

SHAFIUL H. CHOWDHURY

Office Address

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EDUCATION:

- **Ph. D., June 1999**, Western Michigan University, Kalamazoo, Michigan, **Hydrogeology**
- **M. S. August 1995**, The University of Akron, Akron, Ohio, **Environmental Geology**
- **M. Sc., 1987**, Dhaka University, Dhaka, Bangladesh, **Geology**
- **B. Sc., 1985**, Dhaka University, Dhaka, Bangladesh, **Geology**

DOCTORAL DISSERTATION:

- “A comprehensive approach for evaluation of groundwater vulnerability to contamination.” Research focused on the development of a new aquifer vulnerability model for glacial drift aquifers, by utilizing advanced GIS (ARC/INFO and ARCVIEW) technology to analyze and map data.

MASTER’S THESIS:

- “Hydrogeology and groundwater pollution potential of Chippewa creek basin, Wayne County, Ohio.” Research involved, determining flow parameters, identifying potential aquifers, and evaluating pollution potential using DRASTIC.

PROFESSIONAL EXPERIENCE:

- 08/22/2007 to present, **Director**, Environmental Geochemical Sciences, SUNY New Paltz, New York.
- 09/01/2007 to present, **Associate Professor**, Department of Geological Sciences, SUNY New Paltz, New York, Teaching and Research.
- 09/01/2003 to 08/31/2007, **Assistant Professor**, Department of Geological Sciences, SUNY New Paltz, New York, Teaching and Research.
- 09/01/99 to 08/31/2003, **Assistant Professor**, School of Earth and Environmental Sciences, Queens College (CUNY), Flushing, NY, Teaching and Research.
- 09/01/95 to 06/26/99, **Doctoral Associate**, Department of Geology, Western Michigan University, Kalamazoo, MI, Teaching and Research.
- 08/27/93 to 08/19/95, **Teaching Assistant**, Department of Geology, The University of Akron, Akron, OH, Teaching and Research.
- 05/01/95 to 08/31/95, **Environmental Geologist**, JDJ&A, Inc., 2162 Front Street, Cuyahoga Falls, OH 44221, Involved in hydrological research, such as collection of surface water samples from the streams and sewage using automatic sampler during storm events.
- 06/01/87 to 08/05/93, **Geologist**, Geological Survey of Bangladesh (GSB), Dhaka, Bangladesh, Geological Research.

AWARDS / HONORS:

- Loewy-Mohonk Preserve Liaison Fellowship, Mohonk Preserve 2006 and 2007
- Dr. Nuala McGann Drescher Award by the State of New York/United University Professions, 2006 (Leave for Fall 2006 Semester)
- Queens College President's Award for Innovative Teaching Projects, for "Field Environmental Hydrology", Queens College, City University of New York, 2000.
- Dissertation Fellowship (one of seven-awarded university wide on a competitive basis), Western Michigan University (WMU), 1998 – 1999.
- Doctoral Associate, Western Michigan University, 1995 – 1998.
- University Merit Scholarship for academic achievement at undergraduate level, Dhaka University, 1985.

FUNDED GRANTS:

