

Andrew J. Stumpf

Ph.D., LG, P.Geo

Illinois State Geological Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign
615 East Peabody Drive
Champaign, IL 61820

Phone: +1 (217) 244-6462
Email: astumpf@illinois.edu
Web: <http://ibit.ly/c0yM>
ORCID: [0000-0003-2940-7333](https://orcid.org/0000-0003-2940-7333)
ResearcherID: [F-1044-2014](https://pubs.rsos.royalsocietypublishing.org/author/F-1044-2014)
Scopus Author ID: [7003926522](https://orcid.org/7003926522)

Updated March 2024

EDUCATION

University of New Brunswick

Ph.D. in Geology
M.Sc. in Geology
Advisor: Professor Bruce Broster
Quaternary geologic mapping; exploration geochemistry

Fredericton, NB, Canada
Sept. 1995 – May 2001
Sept. 1993 – May 1995

University of Western Ontario

B.Sc. in Geography and Geology
Achieved Honors recognition

London, ON, Canada
Sept. 1988 – June 1992

EMPLOYMENT

University of Illinois at Urbana-Champaign

Illinois State Geological Survey, Prairie Research Institute
Principal Research Scientist

Champaign, IL
Since Feb. 2020

University of Illinois at Urbana-Champaign

Institute for Sustainability, Energy, and Environment
Affiliate Faculty

Urbana, IL
Since April. 2023

University of Illinois at Urbana-Champaign

Illinois Geothermal Coalition
Co-Founder

Champaign, IL
Since Nov. 2019

Illinois State University

Department of Geography, Geology, and the Environment
Adjunct Professor

Normal, IL
Since Sept. 2015

University of Waterloo

Department of Earth and Environmental Sciences
Adjunct Professor

Waterloo, ON, Canada
Since May 2009

University of Illinois at Urbana-Champaign

Illinois State Geological Survey, Prairie Research Institute
Associate Geologist

Champaign, IL
June 2008 – Feb. 2020

Illinois Department of Natural Resources

Champaign, IL

Illinois State Geological Survey <i>Associate Geologist</i>	<i>Sept. 2005 – June 2008</i>
University of Washington Pacific Northwest Center for Geologic Mapping Studies <i>Research Geologist</i>	Seattle, WA <i>Jan. 2005 – June 2005</i>
Illinois Department of Natural Resources Illinois State Geological Survey <i>Assistant Geologist</i>	Champaign, IL <i>Jan. 2000 – Sept. 2005</i>
University of New Brunswick Department of Geology <i>Research Assistant</i>	Fredericton, NB, Canada <i>Dec. 1998 – Dec. 1999</i>
Terratech Consulting Limited <i>Geomorphologist</i>	Salmon Arm, BC, Canada <i>May 1998 – Dec. 1998</i>
University of New Brunswick Department of Geology <i>Research Assistant</i>	Fredericton, NB, Canada <i>Sept 1997 – May 1998</i>
British Columbia Geological Survey <i>Research Field Assistant</i> <i>Research Field Assistant</i> <i>Research Field Assistant</i>	Victoria, BC, Canada <i>May 1997 – Sept. 1997</i> <i>May 1996 – Aug. 1997</i> <i>May 1995 – Aug. 1995</i>
New Brunswick Department of Natural Resources <i>Research Field Assistant</i> <i>Research Field Assistant</i>	Fredericton, NB, Canada <i>May 1994 – Sept. 1994</i> <i>May 1993 – Sept. 1993</i>

PROFESSIONAL LICENSURE

State of Washington <i>Licensed Geologist (License# 299400002409)</i>	<i>Since July 2004</i>
Province of New Brunswick Professional Engineers and Geoscientists of New Brunswick <i>Professional Geoscientist (License# M7009)</i>	<i>Since March 2010</i>

AWARDS AND HONORS

- Outstanding Collaboration (Natural Gas Working Group), Prairie Research Institute, 2019
- Fellow, Association of Applied Geochemists, 2014
- Outstanding Team Member, STATEMAP Geologic Mapping Program, Illinois State Geological Survey, 2012
- Ph.D Thesis Nominee: Natural Sciences and Engineering Research Council of Canada Doctoral Prize, University of New Brunswick, 2001

- Ph.D Thesis Nominee: Canadian Governor General's Gold Medal, University of New Brunswick, 2001
- Roy J. Shlemon Award, Geological Society of America (Cordilleran Section), 2001
- First Prize, Graduate Essay Contest, Canadian Institute of Mining, Metallurgy and Petroleum, 2001
- Research field grant, Geological Survey of Canada
- Wright Scholarship, University of New Brunswick, 1997
- Recipient of Natural Sciences and Engineering Research Council of Canada, Post Graduate B Scholarship, 1995 – 1997

PROFESSIONAL SERVICE

Editorial Board

- Review Editor, *Frontiers in Water* (Water and Critical Zone section) (since 2023)
- Editorial Board Member, *Geoenergy Journal* (since 2022)

Technical and Organizational Committee

- Tiger Team Member, DOE's National Consortium for the Advancement of Long-Duration Energy Storage (LDES) (since 2024)
- Member, Administrative Council, North Central Sustainable Agriculture Research and Education (NCR-SARE) Program (since 2023)
- International Ground Source Heat Pump Association (IGSHPA), Research Committee (since 2021)
- Project Manager, CINet: Critical Interface Network in Intensively Managed Landscapes project (since 2020)
- Treasurer, Association of Environmental & Engineering Geologists, Chicago Chapter (since 2019)
- Member, IGSHPA/CSA Standards Committee, Thermal Conductivity Testing
- Member-at-Large, Canadian Geomorphology Research Group (2009 – 2012)

Peer Reviewer (Journals and Books)

