



Michigan Photonics Cluster

115 Holmes Road  
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Press Release

Date: June 8, 2017

## **Baker College – Your Michigan Destination for a Degree in Photonics Technology**

After the Mi-Light Spring Renewal Member Meeting, we interviewed Dr. Anca Sala. She is the Dean of the College of Engineering at Baker College who hosted the event. Baker has the prestige of being the only Michigan College with an associate degree program specializing in photonics. This is what Dr. Sala had to say about the successes and challenges over the years.

**Interviewer:** How did the photonics program get started at Baker?

**Dr. Sala:** Research conducted at both the national level and the state level showed photonics companies had a hard time finding well prepared photonics and laser technicians, which continues to be true today. Due to my previous industry experience, I was in a good position to develop and implement a photonics technology program at Baker College. The new program started in 2013 with a lot of support from the institution, the newly formed, at the time, Mi-Light Michigan Photonics Cluster, as well as from the National Science Foundation.

**Interviewer:** What were some of the obstacles that were overcome in being the first Michigan College to offer a two-year degree in photonics technology?

**Dr. Sala:** One obstacle was the lack of awareness of photonics as a hugely important technology for so many fields. Photonics is an enabling technology that helps advance manufacturing, health and medicine, defense, communications, energy, and other fields. But it is achieving this in a fairly invisible way. Having the year 2015 designated as the International Year of Light was a great way to bring more awareness about the technology to the public.

**Interviewer:** How has the program grown since the beginning in students and course offerings?

**Dr. Sala:** The program has had a strong curriculum from the beginning, which was approved by its Industrial Advisory Board. The curriculum is constantly reviewed and new content areas are added. Right now we are looking at adding photonics applications in the automotive industry, which is only fitting with the dominant automotive industry in our state and its future direction towards autonomous vehicles and connected mobility. The Optics and Photonics Laboratory has also continued to expand. Currently, we are working on integrating a high power, 1kW fiber laser with a robot to teach students laser material processing currently used in manufacturing in various industries.

**Interviewer:** How many of the graduates found photonics jobs and can you say who hired them?

**Dr. Sala:** All of our graduates have found jobs with photonics companies in the state. Some of the companies that hired our graduates are IPG Photonics, Laser Mechanisms and IMRA America.

**Interviewer:** Baker has a lab for students to get hands on training. Tell me more about the lab capabilities and which kinds of tests or processes the students use the equipment for.

**Dr. Sala:** The lab supports students' progress all the way from fundamental knowledge to modern photonics applications. Lab equipment similar to the one used in the industry is used to teach electric circuits and optical phenomena followed by lasers and optical systems. Different types of lasers in the lab include helium-neon, argon ion, diode, Nd:YAG, and high power CO<sub>2</sub> and fiber lasers. Test equipment includes a variety of power meters, interferometers, beam profilers, and spectrometers.

**Interviewer:** What are you most proud of about the photonics program?

**Dr. Sala:** That would have to be the success of our graduates, who were hired immediately after graduation and are making great progress in their work and career.

**Interviewer:** What do you see as challenges in bridging the talent gap between colleges and industry?

**Dr. Sala:** Attracting young people especially high school graduates to programs preparing them for careers in various advanced technology fields such as photonics is still a challenge. Technical and manufacturing careers suffer from a perception problem, however the prospects for engineers and technicians are great at this time. These are interesting, challenging and rewarding careers and we need to increase awareness and interest in them.

**Interviewer:** What aspirations do you have for the Baker College photonics program?

**Dr. Sala:** We will continue to enhance the program with new content and adding new lab equipment so that students become proficient with current photonics technology. I look ahead to a well-known, vibrant program attended by diverse students interested in learning about this fascinating technology who will go on to contribute to the growth of photonics in the state and the country.

For more information about the Photonics and Laser Technology program at Baker College, please contact Dr. Anca Sala, at 810-766-4111 or [anca.sala@baker.edu](mailto:anca.sala@baker.edu).



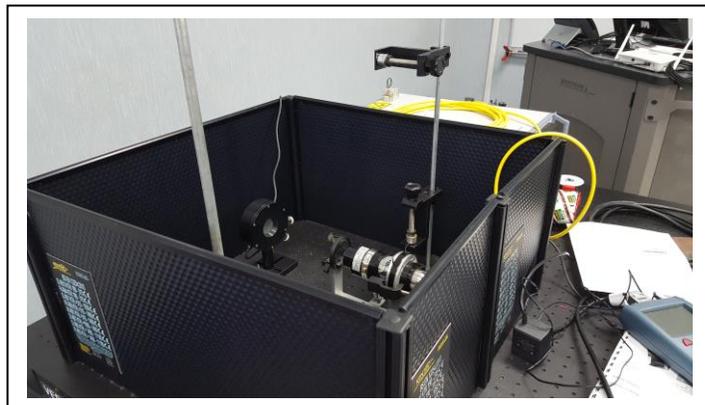
Dr. Anca Sala addressing Mi-Light members



Baker College Robotics Lab



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Baker College Photonics Lab