- Creation of Baseline Water Quality Data for Marakill Watershed, Mohonk Preserve. Loewy-Mohonk Preserve Liaison Fellowship Program 2007 (\$2,000)
- AC2 (AMP/C-STEP/CSEMS) Summer Research Award, 2007 (SUNY New Paltz), Land-use and the Impact on Water Quality (\$5,000)
- Summer Undergraduate Research Award, 2007 (SUNY New Paltz), "Evaluating the health of Lower Esopus Creek using Benthic Macro-invertebrates. (\$3,000)
- Provost's Research and Creative Project Award, 2007 (SUNY New Paltz), "Evaluating the health of Lower Esopus Creek using water quality. (\$2,500)
- Evaluation of the Health of Lower Esopus Creek Using Water Quality and Benthic Macro Invertebrates, New York State Water Resources Institute at Cornell University and New York State Department of Environmental Conservation, Division of Water, 2006. (\$43,796)
- Creation of Baseline Water Quality Data for Marakill Watershed, Mohonk Preserve. Loewy-Mohonk Preserve Liaison Fellowship Program 2006 (\$5,000)
- AC2 (AMP/C-STEP/CSEMS) Summer Research Award, 2006 (SUNY New Paltz), Land-use and the Impact on Water Quality (\$5,000)
- Provost's Research and Creative Project Award, 2006 (SUNY New Paltz), "Evaluating the Groundwater pollution potential of new Paltz, New York". (\$2,500)
- Dean's Summer Undergraduate Research Award, 2005 (SUNY New Paltz), "A Laboratory Analysis of Solute Transport Through Soil Macropores" (\$3,000)
- Provost's Research and Creative Project Award, 2005 (SUNY New Paltz), "Delineation of Aquifer Properties of Gardiner, New York (\$2,500)
- AC2 (AMP/C-STEP/CSEMS) Summer Research Award, 2005 (SUNY New Paltz), Land-use and the Impact on Water Quality (\$5,000)
- Provost's Research Award, 2005 (SUNY New Paltz), "Hydrogeology of the Town of Gardiner, Ulster County, New York" (\$10,000)
- Dean's Summer Undergraduate Research Award, 2004 (SUNY New Paltz), "Hydrogeology of the Town of Gardiner, Ulster County, New York" (\$3,000)
- Provost's Research and Creative Project Award, 2004 (SUNY New Paltz), "Land-use and the Impact on Water Quality". (\$2,500)
- AC2 (AMP/C-STEP/CSEMS) Summer Research Award, 2004 (SUNY New Paltz), Correlation between land use and water quality". (\$5,000)
- Professional Staff Congress of the City University of New York (CUNY), 2002-2004, for the research proposal: "Evaluation of groundwater vulnerability to contamination using GIS and computerized water well records in Long Island, New York, \$7,505.

- Queens College, City University of New York, 2001, Queens College Faculty Mentored Undergraduate Research Award 2000-2001 cycle, \$4,400.
- Professional Staff Congress of the City University of New York (CUNY), 2000, for the research proposal: "A Laboratory Analysis of Solute Transport Through Macropores Under Pondered Water Condition", \$5,680.
- Kalamazoo Foundation, Kalamazoo, MI, Environment Now Grant, 1998, for Ph.D. research proposal: "A Comprehensive Approach to Evaluate Groundwater Vulnerability to Agricultural Chemicals" (\$11,491).
- Geological Society of America Student Research Grant, 1998 (\$2,762).
- Western Michigan University Graduate Student's Research Grant, 1997 & 1998 (\$1,200).
- Department of Geology, Western Michigan University, Dr. David Kunzei Research Grant, 1997 (\$600).
- Department of Geology, Western Michigan University, Dr. John Grace Field Camp Scholarship, 1997 (\$300).
- Department of Geology, The University of Akron Graduate Student's Research Grant, 1995 (\$400).

PUBLICATIONS:

Journal Articles

- Iqbal, M. Z. and **Chowdhury**, S. H., 2007, Using on-campus monitoring wells to enhance student learning in geo-hydrology courses, *Journal of Geoscience Education*, Vol. 55, No. 5, p 364-370
- **Chowdhury**, S. H., and Ganesh, K., 2006, The Impact of Landuse on Surface Water Quality in Queens County, New York, *Journal of Environmental Hydrology*, September 2006 Issue.
- **Chowdhury**, S. H., Kehew, A. E., and Passero, R. N., 2003, Correlation Between The Occurrences of Nitrate Contamination and Ground Water Pollution Potential, *Ground Water* Vol.41 No. 6:735-745.
- Stumm, F, and **Chowdhury**, S. H., 2003, Delineation of the Fractured-Rock Ground-Water Flow System in the Western Part of Manhattan, New York, Using Advanced Borehole Geophysical Techniques, *Ground Water Monitoring and Remediation*, Vol. 23, no. 3:42-49
- **Chowdhury**, S. H., Iqbal, M. Z., and Szabo, J. P., 2003 A Comprehensive Approach of Groundwater Resource Evaluation. *Ohio Journal of Sciences*, Vol. 103, No. 5, December 2003.

Manuscripts in Review:

- Stumm, F, and **Chowdhury**, S. H., 2008, Characterizing the Unconsolidated Aquifer Systems in the Southern Part of Manhattan, New York, Using Advanced Borehole Geophysical Techniques, *Ground Water Monitoring and Remediation* (in review).