Canadian Journal of Earth Sciences, Canadian Water Resources Journal, Environmental and Engineering Geoscience, Geochemistry: Exploration, Environment, Analysis, *Geographie physique et Quaternaire*, Geomorphology, Geothermics, Global and Planetary Change, Groundwater, Journal of Hydrology, Journal of Maps, MDPI-Water, MDPI-Sustainability, MDPI-Applied Sciences, PLOS ONE, Quaternary Research, Sedimentary Geology, The Cryosphere, Encyclopedia of Natural Hazards, Encyclopedia of Engineering Geology

Subject Matter Expert (Policy Documents and Grant Proposals)

National Science Foundation since 2017, Department of Energy (2018 Geovision Report), National Science and Research Council of Canada, Danish Agency for Science, Illinois State Geological Survey, Illinois Water Resources Center, USGS-NIWR Program 2018, University of Wisconsin-Milwaukee (Research Growth Initiative), International Landslide Conference, Canada in a Changing Climate Advancing our Knowledge for Action

Committee Member

- Prairie Research Institute Promotions Committee, 2023
- Executive Scientific Committee, IGSHPA Research Conference 2024
- U of I iCAP Energy Team (since 2018)
- Faculty Advisor, U of I Student Sustainability Committee (since 2015)
- Vice Chair, Sustainability Advisory Commission, City of Urbana, Illinois (Since 2015)
- U of I Water and Energy Scholars, (since 2015 and 2019, respectively)
- Executive Scientific Committee, IGSHPA Research Conference 2022
- Co-organizer, Groundwater and Geothermal Summit, U of I 2018
- Secretary General, IUGS Resources for Future Generations Conference, Vancouver, Canada 2018
- Prairie Research Institute, Natural Gas Working Group (since 2017)
- Prairie Research Institute, Awards Committee (2017 – 2018)
- ISGS Health and Safety Committee, 2015
- Chair, Pardee Keynote Symposia, Geological Society of America, Vancouver, BC 2014
- Subject Matter Expert, Mahomet Aquifer Consortium (since 2013)
- Consultant, NSF Development of Freeze-Shoe Sampler to Recover Aquifer Sands 2013
- Secretariat, proposal to host 2020 International Geological Congress in Canada (2010 – 2012)
- Academic mentor, MentorNet, E-mentoring for STEM (2010 – 2015)
- Illinois State Geological Survey, Hiring Committee (since 2005)

Societal Memberships

- International Ground Source Heat Pump Association (IGSHPA), 2023 – present
- Geothermal Canada, 2018 – present
- Geological Society of America (GSA), 1999 – present
- Geological Society of America Continental Scientific Drilling Division, 2017 – present
- Geothermal Rising, 2016 – present
- Glaciological Society (IGS), 2015 – 2018
- Association of Applied Geochemists (AAG), Fellow, 2003 – present
- Canadian Geomorphology Research Group (CGRG), 2000 – present
- American Institute of Professional Geologists (AIPG), 2001 – present
- Association of Engineering Geologists (AEG), 2001 – present
- American Geological Union (AGU), 2008 – present
- Geological Association of Canada (GAC), 1997 – present
- Canadian Quaternary Association (CANQUA), 1994 – present
- American Quaternary Association (AMQUA), 2002 – present
- American Association for the Advancement of Science (AAAS), 2010 – present
- PAGES (Past Global Changes), 2010 – present
- Illinois Groundwater Association, 2012 – present

SPONSORED RESEARCH

(Grant funding awarded: \$24,960,020 from 73 submissions 2000 – 2023)

Funding Organization	Project Title	Total Award	Role	Funded (Y/N)	Start/End Dates
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$138,935	Co-PI	YES	9/00 – 8/01
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$184,036	Co-PI	YES	9/01 – 8/02
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$201,980	Co-PI	YES	9/03 – 8/04
NOAA Postdoctoral Program in Climate and Global Change	Correlation of (MIS 3 to 4) Stratigraphic Record in the Western Cascade Range, Washington State with the Late Pleistocene Climates of the Pacific Northwest Region	\$58,750	Post-doc.	NO	5/04 – 5/06
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$249,196	Co-PI	YES	9/05 – 8/06
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$227,531	Co-PI	YES	9/06 – 8/07
Illinois-American Water	Improving Groundwater Flow Model of the Mahomet Aquifer	\$600,000	Co-PI	YES	5/07 – 12/10
Illinois Dept. of Natural Resources	Water Supply Planning for Illinois	\$2,637,000	Co-PI	YES	7/07 – 7/10
Illinois Environmental Protection Agency	Lake Education Assistance Program	\$500	PI	YES	3/08 – 6/08
Illinois Dept. of Natural Resources	Water Supply Planning for Illinois, Supplemental	\$598,300	Co-PI	YES	7/08 – 7/10
Illinois Environmental Protection Agency	Lake Education Assistance Program	\$500	PI	YES	11/08 – 2/09
Illinois Board of Higher Education	Quaternary studies and three-dimensional geologic mapping in Illinois	\$55,532	Co-PI	YES	8/09 – 8/10
Geoscience BC	Surficial Geochemistry and Lithology of the Bulkley River Valley, Central British Columbia	\$16,300	PI	YES	5/09 – 4/12
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$226,152	Co-PI	YES	9/10 – 8/11
National Science Foundation	Collaborative Research: Hydrogeologic and Climatic Controls on Submarine Groundwater Discharge (SGD)	\$743,622	Co-PI	NO	12/10 – 12/12

