

### **Salman Habib: From High Current Experiments to UMD Physics**

As a child growing up in Aligarh , India , Dr. Salman Habib had a natural curiosity regarding how things worked. His childhood consisted of building aerofoils, destroying clocks, dangerous chemistry, high-current experiments and an interest in electronics. This curiosity eventually led him to a career in physics.

Habib, received his Physics undergraduate degree from the Indian Institute of Technology in New Delhi . For several reasons, he decided to attend the University of Maryland. With the help of his advisor, Bei-Lok Hu, he obtained his master's degree in 1985 and his doctorate's degree in 1988, both in Physics.

“I came to Maryland originally to work on the detection of gravitational waves eventually switching to the ‘dark side’ of theory (quantum gravity),” said Habib. “Additionally, my professors at IIT, Delhi recommended UMD as an excellent place to go.”

The decision proved to be rewarding. Habib was thrilled to be surrounded by interesting students and faculty, from around the world. In addition, he was given the opportunity to be involved in theory and experimental research groups. While completing work on quantum fields in curved spaces, he also participated on phase transition experiments with Karen Gruner and Sandra Greer.

“Salman was a friend of my student Karen Gruner,” said UMD Chemical & Biomolecular Engineering professor, Sandra Greer. “He was a physics student but he willingly helped her to design a computer-controlled viscometer, about which the two of them wrote a paper. He was a bright and broad intellect, and we enjoyed and appreciated his involvement with us.”

Habib described his experience at Maryland , simply as “fantastic.” He appreciated the approachability and overall friendliness that characterized the department.

After receiving his Ph.D., he was a post-doc with Bill Unruh at the University of British Columbia . Then he became a post-doctoral fellow in the groups T-6 (Theoretical Astrophysics) and T-8. Now, Habib is a staff member in the Fundamental Particles and Field Theory Group in the Theoretical Division at Los Alamos National Laboratory. LANL is the largest institute in Northern New Mexico . He has several external collaborations with national labs and universities and he holds a visiting associateship at Caltech.

His position allows him to participate in basic research on a wide set of topics including cosmology, nonequilibrium, nonlinear science and quantum dynamical systems. Although he works on a large number of topics, the underlying theme is the study of dynamical systems including cosmic scales, the study of rocks, quantum nano-oscillators and particle physics. Work has allowed him such a universality approach to the natural world.

Habib's childhood curiosities and interests led him to discover a passion for Physics. He urges students to follow in his foot steps and choose a path that guarantees enjoyment.

“Go into Physics for the right reasons,” he says. “Not just because you are smart and technically gifted, but because you can't think of doing anything else that grabs your imagination more. Answer this question honestly and you'll know what to do.”

If you would like to contact Dr. Salman Habib, please send messages to the Editor, who will be happy to pass along your questions or comments.