Manuscripts in Preparation:

- Chowdhury, S. H. and Ahmed, A. U. 2008, Water Quality Study of the Southwestern Coastal Aquifers of Bangladesh, *Journal of Hydrology*
- **Chowdhury**, S. H. and Watson, A., 2008, Role of soil macropores in solute transport, *Environmental Geology*.
- Giles, C., Sing, R., and **Chowdhury**, S. H., 2008, Effects of land-use on water quality in Rondout Creek, Ulster county, New York, *Journal of Undergraduate Research*
- **Chowdhury**, S. H., 2008, Integration of theory, fieldwork and computer application in a Groundwater Flow Modeling Exercise, *Journal of Geoscience Education*

Published Abstracts

- Landi, K, DeGroat, K. and **Chowdhury**, S. H., 2008, Evaluation of the Health of the Lower Esopus Creek, GSA Abstracts with Programs, Vol.40, no.6.
- Hartwell, C.J.and **Chowdhury**, S. H., 2008, Hydrogeochemical Evolution of Groundwater in Southeastern New York, GSA Abstracts with Programs, Vol.40, no.6.
- Iqbal, M.Z. and **Chowdhury**, S. H., 2007, using on-campus monitoring wells to bridge the gap between classroom and field-scale learning in two undergraduate hydrogeology programs in the U.S. GSA Abstracts with Programs, Vol.39, no.6.
- Mills, C and **Chowdhury**, S. H., 2007, Water Quality Of The Wallkill River in Ulster County, NY, GSA Abstracts with Programs, Vol.39, no.6.
- Iqbal, M.Z. and **Chowdhury**, S. H., 2006, Effective teaching of groundwater concepts by using outdoor instructional facilities. Midwest Ground Water Conference, Lincoln, Nebraska, Nov. 6-9, 2006. Abstracts with Programs.
- **Chowdhury**, S. H. and Watson, A., 2006, Role of soil macropores in solute transport, GSA Abstracts with Programs, Vol.38, no.7.
- Giles, C., Sing, R., and **Chowdhury**, S. H., 2006, Effects of land-use on water quality in Rondout Creek, Ulster county, New York, GSA Abstracts with Programs, Vol.38, no.7.
- Watson, A., Wheeler, D, Macchiarola, A., and **Chowdhury**, S. H.2006, Role of macropores in soil water flow, GSA Abstracts with Programs, Vol.38, no.2.
- Seksinsky, J., Luhmann, C., Kiernan, C, and **Chowdhury**, S. H.2006, Changes in Water Quality at four sites along the Rondout Creek, GSA Abstracts with Programs, Vol.38, no.2.
- Kalbouss, R., Espinosa, K., and **Chowdhury**, S. H.2005, Land use and the Impact on Water Quality in the towns of Gardiner and New Paltz, Ulster County, New York, GSA Abstracts with Programs, Vol.37, no.1.
- Shimaitis, C. A., Glancey, M., and **Chowdhury**, S. H.2005, Groundwater Flow Modeling of Sand and Gravel Aquifers in Route 208 Corridor, Gardiner, New York, GSA Abstracts with Programs, Vol.37, no.1.
- **Chowdhury**, S. H. and Pratt, Gerry, 2004, Integration of theory, fieldwork and computer application in a Groundwater Flow Modeling Exercise, GSA Abstracts with Programs, Vol.36, no.5.
- **Chowdhury**, S. H., 2003, A Field Hydrogeology Course Incorporating Groundwater Flow Modeling, GSA Abstracts with Programs, Vol.35, no.6.
- **Chowdhury**, S. H., 2003, A field course to provide hands-on experience in Applied Hydrology, "10th Conference on Geology of Long Island and Metropolitan New York" SUNY Stony Brook.
- **Chowdhury**, S. H., 2002, A Field Course to Improve Student Performance and Scientific Interest in Applied Hydrology, GSA Abstracts with Programs, Vol.34, no.6.
- Sallemi, B, Klinger, D, and **Chowdhury**, S. H. 2002, Steady-State Groundwater Flow Model for Great Neck, Long Island, New York. GSA Abstracts with Programs, Vol.34, no.1.
- Stumm, F. and **Chowdhury**, S. H., 2000, Hydrogeologic Interpretation of Geophysical Logs From a Fractured-Rock Borehole in Queens County, New York, GSA Abstracts with Programs, Vol.32, no.7.
- Kehew, A. E., Hughes, L., and **Chowdhury**, S. H., 2000, Aquifer Vulnerability Assessments: Are They Vulnerable to Misinterpretation and Misuse? *Proceeding of International Groundwater 2000 Conference* in Copenhagen, Denmark.
- **Chowdhury**, S. H., Hughes, L., Passero, R. N., and Kehew, A. E., 1999, Correlation Between the Occurrences of Nitrate Contamination and Ground Water Pollution Potential Evaluated by Using Computerized Water Well Records, GSA Abstracts with Programs, Vol.31, no.7.