National Science Foundation	WSC Category 2: Collaborative Research: Groundwater/Surface Water Exchange in Lake Michigan	\$1,293,868	Co-PI	NO	6/10 – 6/12
United States Department of Energy	Single cells genomics for uncultured Archaea dominating in a terrestrial subsurface aquifer abundantly containing methane	\$250,000	Co-PI	NO	1/11 – 12/11
University of Illinois Research Board	Biogeochemical Analyses to Supplement Drilling in High-Arsenic Aquifer near Tolono	\$19,257	Co-PI	NO	5/12 – 5/13
University of Illinois Research Board	Geochemical Characterization of an Arsenic-Contaminated Aquifer near Tolono, Illinois	\$26,103	Co-PI	NO	11/12 – 11/13
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$194,565	Co-PI	YES	9/13 – 8/14
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$182,107	Co-PI	YES	9/14 – 8/15
International Continental Drilling Program	Drilling Overdeepened Alpine Valleys (DOVE)	\$2,985,000	Sci. Team	NO	1/15 – 12/18
Prairie Research Institute & Vice Chancellor of Research, UIUC	Fluctuating glacial margins and periglacial sedimentary environments at the onset of the last deglaciation; a focus on timing, paleoenvironments, and possible relationship with sea level rise at 19 ka	\$29,949	Co-PI	YES	4/14 – 3/15
Prairie Research Institute & Vice Chancellor of Research, UIUC	Geochemical Characterization of an Arsenic-Contaminated Aquifer	\$28,748	Co-PI	NO	4/14 – 4/15
US Geological Survey	Characterization and Uncertainty Analysis of Glacial Aquifer Systems Using Helicopter Electromagnetics	\$249,754	Co-PI	NO	9/14 – 9/17
National Geographic Society	Meltwater megaflood mobilizing sediments in the Mississippi River: damming and inundating the Illinois River Valley during the last deglacial warming interval - resubmission	\$20,114	Co-PI	NO	6/15 – 5/16
National Science Foundation	Collaborative Research: Investigating deglacial climate changes near retreating ice margins of the Laurentide Ice Sheet	\$287,632	Sen. Persnl	NO	7/14 – 6/17

International Continental Drilling Program	Resubmission of ICDP Full Proposal 'Drilling Overdeepened Alpine Valleys (DOVE)'	\$1,595,948	Sci. Team	NO	1/16 – 12/19
US Geological Survey	Improving the resolution and accuracy of 3-D aquifer models to support sustainable management of depleted groundwater resources	\$249,049	Co-PI	NO	9/15 – 9/18
National Science Foundation	Intensively Managed Landscape Critical Zone Observatory	\$5,000,000	Sen. Persnl	YES	12/13 – 11/18
US Geological Survey	Great Lakes Geologic Mapping Coalition	\$100,178	Sen. Persnl	YES	8/14 – 8/15
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$169,354	Sen. Persnl	YES	9/15 – 8/16
US Geological Survey	Great Lakes Geologic Mapping Coalition	\$95,375	Sen. Persnl	YES	8/16 – 8/17
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$161,262	Co-PI	NO	9/16 – 8/17
International Continental Drilling Program	Resubmission of ICDP Full Proposal 'Drilling Overdeepened Alpine Valleys (DOVE)'	\$1,418,137	Sci. Team	YES	1/17 – 12/19
US Department of Energy	Office of Biological and Environmental Research	\$600,000	PI	NO	10/16 – 9/18
Environmental Research & Education Foundation	EREF Research Council	\$191,491	Co-PI	NO	9/16-9/18
UIUC Student Sustainability Committee	Geothermal Test Well at Energy Farm	\$69,325	Sen. Persnl	YES	6/16 – 6/17
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$171,603	Co-PI	YES	9/17 – 8/18
National Science Foundation	NSF/GEO/EAR - Taiwan Collaborative Research	\$467,632	Co-PI	NO	6/17 – 5/19
US Department of Energy	Geothermal Heat Recovery Complex: Large-Scale, Deep Direct-Use System in a Low-Temperature Sedimentary Basin	\$813,662	Co-PI	YES	10/17 – 03/20
UIUC Student Sustainability Committee	Geothermal exchange for greenhouses at UIUC WPP	\$132,550	PI	YES	7/18 – 12/19
European Union Center, UIUC	Provenance of Sediment Fills in Oversteepened Alpine Valleys in the European Alps	\$10,000	PI	NO	08/18 – 12/20

US Department of Agriculture	DIRECT4AG: Digital Infrastructure for Research and Extension on Crops and Technology for Agriculture	\$10,000,000	Sen Prsnl	NO	05/19-04/23
UIUC Student Sustainability Committee	Energy Shaft at Energy Farm	\$10,000	Co-PI	YES	10/18 – 05/19
UIUC Carbon Credit Sales Funding	Geothermal Monitoring Well on Bardeen Quad	\$65,610	PI	YES	12/18 – 12/19
UIUC Student Sustainability Committee	Campus Instructional Facility Geothermal project	\$250,000	Co-PI	YES	1/19 – 12/20
US Geological Survey	Database Maintenance and Drilling New Monitoring Wells for the NGWMN	\$136,948	Co-PI	YES	7/19 – 7/20
Institute for Sustainability, Energy, and Environment (UIUC)	Characterization and Performance of Geopolymers in Geothermal Exchange Systems	\$30,000	Co-PI	YES	1/19 – 1/20
Institute for Sustainability, Energy, and Environment (UIUC)	Characterization of Coupled Thermo-Hydraulic Properties of Glacial Till in Geothermal Systems	\$30,000	Co-PI	YES	3/19 – 2/20
National Science Foundation	Critical Zone Observatory for Intensively Managed Landscapes (IML-CZO)	\$875,000	Sen Prsnl	YES	11/19 – 11/20
US Department of Energy	Subsurface Stress and Lost Circulation in Geothermal Drilling	\$453,113	Sen Prsnl	NO	10/19 – 9/22
US Department of Agriculture	DIRECT4AG: Digital Infrastructure for Research and Extension on Crops and Technology for Agriculture	\$10M	Sen Prsnl	NO	5/20 – 4/24
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois	\$300,000	Co-PI	YES	9/20 – 8/21
National Science Foundation	CINet: Critical Interface Network in Intensively Managed Landscapes	\$6,195,999	Co-PI	YES	07/20 – 08/25
US Department of Energy	Optimized Deep Direct-Use Geothermal Energy System for Midcontinent Low-Temperature Sedimentary Basins	\$8,069,606	PI	NO	10/20 – 09/24
Robert Wood Johnson Foundation	Sustainable Untapped Resources for Planning Low-carbon Urban Systems - SURPLUS	\$150,000	Sci. Team	NO	01/21-12/23

