

## **Dr. Soliman, Abdelfattah**

*Assis. Prof., Nuclear Engineering Dept., King Abdulaziz University*

### **Education**

<i>Degree</i>	<i>Field</i>	<i>Institution</i>	<i>Year</i>
PhD	Nuclear Engineering	Alexandria University, Egypt	2005
MS	Nuclear Engineering	Alexandria University, Egypt	2001
BS	Nuclear Engineering	Alexandria University, Egypt	1998

### **Academic Experience**

<i>From</i>	<i>To</i>	<i>Institution</i>	<i>Rank</i>	<i>Title (Chair, Coordinator, etc.)</i>	<i>Full or Part Time</i>
2006	2011	King Abdulaziz Univ.	Assist. Prof.		Full Time
2011	2014	Alexandria University	Adj. Prof.		Part Time
2014	Date	King Abdulaziz Univ.	Assist. Prof.		Full Time

### **Non Academic Experience (including Consultations)**

<i>From</i>	<i>To</i>	<i>Company/Entity</i>	<i>Title</i>	<i>Position Description (Brief)</i>	<i>Full or Part Time</i>
1998	2006	Egypt Second Research Reactor	Nuclear Engineer	Reactor Physicist, Reactor Operator	Full Time
2011	2013	Egypt Second Research Reactor	Nuclear Engineer	Head of Neutronic Calculation Group	Full Time

### **Certifications and Professional Registrations**

Registered Professional Engineer in Egypt

### **Current Membership in Professional Societies and Organizations**

	<i>Society/organization</i>	<i>Rank</i>	<i>Member Since</i>
1.	American Nuclear Society, ANS	Member	2007
2.	American Society of Engineering Education, ASEE	Member	2011
3.	Institute of Electrical and Electronics Engineers, IEEE	Member	2011
4.	Egyptian Syndicate of Professional Engineers	Member	1998

### **Honors and Awards**

1. World Nuclear University Fellowship 2006
2. King Abdulaziz University Faculty of Engineering honor 2007,2010
3. Outstanding performance, EDUCON conference 2017, 25-28 April 2017 Athens, Greece
4. King Abdulaziz University 1st Student's advisor innovation medal 2018

### **Service Activities (within and outside of the institution)**

1. Academic Advisor, Nuclear Eng. Dept., KAU, 2011-present.
2. Member of the Accreditation policy and procedures Committee, ANS, 2013-2019.
3. Member of the Public Information Committee, ANS, 2013-2016.

### **Principal Publications/Presentations from the Past Five Years**

1. Abdelfattah Y Soliman, Alya A Badawi, Manal M Elkordy and Ali M Al-Bahi, "A Framework for Constructing and Assessing Knowledge Management Systems for Engineering Institutes," 2019 IEEE Global Engineering Education Conference (EDUCON), Dubai, 2019.
2. Abdelfattah Y. Soliman and Ali M. Al-Bahi," A Win-Win Strategy to Integrate Sustainability Objectives in Product Design," International Journal of Engineering Pedagogy-iJEP, Vol. 8, No. 5, 2018. (<https://doi.org/10.3991/ijep.v8i5.8461>)
3. Enhancing Lifelong Learning Skills through Academic Advising, ICL2018 – 21th International Conference on Interactive Collaborative Learning, 25-28 September 2018, Kos Island, Greece, Pages 405-417.
4. A Six-Sigma approach to improve the acquisition of engineering competencies, EEE Global Engineering Education Conference, EDUCON, Volume 2018-April, 23 May 2018, Pages 1555-1562.
5. Sustainability SMART indicators of engineering education for sustainable development, IEEE Global Engineering Education Conference, EDUCON, Volume 2018-April, 23 May 2018, Pages 80-88.
6. Abdelfattah Y. Soliman and Ali M. Al-Bahi, "Rethinking Educational Approaches in Product Design to Achieve Sustainability Objectives," 2017 IEEE Global Engineering Education Conference (EDUCON 2017), Athens, Greece, 25 - 28 April 2017
7. Ali M. Al-Bahi and Abdelfattah Y. Soliman, "On the assessment of sustainability of engineering education," World education engineering forum, WEEF & GEDEC, Seoul, 6-10 November 2016.
8. Ali M. Al-Bahi and Abdelfattah Y. Soliman, "Designing a Resilience Module in an Introductory Engineering Design Course for Freshmen," 2016 IEEE Global Engineering Education Conference (EDUCON), Abu Dhabi, UAE, 10-13 April 2016.
9. Ali M. Al-Bahi and Abdelfattah Y. Soliman, "Design of a Project-Based Active Cooperative Course to Develop and Assess Safety Culture in Undergraduate Nuclear Engineering Programs," 2015 International Conference on Interactive Collaborative Learning, Florence, Italy, 20-24 September 2015.
10. Use of Gamma-Ray Back Scattering Method for Corrosion Assessment in Insulated Pipes, Key Engineering Materials, 2018 Trans Tech Publications, Switzerland, ISSN: 1662-9795, Vol. 786, October 2018, page 165-173. (doi:10.4028/www.scientific.net/KEM.786.165)
11. Investigating neutron backscattering technique for the detection of oil-water separation levels in horizontal gravity oil separators, Journal of Radioanalytical and Nuclear Chemistry, Volume 315, Issue 2, 1 February 2018, Pages 323-330.
12. An investigative study of enrichment reduction impact on the neutron flux in the in-core flux-trap facility of MTR research reactors, Nuclear Engineering and Technology, 2019. <https://doi.org/10.1016/j.net.2019.08.008>
13. Validating COMSOL multiphysics for VVER-1000 whole-core-steady-state via AER benchmark problem, Int. J. Nuclear Energy Science and Technology, Vol. 12, No. 2, 2018.
14. Validation of COMSOL Multiphysics® for PWR Power Distribution via 3D IAEA PWR Benchmark Problem, COMSOL conference 2017, Rotterdam, Netherland, 18-20 October 2017. (ISBN: 978-0-9910001-4-2)
15. Neutronic calculations of the IAEA 10 MW MTR benchmark reactor via finite element method using COMSOL multiphysics code, Annals of Nuclear Energy, Volume 109, November 2017, Pages 277-283
16. Neutronic modeling and calculations of the ETRR-2 MTR reactor using COMSOL multiphysics code, Annals of Nuclear Energy, Volume 109, November 2017, Pages 667-674
15. Detection of illicit material using neutron activation: weakness and solutions, Journal of Radioanalytical and Nuclear Chemistry, Volume 315, Issue 3, 1 March 2018, Pages 557-564
16. Ali M. Al-Bahi, Abdelfattah Y. A. Soliman, Abdulrahim Alzahrani, Faisal Abdelhady & Nader M. A. Mohamed, "Concept design of a PGNA system for optimizing the performance of gravity separators," J Radioanal Nucl Chem (2015) 304:925–931.

### **Recent Professional Development Activities** (*Workshops, training, etc.*)

1. Workshop of research reactor radiological radioprotection program assessment, Vienna, Austria, 2013.
2. Workshop of the leadership role in nuclear security, Vienna, Austria, 2011.