**Mohamed Abuella's Research Interests:** https://mohamedabuella.github.io/cv/

In a nutshell, what I am often doing is finding the optimal & root values and curve fitting of nonlinear equations.
..But usually it is not as simple as that!

For more details, you may have a look at pdf copies of my CV and Cloud of Key Skills & Interests.

## About Me

All of it just in one place, for Mohamed Abuella's Professional Development, you may look at these Slides.

To sum it up in a broad sense, let's imagine that.. If my professional development was a book, its title would be **"Energy Systems Analysis: Operation, Planning, and Integration."**

Thus, the chapters of this book would be as follows:

**Ch.1** Fundamentals of Electrical Engineering. This chapter covers Instrumentation & Control, Basics of Power Electronics such as Diodes & Thyristors as rectifiers, (maneuvered by applying Laws of Physics). With getting hands-on electrical installation & wiring and maintenance of electrical control equipment at pumping stations.

**Ch.2** Power Systems Analysis. It includes Power Flow and Faults Calculations, (applying Numerical Analysis methods, such as Newton methods, Differential eqs & Integrals, etc). Get hands-on some simulations of power systems and programmable logic controllers (PLC).

**Ch.3** Optimal Power Flow (OPF) and Security-Constrained Economic Dispatch (SCED). It is considering renewables as well, specifically for wind energy resouces at the transmission level, (applying Optimization techniques). Get hands-on more of modeling and analysis of power systems.

**Ch.4** Optimize the Integration of Renewables into the Grid. Solar Power Modeling and Forecasting, (applying Descriptive, Predictive and Prescriptive Analytics, AI and ML techniques). Get hands-on data-driven analytics and become more familiar with conducting & publishing research.

**Ch.5** Postdoctoral Researcher at the Center for Applied Intelligent Systems Research (CAISR) at Halmstad University, (applying AI and ML techniques). Dig into research questions trying to get answers and insights for them by using data.

**Ch.6** Who knows!

For more info, please visit my profiles at Google Scholar, LinkedIn, and ResearchGate.