

**Short CV for Prof. Zach Agioutantis**  
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### **Professional Preparation**

- Engineering Diploma, Department of Mining and Metallurgical Engineering, National Technical University of Athens (NTUA), Athens, Greece, 1982
- MSc, Department of Mining and Minerals Engineering, Virginia Polytechnic Institute and State University, Blacksburg (Virginia Tech), VA, USA, 1984
- Ph.D., Department of Mining and Minerals Engineering, Virginia Polytechnic Institute and State University, Blacksburg (Virginia Tech), VA, USA., 1987

### **Appointments**

- 7/2016-present Director of Graduate Studies, Department of Mining Engineering, University of Kentucky, USA
- 10/2014-present Mining Engineering Foundation Professor, Department of Mining Engineering, University of Kentucky, USA
- 5/2001-10/2014 Professor, Department of Mineral Resources Engineering, Technical University of Crete (TUC), Greece.
- 9/2012-7/2013 On sabbatical from TUC and Visiting Professor at the Virginia Center for Coal and Energy, Virginia Polytechnic Institute and State University, USA, participating in a number of funded research projects.
- 9/2011-8/2012 Head, Department of Mineral Resources Engineering, Technical University of Crete, Greece.
- 2005-2013 Director, Engineering Geology Lab, Department of Mineral Resources Engineering, Technical University of Crete, Greece.
- 9/2003-8/2007 Head, Department of Mineral Resources Engineering, Technical University of Crete, Greece.
- 3/1993--10/2014 Director, Rock Mechanics Laboratory, Department of Mineral Resources Engineering, Technical University of Crete, Greece.
- 9/1992-10/2014 Director, Computer Laboratory, Department of Mineral Resources Engineering, Technical University of Crete, Greece.
- 9/1989-10/2014 Lecturer, Assistant Professor, Associate Professor, Professor, Department of Mineral Resources Engineering, Technical University of Crete, Greece.

### **Recent Journal Publications and Book Chapters**

- Kaklis K., V. Saltas, S. Mavrigiannakis, F. Vallianatos, Z. Agioutantis, Using acoustic emissions to enhance fracture toughness calculations for CCNBD marble specimens, *Journal of Fracture and Structural Integrity*, 2017, 40, pp. 1-17, <http://dx.doi.org/10.3221/IGF-ESIS.40.01>
- Kaklis, K., S. Mavrigiannakis, Z. Agioutantis, E.K. Steiakakis, F.K. Stathogianni, Experimental investigation of the mechanical properties of Alfas stone, *Journal of Fracture and Structural Integrity*, 2017, 40, pp. 18-31, <http://dx.doi.org/10.3221/IGF-ESIS.40.02>
- Partsinevelos, P., Z. Agioutantis, A. Tripolitsiotis and N. Schaefer, A Review of Unmanned Aerial Vehicles, Citizen Science and Interferometry Remote Sensing in Landslide Hazards – Applications in Transportation Routes and Mining Environments, 2017, Chapter 23, *Remote Sensing of Hydrometeorological Hazards*, George P. Petropoulos and Tanvir Islam, Editors, pp. 467-488.
- Kamenopoulos, S., Z. Agioutantis, K. Komnitsas, A new Hybrid Decision Support Tool for evaluating the sustainability of mining projects, *International Journal of Mining Science and*

*Technology*, 2018, Vol 28, Issue 2, March, pp. 259-265,  
<http://dx.doi.org/10.1016/j.ijmst.2017.07.001>

- Steiakakis, E., A. Lazaropoulos, A. Vafidis, Z. Agioutantis, G. Kritikakis, Determination of shear wave velocities in sediment deposits, *International Journal of Geotechnical Engineering*, 2017, Vol 11, Issue 6, <http://dx.doi.org/10.1080/19386362.2017.1374494>.
- Kaklis, K., S. Mavrigiannakis, Z. Agioutantis and P. Maravelaki-Kalaitzaki, Characterization of Pozzolanic Lime Mortars Used as Filling Material in Shaped Grooves for Restoring Member Connections in Ancient Monuments, *International Journal of Architectural Heritage*, 2018, Vol 12, Issue 1, 75-90, <http://dx.doi.org/10.1080/15583058.2017.1377313>
- Hescocock, J., C. Newman and Z. Agioutantis, Development of a New Algorithm for Implementing the Edge Effect Offset for Subsidence Calculations, *International Journal of Mining Science and Technology*, 2018, Vol. 28, Issue 1, January, pp. 61-66, <http://dx.doi.org/10.1016/j.ijmst.2017.11.010>
- Newman, C., Z. Agioutantis and N. Schaefer, Development of a Web-platform for mining applications, *International Journal of Mining Science and Technology*, 2018, Vol. 28, Issue 1, January, pp. 95-99, <https://dx.doi.org/10.1016/j.ijmst.2017.11.016>
- Arvanitidis, C., E. Steiakakis, and Z. Agioutantis, Peak friction angle of soils as a function of grain size, *Geotechnical and Geological Engineering*, 2018, <https://dx.doi.org/10.1007/s10706-018-0675-8>
- Kaklis, K., Z. Agioutantis, S. Mavrigiannakis and P. Maravelaki-Kalaitzaki, On the experimental investigation of pozzolanic lime mortar stress-strain behavior and deformation characteristics when subjected to unloading-reloading cycles, *Procedia Structural Integrity*, 10 (2018) 129–134, <https://dx.doi.org/10.1016/j.prostr.2018.09.019>
- Mark, C. and Z. Agioutantis, Analysis of Coal Pillar Stability (ACPS): A new generation of pillar design software, *International Journal of Mining Science and Technology*, 2018, <https://dx.doi.org/10.1016/j.ijmst.2018.11.007>

### Recent Sponsored Projects

- Z. Agioutantis, Principal Investigator, “Monitoring Mine Subsidence Ground Movements in Illinois using D-InSAR”, funded by IMSIF, June 1, 2016 - June 30 2018, approx. budget \$200,000.
- Z. Agioutantis, Principal Investigator, “Wetbud”, funded by WSSI through Virginia Tech, October 2016 – October 2019, approx. budget \$90,000.
- Z. Agioutantis, Principal Investigator, “NIOSH STOP Application”, funded by NIOSH, July 2017 – November 2018, approx. budget \$35,000.
- Z. Agioutantis, Principal Investigator, “Autonomous Underground Mining Systems to Improve Safety – Intelligent Coal Mining”, funded by the Alpha Foundation for the Improvement of Mine Safety and Health, December 2017 – November 2021, approx. budget \$2,195,000.
- Z. Agioutantis, Principal Investigator, Fundamental Investigation into Pillar Design and Global Stability by Integrating Pillar Load and Opening Convergence Response, funded by the Alpha Foundation for the Improvement of Mine Safety and Health, August 2018, Feb 2020 approx. budget \$223,000.
- Z. Agioutantis, co-PI, Coronado Mine Bunker Simulation Modeling, funded by Coronado Coal LLC, Sept 2018 – Feb 2019, approx. budget \$50,000.