

Jason C. Sun

Summary

Dr. Sun is an environmental hydrologist. Dr. Sun has a Doctor of Philosophy degree in Civil and Environmental Engineering, with an emphasis in ground water hydrology, from the Massachusetts Institute of Technology.

Dr. Sun has conducted ground water model simulations and has reviewed ground water model calibration for over 10 years. Dr. Sun has reviewed/modified/performed ground water models in southern California since 2005. Dr. Sun has been performing ground water modeling work for Edwards AFB in California since 2007. Dr. Sun also participated in ground water modeling projects in Oregon, Washington, Florida, New York, and Massachusetts.

Dr. Sun has assisted in litigation projects related to ground water in California and other states. Dr. Sun is experienced in ground water model review, statistical analysis on field data, data reduction, and groundwater remediation analysis. His fieldwork experience includes drill rig supervision, geologic log, and the sampling of groundwater, VOC and soil.

Education

- Ph.D. in water resources, 1998, Massachusetts Institute of Technology, Cambridge, Massachusetts. Thesis Title: A Stochastic Approach for Characterizing Soil and Groundwater Contamination at Heterogeneous Field Sites
- M.S., Civil Engineering, National Taiwan University, 1988
- B.S., Civil Engineering, National Taiwan University, 1983

Professional Registrations

- P.E. Taiwan, 1987

Employment History

Earth Tech, Long Beach, CA

May 2007 - Present

Hydrologist

- Air Force Research Lab (AFRL), Edwards AFB, CA
 1. Reviewed/Modified Mars BLVD ground water model
 2. Reviewed South AFRL ground water model report
 3. Performed/reviewed statistical analysis to establish background value for AFRL sites
- OU1, Edwards AFB, CA
 1. Designed remediation alternatives and strategy for OU1 remediation
 2. Produced groundwater model animation for technical meetings with GMS
 3. Designed groundwater model and performed groundwater flow and transport modeling on OU1 sites

4. Designed groundwater model and performed groundwater flow and transport modeling with Visual Modflow on Site 3 to evaluate the impact from landfill leachate to groundwater
5. Performed vadose zone modeling with VLEACH to evaluate the soil cleanup standard for Site 18
6. Reviewed sampling report, analyzed sampling data and assisted in RI/FS report
7. Field work: VOC sampling
- Tesoro Refining and Marketing Company, Amorc Terminal, Golden Eagle Refinery, Martinez, CA
 1. Reviewed/developed the 3D groundwater flow and transport model.
 2. Analyzing and evaluating the interim remedial measure through pumping to remediate MTBE plume over 100-acre site.
 3. Reviewed the design of extraction wells
- Selby Slag Site, Selby, CA
 1. Reviewed/developed the 3D groundwater flow and transport model.
 2. Assessed the rate and distribution of groundwater discharge into nearby San Pablo Bay.
- Johnson Canyon Sanitary Landfill, Monterey County, CA
 1. Designed two production wells of 200 gpm for landfill expansion.

CH2M Hill, Santa Ana, CA

Nov 2005 – April 2007

Hydrologist

- EPA South El Monte Operating Unit, CA
 1. Reviewed/modified ground water model layering based on conceptual geologic stratification
 2. Reviewed geologic log and conceptualized geological stratification
 3. Calibrated model parameters to fit observed data using FEFLOW
 4. Performed 3D transient particle tracking to analyze the efficiency of an extraction system using FEFLOW
 5. Prepared maps with ArcView GIS
 6. Produced technical memo
- South Florida Water Management District (SFWMD)
 1. Converted MODFLOW model files (30GB) from daily time period to monthly time period for 14 years of record
 2. Extracted Miami-Dade County model from SFWMD model
- Southern California Water Company, Yucca Valley, CA
 1. Supervised a 22-inch production well construction from conductor casing to well installation
 2. Supervised well development
 3. Oversaw drilling contractors
 4. Prepared geologic log
- EPA El Monte Operable Unit, CA
 1. Collected groundwater samples using West bay multi-level samplers
 2. Prepared paper work
- EPA Omega Plant site in Santa Fe Springs, CA

1. Reviewed reports from potentially responsible parties (PRP)
 2. Reviewed/recommended ground water modeling software
 3. Compiled field data (groundwater level and contaminant concentration)
 4. Delineated MCL boundary
 5. Collected soil gas samples for VOC
 6. Prepared maps with ArcView GIS and Arc Map
 7. Prepared paper work
- Montrose dual-site project, CA
 1. Analyzed pumping test data
 2. Reviewed/refined ground water model in MODFLOW, MODPATH, MT3D and PEST
 3. Performed model calibration to simulate pumping test with Parallel PEST
 - SEAWAT modeling project in Florida

Provided technical support on using SEAWAT
 - Risk-based soil screening tool for Los Angeles International Airport
 1. Reviewed related contamination reports
 2. Designed and Performed VLEACH model simulation for contaminants of interest
 3. Built spread sheet tool for risk assessment
 - Fate of a Perchlorate release in Rialto, CA
 1. Reviewed background information including well construction logs
 2. Designed a conceptual transport model in unsaturated zone
 3. Performed VS2D simulation on Perchlorate transport in unsaturated zone.
 4. Produced investigation report
 - Salton Sea related project, CA

