

Education

Mahmoud Mostafa Sadek

- **Cornell University**
 - Ph.D. in Environmental Fluid Mechanics..... 2015
 - Minors: Fluid Mechanics (MAE) and Computational Science and Engineering.
 - **4.132** Grade Point Average and **45** graduate credit hours completed.
 - M.Sc. in Environmental Fluid Mechanics.....2013
- **Cairo University**
 - M.Sc. in Environmental Fluid Mechanics and Hydrology.....2010
 - M.Eng. in Soil Mechanics and Foundation.....2006
 - B.S. in Civil Engineering.....2005

Honors & Publications

- **Honors and Awards:** J. E. Perry Teaching Assistant Prize, J. H. DeFrees fellowship, Dr. Ibrahim El-Assiouty Prize (Prestigious in Egypt), Annual Egyptian Government's Award of Merit for top students (2000-05).
- **Publications and Conferences:**
 - Two-dimensional instability of the bottom boundary layer under a solitary wave, Physics of Fluid journal, 2014.
 - The American Physical Society-Division of Fluid Dynamics conference (2013-2014)

Professional Experience

- **Dar Al-Handasah (Shair & Partners).....2005-2010**
 - Designed tunnels using the different techniques (Drill & Blast, NATM and TBM).
 - Configured different tunnel elements (portal, temporary support, final lining ..)
 - Carried out slope stability and seepage analysis for multiple earth fill dams.
 - Designed of offshore structure.
 - Prepared project documents (specifications, bill of quantity, TOC...).
 - Coordinated between the different design units and the on-site engineers.
 - Supervised contractor of site investigation, soil improvement, piling works.
- **Cairo University Instructor.....2006-2010**
 - Instructed sections and lectures for design of coastal and marine structures.
 - Oversaw senior projects in the area of coastal and harbor engineering.

Extra-Curricular Involvements

- **Academic**
 - **Graduate Research Assistant (Cornell)2010-Present**
 - Use of high performance computing to simulate and study physical flow.
 - Study of stability and transition to turbulence of the boundary layer under solitary waves.
 - **Graduate Instructor (Cornell)2013**
 - Held weekly office hours and graded student work and exams.
 - Organized and orchestrated lab experiments and projects.
- **Non-Academic**
 - **Cornell CURIE Academy.....summer 2013**
 - Volunteered as a scientific mentor to high-school girls in a week-long summer camp.
 - Trained them to conduct lab experiment and prepare final presentation of their work.
 - **Working with local non-profit organization.....2013-2015**
 - Preparing all documents for building special permit from village of Lansing planning board.
 - Member of the committee responsible of negotiation & selection of contractors.

Skills

- **Languages:** English, French and Arabic (native).
- **Programming:** High Performance Computing, FORTRAN (serial and parallel), Matlab.
- **Design software** (short list): Fluent, RMA10, WAsP, REFDIF, Shorecirc, Plaxis (2D, 3D tunnel, 3D foundation, flow), Wallap, Slope, Talren, Tunren, Lpile, GGU package.