

From: Chellam, Shankar
Date: Thursday, 16 January 2003 02:44:43 AM
To: 'bvbabu@bits-pilani.ac.in'
Cc: 'bv_babu@hotmail.com'
Subject: request for a qualified student

Dear Dr. Babu,

I am an assistant professor of Environmental Engineering who also has a joint appointment in the Department of Chemical Engineering at the University of Houston. I graduated from BITS, Pilani in 1986 with degrees in Chemistry and Mechanical Engineering. After working in India for three years, I went to Rice University to pursue a doctoral degree in Environmental Engineering. After graduation from Rice, I worked in the research wing of a consulting company in Washington DC before joining the University of Houston in 1999 as an assistant professor. I am contacting you based on the information I found in your department web-site to request your assistance in possibly identifying a qualified student to work on my funded research.

In July 2002, I received the CAREER award from the National Science Foundation (<https://www.fastlane.nsf.gov/servlet/showaward?award=0134301>). As you may know, this is an extremely important federal grant for young faculty and involves high-profile work in the chosen research area. My research is primarily aimed at microbial and disinfection by-product control during water purification using membrane technologies. One of my doctoral students is already working on disinfection by-product control but I am in the need of a good doctoral student to work on the microbial removal studies. Specifically, this Ph.D. student will be looking into virus removal by microfiltration and ultrafiltration membranes.

The broad objective of this research thrust is to carefully look into the relative effects of convection, diffusion, and electrostatic interactions on virus removal. If the virus size is of the same order of magnitude as the membrane pore size, then its transport can be substantially hindered. An important aspect of this research will also be to study these hindrances to diffusion and convection as it relates to virus transport across water purification membranes. To avoid risk to the student conducting these experiments, we will not directly study human pathogenic viruses but focus on several bacteriophages. Needless to say, the student will be taught virus enumeration procedures first prior to commencing work in the laboratory.

I would greatly appreciate any assistance you can provide in identifying an appropriate student. I believe that the experimental and theoretical skills that BITS imparts to the students will be extremely valuable to my funded research in this area. Please encourage any good student who might be interested in pursuing this research opportunity to contact me directly (chellam@uh.edu). A dual-degree student pursuing the biology and chemical engineering degrees might be especially qualified for this work. The opening is immediate even though I can wait until the Fall 2003 semester if necessary. The best scenario is for the student to be working in my primary department (Civil and Environmental Engineering).

Please contact me if I can provide additional information. Thanks in

advance and I look forward to hearing back from you.

Best regards,

Shankar

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