National Science Foundation	FMRG: Geopolymers and Alkali-activated Materials in Eco Manufacturing	\$3,713,473	Sen Prsnl	NO	1/21-12/25
US Department of Energy	Illinois Compressed Air Energy Storage	\$250,000	Co-PI	YES	03/21-02/22
UIUC/OVCRI	Illinois Geothermal Coalition Technical and Education/ Outreach Program	\$59,543	PI	YES	01/21-12/22
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois FY21	\$608,218	Co-PI	YES	09/21-08/22
US Department of Energy	Feasibility of Storing Heat in the Subsurface for Flexible Electricity Generation - Phase II	\$330,000	Co-PI	NO	08/21-08/23
U of I Facilities & Services	Determination of Changes in Real Estate Prices in the United State after Geothermal Heat Pump Adoption	\$12,593	PI	YES	06/21-12/21
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois FY22	\$546,080	Co-PI	YES	09/22-08/23
US Department of Energy	Illinois Compressed Air Energy Storage, Phase 1b	\$250,000	Co-PI	YES	03/22-02/23
US Geological Survey	Renewable Resilience: City-scale Geothermal Energy Everywhere	\$168,688	Sen Prsnl	YES	10/22-10/24
US Geological Survey	Preservation of Geologic Data and Collections in Illinois: FY22	\$518,521	Sen Prsnl	YES	09/22-08/23
US Department of Energy	FY 2022 Technical Assistance Lab Call	\$294,671	Co-PI	YES	10/23-09/24
US Department of Energy	Digital Twin Collaboratory: Interactions among Chicago' s Urban-Environmental Systems	\$25,000,000	Co-PI	NO	01/23-12/28
US Department of Energy	Sustainable Chicago Geothermal	\$172,538	PI	YES	04/23-03/24
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois FY23	\$692,843	Co-PI	YES	09/23-08/24
US Department of Energy	Aquifer Thermal Energy Storage Demonstration for Renewable Heating and Cooling in the Illinois Basin Area	\$5,000,000	Co-PI	NO	04/24-04/29
US Department of Energy	National Consortium for the Advancement of Long-Duration Energy Storage (LDES) Technologies	\$19,165 (cost share)	Team Partner	YES	10/23-10/26
US Geological Survey	National Cooperative Geologic Mapping Program, Illinois FY24	\$755,384	Co-PI	Pending	09/24-09/25

JOURNAL ARTICLES

1. Rhoads BL, Anders AM, Banerjee P, Grimley DA, **Stumpf AJ**, Blair NE (2024). Sensitivity of a meandering lowland river to intensive landscape management: Lateral migration rates before and after watershed-scale agricultural development. *Anthropocene*, 45: 100429. <https://doi.org/10.1016/j.ancene.2024.100429>
2. Druhan JL, Wang J, Bouchez J, Dolant A, Flourey P, **Stumpf AJ**, Bauer E, Keefer L, Gaillardet J, Kumar P (2023). Sampling frequency, load estimation and the disproportionate effect of storms on solute mass flux in rivers. *Science of the Total Environment*, 906: 16737. <https://doi.org/10.1016/j.scitotenv.2023.167379>.
3. Kumar P, Anders A, Bauer E, Blair NE, Cain M, Dere A, Druhan J, Filley T, Giannopoulos C, Goodwell AE, Grimley D, Karwan D, Keefer LL, Kim J, Marini L, Muste M, Papanicolaou ANT, Rhoads BL, Rodriguez LCH, Roque-Malo S, Schaeffer SM, **Stumpf AJ**, Ward AS, Welp LR, Wilson CG, Yan Q, Zhou, S (2023). Emergent role of critical interfaces in the dynamics of intensively managed landscapes. *Earth-Science Reviews*, 244: 104543, <https://doi.org/10.1016/j.earscirev.2023.104543>.
4. Sanuade O, Ismail A, **Stumpf A** (2023). Comparing Vs profiles from MASW and downhole logging method from glacial deposits in central Illinois. *Arabian Journal of Geosciences*, 16: 196. <https://doi.org/10.1007/s12517-023-11270-y>.
5. Zhao Z, Lin YF, **Stumpf AJ**, Xinlei W (2023). Improving LEED-certified building loads on borehole heat exchanger by coupling subsurface variables. *Applied Thermal Engineering*, 224: 120119, <https://doi.org/10.1016/j.applthermaleng.2023.120119>.
6. Goetzl G, Burns ER, **Stumpf AJ**, Lin YF, Kolker A, Klonowski MR, Steiner C, Cahalan RC, Pepin JD (2023). City-scale geothermal energy everywhere to support renewable resilience a transcontinental cooperation. In Proceedings, 48th Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA, February 6-8, https://pangea.stanford.edu/ERE/db/IGAstandard/record_detail.php?id=35588.
7. Samuel DM, Inumerable N, **Stumpf A**, Kriven WM (2022). Thermal conductivity of several geopolymer composites and discussion of their formulation. *International Journal of Applied Ceramic Technology* 20(1): 475 – 486, <https://doi.org/10.1111/ijac.14200>.
8. Zhao Z, Lin Y-F, **Stumpf AJ**, Wang X (2022), Assessing impacts of groundwater on geothermal heat exchangers: A review of methodology and modeling. *Renewable Energy*, 190: 121 – 147, <https://doi.org/10.1016/j.renene.2022.03.089>.
9. Liu H, **Stumpf AJ**, Lin YF and Liu X (2021), Distributed thermal response multi-source modeling to evaluate heterogeneous subsurface properties. *Groundwater*, 61(2): 224 – 236, <https://doi.org/10.1111/gwat.13154>.
10. Ming L, Foster EJ, Le PVV, Yan Q, **Stumpf A**, Hou T, Wang J, Kumar P, Filley T (2020). A new dynamic wetness index (DWI) predicts soil moisture persistence and correlates with key indicators of surface soil geochemistry. *Geoderma*, 368: 114239, <https://doi.org/10.1016/j.geoderma.2020.114239>.
11. **Stumpf AJ**, Frailey SM, Okwen RT, Lu Y, Holcomb FH, Tinjum JM, Lin Y-F. (2020). Feasibility of deep direct-use for district-scale applications in a low-temperature sedimentary basin. In Proceedings, 45th Workshop on Geothermal Reservoir Engineering, Stanford University, Stanford, CA. <https://pangea.stanford.edu/ERE/pdf/IGAstandard/SGW/2020/Stumpf.pdf>.

