



Carlos Henao

Research Engineer

Why did you join Air Products?

I was approached by several companies, but none seemed to offer the kind of stimulating prospects offered by Air Products. The PhD Career Development Program has allowed me to explore different areas of the company and build a solid professional network.

Why do you love working at Air Products? What is it that keeps you working at Air Products?

The atmosphere of respect and appreciation for different ideas, no matter where they come from. The highly competent people at every level. The way that advanced concepts and techniques are developed and later turned into physical process installation—we transfer knowledge into value for our customers and the company. Air Products promotes diversity and opportunity for career development and growth.

Briefly describe your career at Air Products to date.

In my first assignment, I contributed to the development of simulation-optimization models for hydrogen plants and got the opportunity to interact with our operations organization. I then joined the Process Plant group and got involved in the day-to-day operation of a plant. This experience made me realize that the technology and engineering organizations can best contribute to the success of the business via systematic solution of short- and medium-term operational issues. In my third assignment, I was part of the Energy technology group, working on a waste-to-energy facility. The project scale, the innovative set of technologies involved and all the technical challenges we faced made this experience extremely interesting. I am currently part of the Computational Modeling Center, where we develop advanced systematic approaches to deal with complicated technology and engineering problems using computational modeling techniques.

What the most intriguing/satisfying thing(s) you've experienced at Air Products?

Using engineering principles and advanced techniques that led to significant impact to the company's bottom line, like the hydrogen plant that had drifted away from optimal operation due to the partial failure of a key control element that could not be replaced for several years. Using mathematical modeling and optimization techniques, we were able to identify an alternative operational regime that brought the plant back to optimum economic operation.

What career advice would you give to those just starting out in their engineering careers?

Gain broad experience at the beginning of your career, even if your final goal is to become an expert. You'll learn what the company is all about and how teams and functions work together, contribute to success, and gain a professional network that you can later tap into.