

August 14, 2008: Ruhul Amin, a graduate student from The City College of the City University of New York (CREST), wrote a short summary of his stay here after the NESDIS CoRP Symposium as part of the NESDIS Summer Student Exchanges program.

“After the NESDIS CoRP Symposium, which was held at the Oregon State University (OSU) August 12-13 2008, I stayed one additional day to participate in the NESDIS Summer Student Exchanges program. On August 14, I had a meeting with Dr. Pete Strutton whose research interests are phytoplankton productivity, specifically coupling between biological processes and ocean physics and chemistry. He has also been working with harmful algal blooms which are my research interest as well. During the meeting, we discussed harmful algal blooms, specifically: (1) *Pseudo-nitzschia* - a diatom that produces domoic acid and leads to amnesic shellfish poisoning, and (2) *Alexandrium* - a dinoflagellate that produces saxitoxin and leads to paralytic shellfish poisoning. Both of these species often bloom off the coast of Oregon and Dr. Strutton and his team are trying to develop a new satellite product to predict and track these toxic blooms. Since both of these blooms are driven by upwelling and upwelling is usually caused by sea surface wind, we discussed wind products which might be helpful to predict these blooms. However, there are some spatial resolution problems with the wind satellite and we had a brief discussion on this topic.

Recently, I also developed a novel satellite bloom detection technique and a novel satellite toxic dinoflagellate *Karenia brevis* bloom classification technique which I named red band difference (RBD) and *Karenia brevis* bloom index (KBBI), respectively. We also had a long discussion about my algorithms and the possibility of applying these algorithms to other regions such as the Oregon Coast. Over all this was a very informative meeting.”