

CURRICULUM VITAE

YUNIATI ZEVI

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NATIONALITY: Indonesian

EDUCATIONAL HISTORY

- Ph.D. Cornell University, 2008
Biological and Environmental Engineering
- M.Sc. Cornell University, 2003
Biological and Environmental Engineering
- M.Sc. Institute Technology at Bandung (ITB), 1997
Environmental Engineering
- B.S. Institute Technology at Bandung (ITB), 1991
Environmental Engineering

PROFESSIONAL HISTORY

- 2007-present Post Doctoral Associate, Department of Plant and Soil Science, University of Delaware
- 2001-2007 Graduate Research Assistant, Department of Biological and Environmental Engineering, Cornell University
- 1992-present Assistant Professor, Department of Environmental Engineering, Institute Technology at Bandung. Indonesia

RESEARCH EXPERIENCE

- 2007-present Quantifying the mechanisms of pathogen retention in unsaturated soils, Department of Plant and Soil Science, University of Delaware, USDA-NRI

Agglomeration, retention, and transport of manufactured nanoparticles in porous media, Department of Plant and Soil Science, University of Delaware, USEPA-STAR

- 2001–2007 Colloid transport in unsaturated porous media, Department of Biological and Environmental Engineering, Cornell University
- 1998-2000 Hydrodynamics Kinetic Study of Circulating Bed Reactor, Dep. of Environmental Engineering ITB and Inter-University Centers (IUC) on Biotechnology ITB
- 1997 Biosorption of Chromium Contained in Electroplating Waste Water by Algae Biomass, Department of Environmental Engineering ITB
- 1996-1997 The Kinetic Study of Azo Dye Degrading Micro-organism under Aerobic Conditions, Department of Environmental Engineering ITB
- 1995 Anaerobic Biodegradation of Ethanol Industrial Effluent Using Hybrid Bioreactor, Hydrodynamics Kinetic Study, RUT Research, IUC on Biotechnology ITB
- 1994 Development of Combination of Attached and Suspended Growth System in Anaerobic Hybrid Bioreactor for High Organic-containing Waste Water, Department of Environmental Engineering ITB
- 1992-1993 Performance of Dissolved Air Flotation in Removal of Grease & Oil Contained in Palm Oil Effluent, RUT Research, IUC on Biotechnology ITB
- 1991 Removal of Suspended Solid of Granular Bed, Department of Environmental Engineering ITB

PUBLICATIONS

Zevi, Y., A. Dathe, B. Gao, W. Zhang, B. K. Richards, and T. S. Steenhuis (2009), Transport and retention of colloidal particles in partially saturated porous media: effect of ionic strength, *Water Resource Research*, doi:10.1029/2008WR007322, in press.

Gao, B.; T. S. Steenhuis, Y. Zevi, J.-Y. Parlange, R. N. Carter, T. A. Trabold. 2009. Visualization of Unstable Water Flow in a Fuel Cell Gas Diffusion Layer. *J. Power Sources*, 190, 493–498, doi:10.1016/j.jpowsour.2008.12.135.

Gao, B., T. S. Steenhuis, Y. Zevi, V. L. Morales, J. L. Nieber, B. K. Richards, J. F. McCarthy, and J.-Y. Parlange (2008), Capillary retention of colloids in unsaturated porous media, *Water Resource Research*, 44, W04504, doi:10.1029/2006WR005332.

B. K. Richards, J. F. McCarthy, T. S. Steenhuis, A. G. Hay, Y. Zevi, A. Dathe. 2007. Colloidal transport: the facilitated movement of contaminants into groundwater. (Short feature article on colloidal transport phenomena.) *Journal of Soil & Water Conservation* 62(3)55A-56A.

Zevi, Y., A. Dathe, B. Gao, B.K. Richards, T. S. Steenhuis (2006), Quantifying Colloid Retention in Partially Saturated Porous Media, *Water Resources Research*, 42, W12S03, doi:10.1029/2006WR004929.

Steenhuis, T.S., A. Dathe, Y. Zevi, J. L. Smith, B. Gao, S. B. Shaw, D. DeAlwis, S. Amaro-Garcia, R. Fehrman, M. E. Cakmak, I. C. Toevs, B. M. Liu, S. M. Beyer, J. T. Crist, A. G. Hay, B. K. Richards, D. DiCarlo, J. F. McCarthy. 2006. Biocolloid retention in partially saturated soils. *Biologia* 61: S229-S233 Suppl. 19.