12. **Stumpf AJ**, Berg RC, Curry BB (2019). Changing roles of state geological surveys in the United States: Experiences from Illinois. Lebel D, PR Hill, M Hitzman, M Smelror, H Thorleifson (eds.), *The Changing Role of Geological Surveys*, Geological Society, London, Special Publication 499, <https://doi.org/10.1144/SP499-2019-128>.
13. Wilson CG, Abban B, Keefer LL, Wacha K, Dermisis D, Giannopoulos C, Zhou S, Goodwell AE, Woo DK, Yan Q, Ghadiri M, **Stumpf A**, Pitcel P, Lin Y-F, Marini L, Storsved B, Goff K, Vogelgsang J, Dere A, Schilling KE, Muste M, Blair NE, Rhoads B, Bettis A, Pai H, Kratt C, Sladek C, Wing M, Selker J, Tyler S, Lin H, Kumar P, Papanicolaou ANT (2018). The Intensively Managed Landscape Critical Zone Observatory: A scientific testbed for understanding critical zone processes in agroecosystems. *Vadose Zone Journal*, 17(1): 1 – 21, <https://doi.org/10.2136/vzj2018.04.0088>.
14. **Stumpf A**, Damico J, Okwen R, Stark T, Elrick S, Nelson WJ, Lu Y, Holcomb F, Tinjum J, Yang F, Frailey S, Lin Y-F (2018). Feasibility of a deep direct-use geothermal system at the University of Illinois Urbana-Champaign. *GRC Transactions*, 42: 227 – 248, <https://www.osti.gov/servlets/purl/1462352>.
15. Botero-Acosta A, Chu M, **Stumpf AJ** (2018). Impacts of environmental stressors on the water resources of intensively managed hydrologic systems. *Hydrological Processes*, 32: 2947 – 2962, <https://doi.org/10.1002/hyp.13244>.
16. McDaniel A, Tinjum J, Hart D, Lin Y-F, **Stumpf A**, Thomas L, (2018). Distributed thermal response test to analyze thermal properties in heterogeneous lithology. *Geothermics*, 76: 116 – 124, <https://doi.org/10.1016/j.geothermics.2018.07.003>.
17. Wang H, **Stumpf AJ**, Kumar P (2018). Radiocarbon and stable carbon isotopes of labile and inert organic carbon in the critical zone observatory in Illinois, USA. *Radiocarbon*, 60(3): 989 – 999, <https://doi.org/10.1017/RDC.2018.31>
18. Kumar P, Phong VVL, Papanicolaou TAN, Bruce RL, Anders A, **Stumpf A**, Wilson C, Bettis A, Blair N, Ward AS, Filley T, Lin H, Keefer L, Keefer DA, Lin, Y-F, Muste M, Royer TV, Fougoula-Georgiou E, Belmont P (2018). Critical transition in critical zone of intensively managed landscapes. *Anthropocene*, 22: 10 – 19, <https://doi.org/10.1016/j.ancene.2018.04.002>.
19. Anders AM, Bettis A, Grimley DA, **Stumpf AJ**, Kumar P (2018). Critical zone structure in the glaciated Interior Lowlands, USA: a conceptual model from the Intensively Managed Landscapes Critical Zone Observatory. *Frontiers in Earth Science*, 6(24): 1 – 16, <https://doi.org/10.3389/feart.2018.00024>.
20. **Stumpf, AJ**, (2017). The Mahomet Bedrock Valley: Its history and character. *Illinois Geographer*, 59(2): 58 – 78.
21. Griffin JS, Lu N, Sangwan N, Li A, Dsouza M, **Stumpf AJ**, Sevilla T, Culotti A, Keefer LL, Kelly JJ, Gilbert JA, Well GF, Packman AI (2017). Microbial diversity in an intensively managed landscape is structured by landscape connectivity. *FEMS Microbiology Ecology*, 93(10): fix120, <https://doi.org/10.1093/femsec/fix120>.
22. Yan, Q, Iwasaki T, **Stumpf A**, Belmont P, Parker G, Kumar P (2017). Hydrogeomorphological differentiation between floodplains and terraces. *Earth Surface Processes and Landforms*, 4(1): 218 – 228, <http://dx.doi.org/10.1002/esp.4234>.
23. Rickels ES, **Stumpf AJ**, Malone DH and Shields WE (2017). Surficial geologic map of the Saybrook 7.5-minute Quadrangle, McLean County, Illinois, USA. *Journal of Maps*, 13(2): 191 – 195, <http://dx.doi.org/10.1080/17445647.2017.1291369>.

