CURRICULUM VITAE

1. Name Surname: Onur Akay

2. Date of Birth: 25 September 1977

3. Department: Civil Engineering

4. Education:

Degree	Department	University	Year
Bachelor	Civil Engineering	Dokuz Eylul University	2000
Master	Hydraulics	Istanbul Technical University	2002
Ph.D.	Civil Engineering	University of Mississippi	2007

5. Academic Titles:

Title	Discipline	University	Year
Assistant Professor	Civil Engineering	Okan University	2009
Associate Professor			
Full Professor			

6. Supervised Master and Ph.D. Thesis

6.1 Title of Master Thesis:

6.2 Dissertation Title:

7. Publications

7.1 International Refereed Journal Publications

- Akay, O., G.A. Fox and J. Simunek. 2008. Numerical Simulation of Flow Dynamics during Macropore -Subsurface Drain Interactions Using HYDRUS. *Vadose Zone Journal* 7:3 909-918.
- Akay, O. and G.A. Fox. 2007. Experimental investigation of direct interconnectivity between macropores and subsurface drains during infiltration. *Soil Science Society of America Journal* 71:5 1600–1606.
- Fox, G.A., G.V. Wilson, A. Simon, E. Langendoen, O. Akay, and J.W. Fuchs. 2007. Measuring streambank erosion due to ground water seepage: Correlation to bank pore water pressure, precipitation, and stream stage. Earth Surface Processes and Landforms DOI: 10.1002/esp.1490.

7.2 International Conference Presentations & Proceedings

- Fox, G. A., O. Akay, R. Malone, L. Ma, and G. Sabbagh. An Improved Express Fraction for Modeling Macropore/Subsurface Drain Interconnectivity. ASABE Annual International Meeting, 17 - 20 June 2007, Minneapolis, Minnesota. ASABE Paper No. 072139, ASABE: St. Joseph, MI
- Akay, O. and Fox, G. A. Experimental Investigation of Direct Connectivity between Macropores and Subsurface Drains during Infiltration. EWRI World Environmental & Water Resources Congress, 21-25 May 2006, Omaha, NE, USA
- Akay, O. and Fox, G. A. Interconnectivity of Macropores and Subsurface Drains: Influence on BTC's. USDA-CSREES National Water Conference, 5-9 February 2006, San Antonio, TX, USA
- Akay, O., Yagci, O., Kabdasli, S. The Hydrodynamics of the Bosphorus Strait: A Three-dimensional TELEMAC Simulation, EGS-AGU-EUG Joint Assembly, 06-11 April 2003, Nice, France

7.3 International Books / Chapters of Books

7.4 National Refereed Journal Publications

7.5 National Conference Presentations & Proceedings

7.6 National Books / Chapters of Books

7.7 Other Publications

8. Projects (As Contributor)

- Experimental Analysis and Modeling of Macropore Flow during Artificial Subsurface Drainage. Supported by USDA CSREES- Cooperative State Research, Education, and Extension Service
  - Design and build laboratory soil columns and setups
  - Use of HYDRUS computer model for verification of data and to test macropore connectivity to subsurface drains at different locations in the field
  - Selection and operation of equipments such as datalogger, tensiometers, pressure transducers, infiltrometer
  - Collection of undisturbed soil samples from field. Lab tests included determining bulk density, particle size analysis, water retention curves (use of Tempe Cells)
- Quantifying the importance of lateral, subsurface flow on sediment load to streams. Supported by USDA CSREES-Cooperative State Research, Education, and Extension Service
  - Collection and analysis of field data including stream bank seepage flow and sediment concentrations
  - Conduct laboratory lysimeter experiments to investigate subsurface erosion processes under various layering and hydrologic conditions
- Removal of Airborne Particulate during Spray Application of Surficially-Applied Emulsions. Supported by U.S. Army Corps of Engineers, Engineer Research and Development Center
  - Design and construction of particle disperser and horizontal flow chamber
  - Determine adequate spray nozzles/fittings

- Perform control experiments to achieve operation/mass balance requirements

- Technical Drainage Study for the Clark County Water Reclamation District (CCWRD) Advanced Water Treatment Plant Membrane/Ozone Project, Las Vegas, Nevada
  - Existing and ultimate condition hydrologic analysis
  - Normal depth calculations (FlowMaster) for the storm drain laterals and water head calculations for the drop inlets
  - Hydraulic grade line (HGL) calculations for the storm drains using Water Surface Pressure Gradient (WSPG)
- Clark County Water Reclamation District Las Vegas Wash Channelization Improvements Request for Conditional Letter of Map Revision, Las Vegas, Nevada
  - Floodway analysis for pre and post-project conditions
- Stable Slope Analysis for Pittman Wash, Las Vegas, Nevada
  - Use of GIS Spatial analysis to determine the long-term aggradation/degradation along the study reaches
  - Use of sediment transport formulations (Empirical Power Relationship, Copeland Method) to estimate the historical sediment inflow
  - Use of incipient motion/tractive force formulations (Skhoklitsch Method, Meyer-Peter Muller Method, Shield's Diagram Method, Lane's Tractive Force Method)
- Cactus Avenue / UPRR Grade Separation 60% Drainage Design, Las Vegas, Nevada
  - Existing condition hydraulic model setup (HEC-GeoRAS) to estimate the amount of flow impacting the project site
  - Construction of a 2-D model (FLO-2D) to verify the HEC-RAS results
- Fourmile Creek and Mudd Gulch H&H Analysis and PMR, Canon City, Colorado
  - Subbasin delineation (ArcHydro tools) and hydrologic analysis using SCS and Regression equations
  - Hydraulic analysis and floodplain delineation (Zone AE, Zone X)
  - Floodway analysis
  - Preparation of TSDN
- Lower Occoquan Watershed Hydraulic Analysis and Floodplain Mapping, Fairfax County, Virginia
  - Preliminary modeling using RFD (Rapid Floodplain Delineation) software
  - Use of HEC-RAS & HEC-GeoRAS for hydraulic modeling and floodplain mapping
- State of Georgia Flood Map Modernization, Marietta, Georgia
  - QC of hydraulic analysis and floodplain mapping for Toombs, Jenkins and Jeff Davis County
  - Redelineation of effective Zone AE for Appling, Bacon, Toombs, Jenkins, and Jeff Davis County

9. Administrative Tasks:

10. Academic/Professional Memberships:

- ASCE-American Society of Civil Engineers, EWRI-Environmental & Water Resources Institute, ASABE-American Society of Agricultural and Biological Engineers, ASFPM-Association of State Floodplain Managers, SIGMA XI-The Scientific Research Society, CHI EPSILON-National Civil Engineering Honor Society

11. Awards

- Best Presentation Award: Environmental Sciences, Student Research Symposium, Chapter of Sigma Xi, The University of Mississippi
- Graduation Degree Award: 1st place among 113 graduates, Department of Civil Engineering, Dokuz Eylul University, Izmir, TURKEY