



Feature interview: Professor Verônica Maria de Araújo Calado

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Dear Readers and Colleagues,

It is a pleasure to invite you to read the interview with Profa Dra Veronica Maria de Araújo Calado.

She is graduated, Master and Ph.D. in Chemical engineering. She was an invited researcher at the Center of Composite Materials – University of Delaware and at the University of California, Berkeley.

Currently, she is a Full Professor at the Federal University of Rio de Janeiro. Besides, she is a reviewer of renowned international journals as Composite Science and Technology, Carbon, Polymer Composites, Composites Part A: Applied science and manufacturing, International Journal of Engineering Science, Food Chemistry, Food Research International, and also a member of the editorial board of Composites Science and Technology and Advances in Materials Science and Engineering.

Therefore, she is an expert in the materials area, emphasizing composites, applied statistics (planning and statistical control of processes), besides thermal and rheological characterizations.

During ConBraPA-2020, Professor Verônica Maria de Araújo Calado was awarded the Academic Distinction Award for her unique contribution to disseminating Scientific Knowledge in Brazil, mainly in Experimental Design and Data Analysis fields.

Enjoy!



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"I got my Bachelor's degree in Chemical Engineering at the Federal University of Pernambuco in 1981. After that, I was invited to work at Votorantim Group, but I did not accept it. I was completely decided to get my Master's and Doctorate degrees at UFRJ because I knew I wanted to be a professor at some university.

"My dream came true" in July of 1983 while I was still a Master's student. Nevertheless, I wanted to be more than a professor; I wanted to become a scientist because I always liked to be challenged and know how to explain real facts. With this thought, I have been working with different topics, such as composite materials for some industries (food, petroleum, civil construction), statistical analyses, polymers, thermal analyses, transport phenomena, but Rheology is the science that I consider very impressive; it is so intriguing and so fascinating!

My professional career focus started with composite materials when I spent two years at the Center for Composite Materials, University of Delaware. However, in 1998, I decided to teach Applied Statistics at our Graduate Program from Escola de Química, UFRJ, and did not stop anymore. From this time on, I got very involved with Statistics, which was definitive to my future research. I noticed how necessary the knowledge in Statistics was to improve the quality of my work and of many students I had the opportunity to teach.

The most cited papers I have (more than 250 citations) are *Trends in Chemometrics: Food Authentication, Microbiology, and Effects of Processing* and *Statistical Approaches to Assess the Association Between Phenolic Compounds and the Antioxidant Activity of and Teas*. I also wrote a book about *Design of Experiments by Using Statistica*, with a new edition coming soon, and some chapters applied to food science: *Development and Optimization of Prebiotics and Probiotics Food*, 2011; *The use and importance of a design of experiments (DOE) in process modeling in food science and technology*, 2014; and *Optimization of food processes using mixture designs*, 2020.

Nowadays, I am working with lignin, an extremely complex molecule from which we can extract many products with different uses, such as a binder, in a supercapacitor, in food, in carbon fibers, in medicine, in cosmetics, in pharmaceuticals. Using the Design of Experiments will address the best experimental strategy to optimize cost and time in order to have competitive new products.

I would like to produce something to help many people to live better in many aspects. This issue is my "fuel" to keep working until I have strengths for this achievement. To transform this dream into reality, it is imperative to know how to efficiently analyze all the data we must have to validate any scientific study. For that, our background in Statistics needs to be very strong. Thus, before starting a new work, everybody needs to think about the best design of experiments. The data set needs to be robust and trustful, and the analyst must understand the results to conclude correctly.

All sciences need Statistics!

This new journal, BJEDIS, intends to spread the use of statistical tools to help people obtain good results for their studies. Enjoy every paper published herein, and the success will come for sure."