24. **Stumpf A** (2015). Interactive comment on “Numerical simulations of the Cordilleran ice sheet through the last glacial cycle” by J. Seguinot et al. *The Cryosphere Discussion* 9: C1944 – C1946, <https://doi.org/10.5194/tcd-9-4147-2015>.
25. Stohr CJ, **Stumpf AJ**, Stiff BJ (2015). Collection and application of outcrop measurements in glacial materials for geoeengineering and hydrogeology along the Vermilion River, east-central Illinois. *Environmental & Engineering Geoscience*, 21: 63 – 74, <http://dx.doi.org/10.2113/gsegeosci.21.1.63>.
26. Atkinson LA, Ross M, **Stumpf AJ** (2014). Three-dimensional hydrofacies assemblages in ice-contact/proximal sediments forming a heterogeneous ‘hybrid’ hydrostratigraphic unit in central Illinois, USA. *Hydrogeology Journal*, 22: 1605 – 1624, <http://dx.doi.org/10.1007/s10040-014-1156-7>.
27. Ismail A, **Stumpf AJ**, Bauer R (2013). Seismic characterization of glacial sediments in central Illinois. *Journal of Applied Geophysics*, 101: 1 – 10, <http://dx.doi.org/10.1016/j.jappgeo.2013.11.009>.
28. **Stumpf AJ**, Ferbey T, Plouffe A, Clague JJ, Ward BC, Paulen RC, Bush ABC (2013). Discussion: “Streamlined erosional residuals and drumlins in central British Columbia, Canada” by J. Donald McClenagan, (2013) *Geomorphology*, 189: 41 – 54. *Geomorphology*, 209: 147 – 150, <http://dx.doi.org/10.1016/j.geomorph.2013.10.019>.
29. Hong W, **Stumpf AJ**, Miao X (2013). Reply to comments by Curry et al. (2013) on “Atmospheric changes in North America during the last deglaciation from dune-wetland records in the Midwestern United States” . *Quaternary Science Reviews*, 58: 124 – 134, <http://dx.doi.org/10.1016/j.quascirev.2013.04.001>.
30. **Stumpf AJ**, Ismail A (2013). High-resolution seismic reflection profiling: An aid for resolving the Pleistocene stratigraphy of a buried valley in central Illinois, USA. *Annals of Glaciology*, 54(64): 10 – 20, <http://dx.doi.org/10.3189/2013AoG64A602>.
31. Hong W, **Stumpf AJ**, Miao X, Lowell TV (2012). Atmospheric changes in North America during the last deglaciation from dune-wetland records in the Midwestern United States. *Quaternary Science Reviews*, 58: 124 – 134, <http://dx.doi.org/10.1016/j.quascirev.2012.10.018>.
32. Ismail A., Smith EC, Phillips AC, **Stumpf AJ**, (2012) Pitfalls in interpretation of shallow seismic data. *Applied Geophysics*, 9(1): 87 – 94, <http://dx.doi.org/10.1007/s11770-012-0318-4>.
33. **Stumpf AJ**, Luman DE (2007). An interactive 3-D geologic map for Lake County, Illinois, United States of America. *Journal of Maps*, 2007: 254 – 261, <http://www.tandfonline.com/doi/pdf/10.1080/jom.2007.9710843#.U2gIf1eAmbM>
34. **Stumpf AJ**, Broster BE, Levson VM (2004). Glacial stratigraphy of the Bulkley River region: A depositional framework for the Late Pleistocene in central British Columbia. *Géographie physique et Quaternaire*, 58(2-3): 271 – 228, <http://www.erudit.org/revue/gpq/2004/v58/n2-3/013139ar.html>.
35. **Stumpf AJ**, Broster BE, Levson VM (2000). Multi-phase flow of the Late Wisconsinan Cordilleran Ice Sheet in Western Canada. *Bulletin of the Geological Society of America*, 112: 1150 – 1163, [http://dx.doi.org/10.1130/0016-7606\(2000\)112<1850:MFOTLW>2.0.CO;2](http://dx.doi.org/10.1130/0016-7606(2000)112<1850:MFOTLW>2.0.CO;2).
36. Stumpf AJ, Broster BE, Seaman AA (1997) Lithological and geochemical dispersal in till, McAdam area, New Brunswick. *Atlantic Geology*, 33: 31 – 42, <http://dx.doi.org/10.4138/2057>.

BOOK CHAPTERS

1. **Stumpf AJ**, Turner AK, Keefer DA (2021). Overview of the entire modelling process (Chapter 5). A.K. Turner, H. Kessler M.J. van der Meulen (eds.), Applied Multi-dimensional Geological Modelling: Enabling the Sustainable Use of the Shallow Subsurface, John Wiley and Sons, Chichester, UK., <https://doi.org/10.1002/9781119163091.ch5>.
2. **Stumpf AJ** (2018). Drilling Hazards. P. Bobrowsky, B.R. Marker (eds.), Encyclopedia of Engineering Geology, Springer, Cham. http://dx.doi.org/10.1007/978-3-319-12127-7_96-1.
3. **Stumpf AJ** (2018). Water testing. P. Bobrowsky, B.R. Marker (eds.), Encyclopedia of Engineering Geology, Springer, Cham. https://doi.org/10.1007/978-3-319-12127-7_296-1.
4. **Stumpf AJ** (2013). Hydrocompaction subsidence. P. Bobrowsky (ed.), Encyclopedia of Natural Hazards, Springer Science. http://link.springer.com/referenceworkentry/10.1007/978-1-4020-4399-4_177.
5. **Stumpf AJ** (2013). Collapsing soil hazards. P. Bobrowsky (ed.), Encyclopedia of Natural Hazards, Springer Science. http://link.springer.com/referenceworkentry/10.1007%2F978-1-4020-4399-4_70.
6. **Stumpf AJ** (2013). Dispersive soil hazards. P. Bobrowsky (ed.), Encyclopedia of Natural Hazards, Springer Science. http://link.springer.com/referenceworkentry/10.1007/978-1-4020-4399-4_94.

