

YOUSRA M. H. AHMED, Ph.D.

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EDUCATION

PHD: ENVIRONMENTAL ENGINEERING

MAY 2017

LYLES SCHOOL OF CIVIL ENGINEERING, PURDUE UNIVERSITY
WEST LAFAYETTE, IN, USA.

Cumulative GPA: 3.95

Adviser: Prof. Ernest R. Blatchley III

Thesis title: “*Stochastic Evaluation of Disinfection Performance in Large-Scale Open-Channel UV Photoreactors*”

Relevant course work: Physico-chemical Processes in Environmental Engineering, Water Quality Modeling, Surface Water Transport, Water Resources Sustainability, Principles of Turbulence, Environmental and Ecological Engineering Collaboratory, Air Quality Management, and Environmental Analytical Chemistry.

MSC: CHEMICAL ENGINEERING

AUGUST 2012

FACULTY OF ENGINEERING, CAIRO UNIVERSITY, CAIRO, EGYPT

Very good with honor

Advisers: Prof. Seif Fateen and Prof. Mai Fouad (collaboration with Prof. Rabie Mokhtar at Purdue University)

Project: “*Assessing Isotropy of Shrinkage in Soils Using Digital Image Analysis*”

BSC: CHEMICAL ENGINEERING

MAY 2007

FACULTY OF ENGINEERING, CAIRO UNIVERSITY, CAIRO, EGYPT

Very good with honor

Graduation Project: “*Zero Emission Solvay Process for Soda Ash Production*”

Advisor: Prof. Alaa Fahmy

PROFESSIONAL EXPERIENCE

Teaching the following courses:

- Environmental Engineering
- Environmental Impacts of Projects
- Fluid Mechanics
- Technical English
- Mathematics
- Irrigation and Drainage engineering
- Properties and Testing of Materials
- Engineering Chemistry
- Geology and Environmental Engineering
- Sanitary Engineering
- Scientific Technical Writing
- Measurements of Industrial water quality and wastes
- Sanitary Engineering Senior graduation project
- Materials Senior graduation project

ADJUNCT PROFESSOR

FEBRUARY 2019- MAY 2019

Faculty of Engineering, Cairo University, Cairo, Egypt

ASSISTANT PROFESSOR**FEBRUARY 2018- CURRENT**

Integrated Thebes Academy, Higher Institute of Engineering (Civil Engineering), Cairo, Egypt

DIRECTOR OF CIVIL ENGINEERING DEPARTMENT**OCTOBER 2019-CURRENT**

Integrated Thebes Academy, Higher Institute of Engineering (Civil Engineering), Cairo, Egypt

HEAD OF QUALITY ASSURANCE UNIT**SEPTEMBER 2018- CURRENT**

Integrated Thebes Academy, Higher Institute of Engineering, Cairo, Egypt

POST-DOCTORAL RESEARCH**JUNE 2018-SEPTEMBER 2018****Lyles School of Civil Engineering, Purdue University, West Lafayette, IN, USA**

- Conducting research on the numerical modeling of UV photoreactors for water reuse applications using computational fluid dynamics simulations with more in-depth examination of fluid mechanics and fluence rate fields within these systems.

TEACHING ASSISTANT (TA)**JANUARY 2013 – MAY 2013****Lyles School of Civil Engineering, Purdue University, West Lafayette, IN, USA**

Course name: “Introduction to Environmental Engineering”

PUBLICATIONS

Usama A. Abdel Ghany; Abdel Rahman M. Naguib and **Yousra M. Ahmed**. “*Comparison Between Rapid Sand and Dyna Sand Filtration Techniques for Water Purification*”. AEIC2021 Al-Azhar Engineering Fifteenth international conference, Egypt. (March 2021)

NIKHIL SANGWAN, **YOUSRA M. AHMED**, ERNEST R. BLATCHLEY III. “*Dose distribution scaling: a novel validation approach for UV disinfection reactor*”. International Ultraviolet Association Americas conference (IUVA2020), Florida, USA.

Ahmed, Yousra M.; Blatchley III, Ernest R. “*Stochastic Evaluation of Disinfection Performance in Large-Scale Open-Channel UV Photoreactors*”,145(10), Journal of Environmental Engineering (October 2019).

Ahmed, Yousra M.; Jongewaard, Mark; Li, Mengkai; Blatchley III, Ernest R. “*Raytracing for Fluence Rate Simulations in Ultraviolet Photoreactors*”. Environmental Science & Technology journal (March 2018).

Ahmed, Yousra M.; Li, Xing; Ortiz, Angela; Shen, Chengyue; Chiu, Daphne; Rijal, Geeta; Mahoney, Keith; Ferran, Bruno; Yang, Wei; Tkachev, Andrey; Blatchley III, Ernest R. “*Stochastic Simulations of Process Performance in UV Disinfection Systems*”. Water Environment Federation’s Annual Technical Exhibition and Conference (WEFTEC), New Orleans, Louisiana. (September 2016)

CONFERENCE PRESENTATIONS

Yousra M. Ahmed; Jongewaard, Mark; Li, Mengkai; Blatchley III, Ernest R. “*Ray tracing Tools for Ultraviolet Fluence Rate Simulations in Photoreactors*”. Talk Presentation at Council of Optical Radiation Measurement (CORM) conference, Gaithersburg, MD, USA (July 2018).

