Process Analytical Technology meets American student

What technical experts can learn from young and agile girls....

Recruitment of personnel to become PAT experts is vital for maintaining and further developing the quality of work required within this center of expertise. Process Analytical Technology (PAT) is used to determine the composition of process streams. The results of such analyses are important for efficient process control to maximize yields with minimum energy and raw material use. For efficient operation of process analytical equipment, a close cooperation of all PAT experts working at various BASF-sites is crucial.

Within BASF an international PAT community has been formed. By collaboration with universities and attracting interns BASF aims to hire the best people for the PAT teams at the various sites. Since BASF-internal collaboration is so important it was decided to reach out to American universities to attract interns to work at the Ludwigshafen site. The students have the unique chance to gain experience abroad while working for a transnational company with large sites also in the US. The idea is to find people that like to work also in a new and unfamiliar surrounding while learning about an area (PAT) that is usually not taught at university.

In 2015 Michael Kloska, head of the PAT group in Ludwigshafen, Rudolf Lehnig, member of the PAT group in Ludwigshafen, and Scott Freeman, a PAT colleague from Freeport, were discussing with professors from the engineering department of Texas A&M University located close to Houston about a collaboration for an intern program. Similar talks were held at Tulane University with participation of Monique Ravey, at that time a PAT-colleague from the Geismar site. As one result job postings for intern positions at BASF Ludwigshafen were posted at Texas A&M and Tulane University, respectively.

Finally, Sandra Fomete from Texas A&M was hired to work for six months in the lab for Process Chromatography within the PAT-group at Ludwigshafen.
Why did you choose this field of study?

I decided to pursue a degree in chemical engineering because I wanted to combine my love for chemistry and problem solving in order to solve real world problems thus, improving lives. The fact that chemical engineers are employable in almost every industry also motivated my choice for this career/educational path. When I finally received an e-mail from my department: The Artie McFerrin Department of Chemical Engineering at Texas A&M University to become part of this exchange program the decision has been affirmed.

What was the reason for you to join this student exchange program?

I joined because I had the strong wish to move to Germany for six months because I believed that I had so much to learn from not only my internship at BASF, but also about the culture and the people here.

Which impressions have you got being at BASF?

It definitely feels great being part of a huge company such as BASF that makes everyday products better in one way or the other. It is remarkable to see how the different operations come together in this verbund site, and how vital process analytical technology is in ensuring product integrity and safety in plants.

Which project work have you obtained at PAT?

My main task has been testing the performance of new Gas Chromatographs and record and document the details of a process analytical sample preparation in an analyzer house in one of production plants. Drawing the sample preparation system in AUTOCAD was an additional possibility to improve my engineering skills.

I believe it is extremely import-
ant for students especially those in engineering, to obtain hands-on experience in order to practice problem solving using their scientific background.

Which contribution do you bring to BASF from your point of view?

I believe that I contribute to BASF mainly through my knowledge I put into my work. The diversity I bring through my background and experiences, enables fostering a conducive work environment.

Is there any impact for your personal work life you hope to get after your return to the US?

As an ambassador for the college of engineering at Texas A&M University, I hope to inspire other students to consider participating in exchange programs such as this one because, I believe these are life-changing experiences. I have personally, learnt how to be more patient and understanding in a new culture and this has improved not only my way of communicating but also how I interact with people. As a leader this is very important. Also, I have made so many valuable friendships and connections which I am very grateful for.

In the meantime Sandra returned back home, finishing her degree in chemical engineering.

"It was a pleasure to have Sandra working in the lab for process chromatography. She was eager to learn about instruments and techniques completely unfamiliar to her when she started her internship. She completed a type test of a process gas chromatograph with a novel design. It is planned to install chromatographs of this type in the new Acetylene plants for the Ludwigshafen site. It is intended to continue the collaboration with Texas A&M University for hiring interns from the Chemical Engineering department. New job postings for intern positions will be sent to Texas A&M. Sandra agreed to advertise the internship program with BASF in Germany. We are looking forward to see more students coming to Ludwigshafen to learn about how working with BASF is like. We are confident that by hiring interns from the United States we will present BASF as an attractive and diverse international company to work for," says Michael Kloska, head of Process Analytical Technology.