Analyzed/organized nutrient data
 - San Luis Drainage project, CA

Analyzed field data

S. S. Papadopoulos & Associates, Portland, OR/Olympia, WA Feb 2003 – Sep 2005
Project Hydrologist

- Litigation project in San Diego, CA
 1. Searched public records at county agency and water board in San Diego County on surface water contamination
 2. wrote investigation report
- Port of Vancouver, WA
 1. Performed MT3D simulation to analyze the contribution from 3 separate contamination source for litigation purpose
 2. Performed PATH3D to identify the capture zones of remediation system
 3. Prepared model output with Surfer and TECPLOT
 4. Wrote report
- Port of Seattle, WA
 1. Designed a MODFLOW model based on geological data and boring logs
 2. Performed parameter calibration based on observed groundwater level data.
- Olympia, WA
 1. Investigated the effect of pumping wells on groundwater resources

- 2. Performed MODFLOW-SURFACT model
- Sand capping project in Seattle, WA
 1. Designed a seepage model to investigate the effectiveness of sand capping for a contamination site
 2. Applied MODFLOW and MT3D to simulate the contaminant transport through sand capping layer
- San Francisco, CA
 1. Conceptualized a seawater intrusion model
 2. Designed and performed SEAWAT model simulation to analyze the seawater intrusion
- NAPL site in Modesto, CA
 1. Conceptualized a NAPL transport model in unsaturated zone
 2. Performed feasibility study with MOFAT and NAPL Simulator
- Developed and maintained Windows graphical user interface (GUI) groundwater software (ModIME) using MFC and Visual C++

Self-employed Consultant, Carlsbad, CA

June 1999 - Jan 2003

- Reviewed/modified a regional groundwater model for Chor-Sui watershed in Taiwan using GMS for Sinotech Consultants in Taiwan.
- Assisted in pumping tests for underground tunnel project in Taipei, Taiwan
- Developed graphic user interface (GUI) to groundwater models

S. S. Papadopoulos & Associates, Bethesda, MD

Feb 1998 - Jun 1999

Senior Staff Scientist

- Puente Valley, CA
 1. Reviewed existing CDM's DYNFLOW/DYNTRACK ground water model
 2. Converted CDM's Dynflow model into MODFLOW model
- Kodak plant in New York state
 1. Designed conceptual extraction system using vertical and horizontal wells
 2. Analyzed effectiveness of remediation using MODFLOW, PATH3D
- Massachusetts Military Reserve in Cape Cod, MA
 1. Designed conceptual extraction wells for remediation
 2. Analyzed different remedial system with MODFLOW, PATH3D and MT3D simulation
 3. Produced animation movie on 3D contaminant transport with TECPLOT for local town hall meetings
 4. Accomplished a time-critical task ahead of schedule and received praise from the client
- Factory Lane, New Jersey
 1. Analyzed surface water data including precipitation and land use
 2. Performed SWMM to simulate flow and arsenic transport
- Provided customer support for MT3D and PATH3D

Ebasco-CTCI, Taiwan
Associate Engineer

June 1988 – Aug 1990

- Coordinator on environmental disciplines for a project selecting 10 potential thermal power plant sites
- Project lead for Environmental Impact Assessment project on Su-Ao thermal power plant
- Field work to collect environmental data (air and noise)
- Field survey

Training and Certifications

- Introduction to Arc GIS II, ESRI, 2008
- Introduction to Arc GIS I, ESRI, 2007
- 40 Hour OSHA HAZWOPER

Conference Presentations

- Sun, C-C. and D. McLaughlin, **A Stochastic Approach for Characterizing Soil and Groundwater Contamination at Heterogeneous Field Sites.** International Conference on Computational Methods in Water Resources, Cancun, Mexico, July 22-26, 1996.
- Sun, C-C. and D. McLaughlin, **The Spatial Distribution of Sorption Coefficient and its Correlation to Hydraulic Conductivity in a Heterogeneous Field Site.** AGU Spring Meeting, Baltimore, Maryland, May 20-24, 1996.
- Reid, L.B., C-C. Sun, and D. McLaughlin, **Characterization of Aquifer Properties From Contaminant Concentration Measurements at a Heterogeneous Field Site,** IUGG 21st General Assembly, Boulder, Colorado, July 2-14, 1995.
- Sun, C-C. and D. McLaughlin, **Three-Dimensional Nonstationary Cross-Covariances for Solute Transport Applications,** AGU Spring Meeting, Baltimore, Maryland, May 30 - June 2, 1995.

Publications

- Sun, C-C., 1998, **A Stochastic Approach for Characterizing Soil and Groundwater Contamination at Heterogeneous Field Sites.** PhD Thesis, Massachusetts Institute of Technology, February 1998.
- Lee, C.K., C-C. Sun, and C.C. Mei, 1996, **Computation of Permeability and Dispersivities of Solute or Heat in Periodic Porous Media.** International Journal of Heat and Mass Transfer, v. 39, No. 4, pp.661-676.

Personal: U.S. citizen