awaited by the Madison community, and since 1973 has been shown on local television and to audiences throughout the country. From 1984 to 1986, his Christmas Lecture was presented in Washington at the National Academy of Sciences. Dr. Shakhashiri learned this tradition of Michael Faraday's Christmas Lecture from University of Illinois Professor Gilbert P. Haight, Jr., who had learned it from Princeton University Professor Hubert Alyea.

Dr. Shakhashiri was born in Lebanon, in 1939, where he completed high school and attended the American University of Beirut for one year. He accompanied his parents and two sisters to the United States in 1957, and completed his undergraduate studies at Boston University in 1960. Dr. Shakhashiri was a Teaching Fellow in Chemistry at Bowdoin College in 1960-1961. His graduate studies were completed at the University of Maryland, which awarded him the M.Sc. and Ph.D. degrees. After a year as post-doctoral research associate at the University of Illinois, Urbana, he was for two additional years a member of its faculty in Chemistry. In 1970, he was invited to the faculty of the University of Wisconsin-Madison.

Dr. Shakhashiri has received many awards including the 1977 Kiekhofers Distinguished Teaching Award from the University of Wisconsin-Madison, and the 1979 Manufacturing Chemists Association Catalyst Award. He is the youngest recipient of both American Chemical Society's James Flack Norris Award for Outstanding Achievement in the Teaching of Chemistry (1983), and the ACS Award in Chemical Education (1986).



Program

Dr. Martin O. Harwit
Director
National Air and Space Museum

Welcoming Remarks

Mr. Bill G. Aldridge
Director
National Science Teachers Association

Introduction of Speaker

Dr. Bassam Z. Shakhashiri
Assistant Director
National Science Foundation for
Science and Engineering Education

Christmas Lecture

Michael Faraday's Christmas Lecture

Michael Faraday, the noted English physicist and chemist, lived from 1791 to 1867. He was a gifted lecturer and he began giving his Christmas Lectures for children at the Royal Institution of Great Britain in the 1840's. Faraday loved simplicity and he had a strong sense of the dramatic. His audience entered wholeheartedly into the world of science with him as guide. His ideas were still considered very unorthodox at that time, and children—who had not yet adopted conventional ideas—would react enthusiastically to the ones he presented. Eventually the Lectures became very popular, and even the Prince of Wales attended and learned about the mysteries of electricity.

Faraday sought to awaken a sense of wonder in his listeners. He knew that once a person could be made to wonder about the world, it was only a short step to studying it. He strove to point out that if you looked closely at the most ordinary thing, such as the force of gravity, it ceased to be ordinary and became somehow miraculous. Faraday did all he could to urge his listeners to see and judge for themselves, to experiment—to question nature directly—whenever anyone discovered something out of the ordinary.



Acknowledgements

The 1987 Christmas Lecture was made possible through the cooperation of:

National Air and Space Museum

National Science Teachers Association

National Science Foundation

Institute for Chemical Education

Santa Claus

Santa's Elves