Yousra M. Ahmed; Jongewaard, Mark; Li, Mengkai; Blatchley III, Ernest R. “*Ray tracing Tools for Ultraviolet Fluence Rate Simulations in Photoreactors*”. Poster Presentation at 23rd Annual Environmental Engineering & Science Spring Symposium at the University of Illinois at Urbana-Champaign, Chicago, USA (April 2017).

Yousra M. Ahmed; Li, Xing; Ortiz, Angela; Shen, Chengyue; Chiu, Daphne; Rijal, Geeta; Mahoney, Keith; Ferran, Bruno; Yang, Wei; Tkachev, Andrey; Blatchley III, Ernest R. “*Stochastic Simulations of Process Performance in UV Disinfection Systems*”. Presented paper at the Water Environment Federation’s Annual Technical Exhibition and Conference (WEFTEC), New Orleans, Louisiana, USA. (September 2016)

Yousra M. Ahmed; Blatchley III, Ernest R. “*Stochastic Evaluation of UV Disinfection Performance in Open Channels UV Photoreactors*”. Presented at the Indiana Water Environment Association (IWEA) Annual Conference, Indianapolis, Indiana, USA (August, 2016).

Yousra M. Ahmed; Blatchley III, Ernest R., “*CFD-I Modeling of UV Disinfection Reactors with Statistic Evaluation of System Variables*”. Poster presentation at Computational Science and Engineering Student Conference (CSEC), Purdue University, West Lafayette, IN, USA. (March 2015).

Yousra M. Ahmed.; Huang, Erin; Otten, Brian; Martin, Alyssa, “*Assessment of Water Quality and Water Quantity Correlation*”. American Society of Civil Engineers (ASCE) Environmental and Water Resources Institute (EWRI) World Congress, Houston, Texas, USA, (May 2015).

PROFESSIONAL ACTIVITIES AND DEVELOPMENT

- Journal Managing Editor: **International Journal of Advanced Engineering and Business.**
- Thebes Academy International Conference and workshops. **Egyptian-Russian dialogue for Higher education development for sustainable development.** (October 2018).
- Attended the following training workshops:

Name of the workshop	Organizer	Date
Strategic Planning for Higher Education التخطيط الاستراتيجي لكليات و معاهد التعليم العالي	NAQAE National Authority for Quality Assurance and Accreditation for Education	February, 2022
Publish your research open access with springer Nature with Fees covered by STDF in collaboration with EKB-Egypt	AD Webinars (EKB)	Feb 16, 2022
Professional Writing of Grant Proposals	CABI - EKB	January 30,2022
Academic Writing and Publishing Standards	IET Inspec- EKB	February 16, 2022
Tips for a successful research career	IET Inspec- EKB	January 26, 2022
Electronic assessment and developing learning outcomes	Thebes Academy, Cairo, Egypt	

Online Assessment Tools Workshop Using Google Forms.	Thebes Academy, Cairo, Egypt	October 2018
Using Electronic Grading for Exams workshop	Thebes Academy, Cairo, Egypt.	October 2018
Management of Question Banks workshop	Thebes Academy, Cairo, Egypt.	August 2018
Using Smart Board in Classrooms workshop	Thebes Academy, Cairo, Egypt.	September 2018

SKILLS

- E-learning platforms: Google classroom, Microsoft TEAMS
- MATLAB programming language
- Ansys Fluent computational fluid dynamics CFD software
- COMSOL multi-physics
- AutoCAD
- Ray tracing optical design software (Photopia, LTI Optics)
- Adobe Photoshop
- Microsoft Office (i.e. Word, Excel, and PowerPoint) and Latex.
- LabVIEW system design software
- Communication and Interpersonal Skills.
- Organization and Time Management.
- Critical Thinking.

AWARDS

- **Prof. Seddik Afifi** award for the highest contribution in the E-learning and smart board technology.
- **Ron Wukasch Environmental Engineering Scholarship**
Award Year: 2013, 2014, 2015, and 2016
Awarded to outstanding graduate students in Environmental Engineering at Purdue University.
- **Third place winner in the poster contest** at *Computational Science and Engineering Student Conference (CSEC), 2015.*

EXTRACURRICULAR ACTIVITES

2020-current	Coordinator Member of IUVA (International Ultraviolet Association) Young Professional Committee
2019-current	Academic Advisor of ENACTUS THEBES student activity
2019-current	Academic committee member of Student Union Assembly
2008	Organizer for the 3 rd International Conference on Engineering Sciences an& Technologies at the National Research Center of Egypt
2003- 2007	Volunteer in Resala Charitable Society
2005-2007	Member in public relation committee in STP "Steps Towards Progress" student activity, which aims at providing students with soft skills
2010	President of Egyptian Women Association in West Lafayette, IN, USA