GEOLOGIC REPORTS AND MAPS

1. Phillips AC, **AJ Stumpf**, AT Sanchez, BB Curry (2023). Surficial geology of Lake Calumet Quadrangle, Cook County, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 3 sheets, 1:24,000.
2. Curry, BB, AC Phillips, **AJ Stumpf**, AT Sanchez (2023). Surficial geology of Jackson Park Quadrangle, Cook County, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 3 sheets, 1:24,000.
3. **Stumpf AJ** (2022). Surficial geology of Fisher Quadrangle, Champaign County, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 2 sheets, 1:24,000. <http://isgs.illinois.edu/maps/isgs-quads/surficial-geology/statemap/fisher>.
4. **Stumpf AJ**, YF Lin and TD Stark (2021). Subsurface characterization, monitoring, and modeling of a geothermal exchange borefield for the Campus Instructional Facility at the University of Illinois at Urbana-Champaign. Illinois State Geological Survey, Circular 606, 35 p. <http://hdl.handle.net/2142/111796>.
5. Lin, Y.F., **Stumpf A**, Frailey S, Okwen R, Lu Y, Holcomb F, Tinjum J, Stark T, Damico J, Elrick S, Nelson J., Garner D, Yang F, Salih H, Fu W, Lin Z, Lin J, Korose C, Thomas L, McKaskle R, Fisher K, Vance A, Urlaub J, Kirksey J, and Hammock C (2020). Geothermal Heat Recovery Complex: Large-Scale, Deep Direct-Use System in a Low-Temperature Sedimentary Basin. Illinois State Geological Survey, DOE-DE-EE0008106 Final Report. <https://doi.org/10.2172/1821557>.
6. **Stumpf AJ** (2018). Geologic cross sections of Quaternary deposits across the Manlove gas storage field area, Champaign County, Illinois. Illinois State Geological Survey, Special Report 6, 7 p.; 2 plates. <http://hdl.handle.net/2142/99637>.

7. Locke R, Roadcap G, **Stumpf A**, Leetaru H, Kelly W, and Winkel R (2018). An introductory guide to the Mahomet aquifer and natural gas storage in east-central Illinois. Prairie Research Institute, 18 p.
<http://hdl.handle.net/2142/99145>.
8. **Stumpf AJ** (2018). Surficial geology of Monticello Quadrangle, Piatt County, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 2 sheets, 1:24,000. <http://isgs.illinois.edu/maps/isgs-quads/surficial-geology/statemap/monticello>.
9. Lin Y-F, Zhong S, **Stumpf AJ** (2016). Procedure for three-dimensional printing of a digital hydrostratigraphic model. Illinois State Geological Survey, Circular 593, 16 p.
<http://library.isgs.illinois.edu/Pubs/pdfs/circulars/c593.pdf>.
10. Grimley DA, Anders AM, **Stumpf AJ** (2016). Quaternary geology of the Upper Sangamon River Basin: Glacial, postglacial, and postsettlement history, in Z. Lasemi and S.D. Elrick, eds., 1967 – 2016—Celebrating 50 Years of Geoscience in the Mid-Continent. Guidebook for the 50th Annual Meeting of the Geological Society of America – North-Central Section, April 18 – 19, 2016: Illinois State Geological Survey, Guidebook 43, p. 55 – 96.
<http://library.isgs.illinois.edu/Pubs/pdfs/guidebooks/guidebook-43.pdf>
11. **Stumpf AJ**, Atkinson LA (2015). Geologic cross sections across the Mahomet Bedrock Valley in Champaign, Ford, McLean, Piatt, and Vermilion Counties, Illinois. Illinois State Geological Survey, Illinois Map 19, 1:48,000,
<http://hdl.handle.net/2142/89865>.
12. Stohr C, Kemmis T, **Stumpf J**, Keefer D, Stumpf A, Stiff B, Mikulic D (2015). Measuring and describing outcrops that you can't actually touch. In Proceedings of the 47th Forum on the Geology of Industrial Minerals, May 15-17, 2011, Champaign, IL. Illinois State Geological Survey, Circular 587, 8 p,
<http://isgs.illinois.edu/publications/c587>.
13. Stohr CJ, Kemmis T, **Stumpf AJ**, Thomason J, Curry BB (2015). Stop 9: Sedimentology of kame terrace deposits at the Thelen sand and gravel pits, northwestern Lake County, Illinois. In Deglacial History and Paleoenvironments of Northeastern Illinois – 54th Midwest Friends of the Pleistocene Field Conference. Illinois State Geological Survey Open File 2008-1, Illinois State Geological Survey, pp 164 – 175,
<http://hdl.handle.net/2142/79513>.
14. **Stumpf AJ** (2014). Surficial geology of Rantoul Quadrangle, Champaign County, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 2 sheets, 1:24,000, <http://isgs.illinois.edu/maps/isgs-quads/surficial-geology/statemap/rantoul>.
15. **Stumpf AJ**, Dey WS (Eds) (2012). Understanding the Mahomet aquifer: geological, geophysical, and hydrogeological studies in Champaign County and adjacent areas. Draft Contract no. Illinois-American Water 2007-02899, Illinois State Geological Survey, Champaign, IL, 480 p. <http://hdl.handle.net/2142/95787>.
16. **Stumpf AJ** (2012). Till geochemistry and clast lithology studies of the Bulkley River Valley, West-Central British Columbia (parts of NTS 093L): Geoscience BC, Report 2012-11, 59 p,
http://www.geosciencebc.com/i/project_data/GBC_Report2012-11/GBCR2012-11_Report_rev.pdf.
17. **Stumpf A** (2012). Development of a database for geological field observations, west-central British Columbia (part of NTS 093L), in Geoscience BC Summary of Activities 2011, Geoscience BC, Report 2012-1, p. 53 – 58,
http://www.geosciencebc.com/i/pdf/SummaryofActivities2011/SoA2011_Stumpf.pdf.