- **Chowdhury**, S. H., and Szabo, J. P., 1999, Groundwater Pollution Potential of Chippewa Creek Basin, Wayne County, Ohio. GSA Abstracts with Programs, Vol.31, no.5.
- Kozlowski, A, Kehew, A. E, Flint, A.C., **Chowdhury**, S. H., Lee, J. N., and Nicks, L. P., 1999, Three dimensional mapping of the East Leroy and Union City 7.5 minute Quadrangles, Michigan. GSA Abstracts with Programs, Vol.31, no.5.
- **Chowdhury**, S. H., Hughes, L., and Kehew, A. E., 1998, A Study of Aquifer Vulnerability in Nottawa Creek Watershed, Calhoun County, Michigan Using Computerized Water Well Records. GSA Abstracts with Programs, Vol.30, no.7.
- Benner, L., **Chowdhury**, S. H., et. al., 1994, Geochemical Survey of Silver Creek Metro-Park, Summit County, Ohio. The Ohio Journal of Science, vol. 95, A-51. (Poster).
- **Chowdhury**, S. H., and Ali, W., 1992, Geology of Kahaloo Thana, Bogra, Bangladesh. Unpublished geological survey bulletin #4196, Geological Survey of Bangladesh.

SHORT COURSES/WORKSHOPS/CERTIFICATION:

- Participated a weeklong NSF funded workshop on “Teaching Hydrogeology in the 21st Century”, July 23-28, 2005, Nebraska, Lincoln.
- OSHA 40-Hour HAZWOPER Certified.
- Characterization and modeling fluid flow in fault and fracture zones: The reality and the idealized, Geological Society of America Annual Meeting, Reno, Nevada, November 13-16, 2000.
- Visual MODFLOW: The most widely used software package for MODFLOW, MODPATH, and MT3D; organized by the National Ground Water Association, October 19–21, 1998, Salem, MA.
- Use of Ground Penetrating Radar (GPR) in Environmental Science, WMU, 1997.
- Geophysics with special emphasis on 3-D seismic method and high resolution seismic survey; organized by the United Nations Development Program and the Geological Survey of Bangladesh, June 15 – July 30, 1992, Dhaka, Bangladesh.

SERVICES:

- Member, University Senate Committee, SUNY-New Paltz, 2005 to present
- Member of SS&E Colloquium Committee, SUNY-New Paltz 2003-2004 and 2006
- Member, Faculty Search Committee, Chemistry, SUNY-New Paltz, Fall 2006
- Member, Faculty Search Committee, Geological Sciences, SUNY-New Paltz.
- Faculty member of the environmental geochemical science major, SUNY New Paltz
- Organized a Workshop titled, “Research and Career Opportunities in Environmental Geoscience” in the Department of Geological Sciences funded by SUNY New Paltz Special Events Program
- Nov 22, 2003 and March 13, 2004, Attended two one-day seminars jointly organized by Mohonk Consultants, Inc., and the Hudson River Sloop Clearwater, Inc., dealing with the current and future water resources related issues in the Hudson Valley Regions.
- Attended a two-day workshop on Enhancing Undergraduate Environmental Education in Hudson Valley organized by the Environmental Consortium of Hudson Valley Colleges & Universities. Also presented a poster highlighting our new environmental geochemical science major to attract new students into our program, October 29-30, 2004
- Presentation on SUNY New Paltz College wide Faculty Meeting on Group Response System, Fall 2004
- Senator, Academic Senate, Queens College of CUNY, Fall 1999 to Spring 2003.
- Served as a member in the Evaluation Committee for the President’s Grants for Innovative Teaching Projects, Spring 2001, 2002 and 2003.

- Provost's Committee for University Strategic Planning, Western Michigan University, 1999.
- Incoming Teaching Assistant Training Program conducted by the Graduate College, Western Michigan University, 1998-1999.

PROFESSIONAL WORK IN PROGRESS:

FUTURE GRANT PROPOSALS:

- Comprehensive Approach to Watershed Characterization Focusing on the Source of New York City, NSF-REU Site Grant 2008

PROFESSIONAL AFFILIATIONS:

- Certified Professional Geologist, American Institute of Professional Geologists (**AIPG**)
- Geological Society of America (**GSA**)
- National Ground Water Association (**NGWA**)
- American Geophysical Union (**AGU**)