DiCarlo, D., Y. Zevi, A. Dathe, S.K. Giri, T. S. Steenhuis (2006), In-situ measurements of colloid transport and retention using synchrotron x-ray fluorescence, *Water Resources Research*. W12S05, doi:10.1029/2005WR004850.

Zevi, Y., A. Dathe, J. F. McCarthy, B. K. Richards, and T. S. Steenhuis. 2005. Distribution of colloid particles onto interfaces in partially saturated sand. *Environmental Science & Technology* 39:7055-7064. DOI: 10.1021/es048595b.

Steenhuis, T.S., A. Dathe, Y.Zevi, J.L. Smith, B. Gao, S.B. Shaw, D. DeAlwis, S. Amaro-Garcia, R.L.Fehrman, M.E.Cakmak, I.C. Toevs, B.M. Liu, S.M. Beyer, J.T.Crist, A.G. Hay,B.K. Richards, D. DiCarlo and J.F.McCarthy (2006). Characterization of transport and retention of biocolloids in unsaturated soils. *Biologia*, doi: 10.2478/s11756-006-0163-0.

Steenhuis, T.S. J.F.McCarthy , J.T. Crist, Y. Zevi, P.C. Baveye, J.A. Throop, R.L. Fehrman, A. Dathe and B.K. Richards (2005), Reply to “Comments on ‘Pore-Scale Visualization of Colloid Transport and Retention in Partly Saturated Porous Media’” *Vadose Zone J* 4:957-958 (2005) DOI: 10.2136/vzj2005.0041.

Crist, J.T., J. F. McCarthy, Y. Zevi, .P.C. Baveye, J.A. Throop, T.S. Steenhuis (2004), Pore-scale visualization of colloid transport and retention in partly saturated porous media. *Vadose Zone J.* 3(2), 444-450.

Crist, J.T., Y. Zevi, J.F. McCarthy, J.A. Troop, T.S. Steenhuis (2005), Transport and retention mechanisms of colloids in partially saturated porous media *Vadose Zone J.* , 4, 184-195.

Zevi, Y (1998), Biosorption of Chromium Contained in Electroplating Waste Water by Algae Biomass, Research Report, Dep. of Environmental Engineering ITB.

Djajadiningrat, A.H, Syafila M., Nobelia J., Y. Zevi (1997), Development of Combination of Attached and Suspended Growth Systems in Anaerobic Hybrid Bioreactor for High Organic-containing Waste Water, First year URGE Research Report, Dep. of Environmental Engineering ITB.

Zevi, Y (1997), The Kinetic Study of Azo Dye Degrading Micro-organisms under Aerobic Conditions, Master Thesis, Dep. of Environmental Engineering ITB.

Djajadiningrat, A.H, Muntalif, B.S, Sudrajat Arief, Y. Zevi (1995), Anaerobic Biodegradation of Ethanol Industrial Effluent Using Hybrid Bioreactor, Hydrodynamics Kinetic Study, RUT Research Report, IUC on Biotechnology ITB.

Wisjnuprpto, Syafila M, Y. Zevi (1993), Performance of Dissolved Air Flotation in Removal Grease & Oil Contained in Palm Oil Effluent, RUT Research Report, IUC on Biotechnology ITB.

Zevi, Y (1991), Removal of Suspended Solid of Granular Bed, Dep. of Environmental Engineering ITB.

CONFERENCE, PRESENTATIONS AND POSTERS

Zevi ,Y. and Y. Jin, The Effect of Air and Water Phase Configuration on Colloid Retention in Partially Saturated Porous Media, 2008 Joint Annual Meeting.Oct. 8, 2008. Houston, TX.

Steenhuis, T.S., Y. Zevi, V.L. Morales, E. Cakmak, A. Salvucci, E.A. Medrano, B.K. Richards, A. Hay, and B. Gao. Poster: Intricacies of Colloid Retention in Unsaturated Soils. Poster 699-27. 2008 Joint Annual Meeting.Oct. 8, 2008. Houston, TX.

Zevi ,Y, A. Dathe, B. Gao, B. K. Richards, J.-Y. Parlange, and T. S. Steenhuis , Effects of surfactant and ionic strength on transport and retention of colloid particles in partially saturated porous media, The 81 th ACS Colloid and Surface Science Symposium, Newark, DE, June 24-27, 2007

Cakmak , M.E., Y.Zevi, V. L. Morales, D. R. Fuka, B. Gao, J.L. Nieber and T.S. Steenhuis, Pore Scale Simulation of Colloid Transport in Porous Media with COMSOL Multiphysics, The 81 th ACS Colloid and Surface Science Symposium, Newark, DE, June 24-27, 2007

Zevi ,Y, Y. Jin, M. Prodanovic and S. L. Bryant, The Effect of Air and Water Phase Configuration on Colloid Retention in Partially Saturated Porous Media, The 82nd ACS Colloid and Surface Science Symposium, Raleigh, NC, June 15-18, 2008.

Hu, J., Y.Zevi, X. Kou, J.Xiao, X.Wang and Y. Jin, Agglomeration and Transport of Magnetite Nanoparticles: The Effect of pH, Ionic Strength and Humic Acid, The 82nd ACS Colloid and Surface Science Symposium, Raleigh, NC, June 15-18, 2008.

Zevi, Y., A. Dathe, B. Gao, M. E. Cakmak, B. K. Richards, J.-Y. Parlange, and T. S. Steenhuis (2006), Transport and retention of colloid particles in partially saturated porous media: effect of surfactant and ionic strength. Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract H54D-02.

Dathe, A., Y. Zevi, B. Gao, B. K. Richards, A. G. Hay, and T. S. Steenhuis. 2006. Poster: Direct observation and quantification of colloid retention in unsaturated porous media, American Geophysical Union Fall Meeting, December 2006. San Francisco, CA. Eos Trans. AGU, 87(52), Fall Meet. Suppl.

Cakmak, M.E., Y.Zevi, V.L. Morales, J.L. Nieber, B. Gao, and T. S. Steenhuis (2006), Poster: Pore Scale Simulation of Fluid Flow and Colloid Transport in Porous Media, Eos Trans. AGU, 87(52), Fall Meet. Suppl., Abstract H54D-02.

Dathe, A., Y. Zevi, B. Gao, A.G. Hay and T.S. Steenhuis (2006), Direct Observation and Quantification of Colloid Retention in Unsaturated Porous Media, World Congress of Soil Science (WCSS) in Philadelphia

Zevi, Y., Dathe, A., Richards, B.K., Steenhuis, T.S. (2004), Visualization Of Colloids Distribution in Partially Saturated Media. Poster, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract H21D-1047.

Dathe, A., Zevi, Y., Richards, B.K., Steenhuis, T.S., 2004. Visualization and Measurement of Colloid Movement and Retention in Unsaturated Media. Poster, Eos Trans. AGU, 85(47), Fall Meet. Suppl., Abstract H21D-1046.

Steenhuis, T.S., J. Crist, Y. Zevi, D. De Alwis, A. Marshal, T. Dittrich, S. Lyon, B. Gao, N. Peranginangin, J. Taylor, P. Baveye, J.-Y. Parlange, and J. McCarthy, (2002) Determining (Un)certainity in Modeling Colloid Transport by Visualization. AGU Fall Meeting. San Francisco, CA. Dec. 6-10.

Zevi, Y., Richards, B.K., Dathe, A., Steenhuis, T.S., 2004. Distribution of Colloid Particles onto Interfaces in Unsaturated Porous Media. Poster, Eos Trans. AGU, 85(17), Jt. Assem. Suppl., Abstract H21B-12.

Crist, J.T., Y. Zevi, J. Taylor, N. Peranginangin, B. Gao, S. Lyon, T.M. Dittrich, A.G. Marshall, D.DeAlwis, P.C. Baveye, J.Y. Parlange, J.F. McCarthy, and T.S. Steenhuis (2002). Visualization of colloidal transport in porous media. DIAS report 80 Plant Production, Colloids and colloid-facilitated transport of contaminants in soils and sediments, Tjele, Denmark.

PROFESSIONAL MEMBERSHIP

Member, American Geophysical Union (AGU)

Member, Indonesian Society of Engineers (PII)

Member, Indonesian Society of Sanitary and Environmental Engineers (IATPI)