18. **Stumpf AJ** (2011). Quaternary geology and till geochemistry of the Bulkley River valley, west-central British Columbia, in Geoscience BC Summary of Activities 2011, Geoscience BC, Report 2012-1, p. 57-64, http://www.geosciencebc.com/i/pdf/SummaryofActivities2010/SoA2010_Stumpf.pdf
19. Dixon-Warren AB, **Stumpf AJ** (2010). Geochemistry of glacial sediments in Illinois and adjacent areas: Illinois State Geological Survey, Open File Series 2010-2, 62 p. plus appendices, <http://hdl.handle.net/2142/50254>.
20. **Stumpf AJ** (2010). Surficial geology of Rome Quadrangle, Peoria and Marshall Counties, Illinois: Illinois State Geological Survey, Illinois Geologic Quadrangle Map, IGQ Rome-SG, 2 sheets, 1:24,000, <http://hdl.handle.net/2142/43401>.
21. McKay ED III, Berg RC, **Stumpf AJ**, Weibel CP (2010). Surficial geology of the Middle Illinois River valley, Bureau, Marshall, Peoria, Putnam, and Woodford Counties, Illinois: Illinois State Geological Survey, Illinois Map 16, 1:48,000; report, 7 p, <http://hdl.handle.net/2142/43403>.
22. **Stumpf AJ** (2010). Surficial geology of Gifford Quadrangle, Champaign County, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 2 sheets, 1:24,000, <http://isgs.illinois.edu/maps/isgs-quads/surficial-geology/statemap/gifford>.
23. Berg RC, Weibel CP, **Stumpf AJ**, McKay ED III (2009). Bedrock topography of the Middle Illinois River Valley, Bureau, Marshall, Peoria, Putnam, and Woodford Counties, Illinois: Illinois State Geological Survey, Illinois Map 15, 1:62,500, <http://hdl.handle.net/2142/43406>.
24. McKay ED III, Berg RC, Hansel AK, Kemmis TJ, **Stumpf AJ** (2008). Quaternary deposits and history of the ancient Mississippi River valley, north-central Illinois: Fifty-first Midwest Friends of the Pleistocene field trip, an ISGS centennial field trip, May 13-15, 2005: Illinois State Geological Survey, Guidebook 35, 98 p, <http://hdl.handle.net/2142/32499>.
25. **Stumpf AJ** (2007). Surficial geology of the Streamwood Quadrangle, Cook and Kane Counties, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 2 sheets, 1:24,000, <http://isgs.illinois.edu/maps/isgs-quads/surficial-geology/statemap/streamwood>.
26. Frankie WT, Miner JJ, Benton SE, Pociask GE, Plankell ET, **Stumpf AJ**, Jacobson RJ (2007). Guide to the Geology of Moraine Hills, Glacial Park, and Volo Bog areas, McHenry and Lake Counties, Illinois. Illinois State Geological Survey, Geological Science Field Trip Guidebook 2007A, 54 p, <http://hdl.handle.net/2142/55253>.
27. McKay ED III, Berg RC, **Stumpf AJ**, Weibel CP (2007). Surficial geology of Chillicothe Quadrangle, Peoria, Marshall, and Woodford Counties, Illinois: Illinois State Geological Survey, Illinois Preliminary Geologic Map, IPGM Chillicothe-SG, 1:24,000, <http://hdl.handle.net/2142/77855>.
28. McKay ED III, Berg RC, **Stumpf AJ**, Weibel CP (2007). Surficial geology of Lacon Quadrangle, Marshall County, Illinois: Illinois State Geological Survey, Illinois Preliminary Geologic Map, IPGM Lacon-SG, 1:24,000, <http://hdl.handle.net/2142/77856>.
29. McKay ED III, Berg RC, **Stumpf AJ**, Weibel CP (2007). Surficial geology of Putnam Quadrangle, Bureau, Putnam, and Marshall Counties, Illinois: Illinois State Geological Survey, Illinois Preliminary Geologic Map, IPGM Putnam-SG, 1:24,000, <http://hdl.handle.net/2142/77857>.
30. **Stumpf AJ** (2006). Surficial geology of the Lake Zurich Quadrangle, Lake and Cook Counties, Illinois: Illinois State Geological Survey, USGS-STATEMAP contract report, 2 sheets, 1:24,000 <http://isgs.illinois.edu/maps/isgs-quads/surficial-geology/statemap/lake-zurich>.

31. Barnhardt, ML, Berg RC, Hansel AK, **Stumpf AJ**, Dixon-Warren AB, Stohr CJ, Luman DE, Stiff BJ, Pugin AJM, Larson DR, Larson TH, Barrett ME, Amacher VJ (2005). Methods and standards development for three-dimensional geologic mapping of the Antioch Quadrangle, Lake County, Illinois: a pilot study. Illinois State Geological Survey Open File 2005-12, 42 p, <http://hdl.handle.net/2142/55841>.
32. **Stumpf AJ**, Weibel CP (2005). Surficial geology of Spring Bay Quadrangle, Peoria and Woodford Counties, Illinois: Illinois State Geological Survey, Illinois Geologic Quadrangle, IGQ Spring Bay-SG, 1:24,000 (includes supplementary data and text), <http://hdl.handle.net/2142/77974>.
33. Weibel CP, **Stumpf AJ** (2005). Bedrock topography of Spring Bay Quadrangle, Peoria and Woodford Counties, Illinois: Illinois State Geological Survey, Illinois Geologic Quadrangle, IGQ Spring Bay-BT, 1:24,000, <http://hdl.handle.net/2142/77975>.
34. Weibel CP, **Stumpf AJ** (2005). Drift thickness of Spring Bay Quadrangle, Peoria and Woodford Counties, Illinois: Illinois State Geological Survey, Illinois Geologic Quadrangle, IGQ Spring Bay-DT, 1:24,000, <http://hdl.handle.net/2142/77976>.
35. **Stumpf AJ** (2005). How much data is enough? Detailed geologic mapping near a Superfund site, Wauconda, Illinois. Geological Society of America, Three-Dimensional Geologic Mapping for Groundwater Applications Workshop Extended Abstracts, Geological Survey of Canada, Open File 5048, p. 89 – 92, Salt Lake City UT, <http://isgs.illinois.edu/sites/isgs/files/files/3Dworkshop/2005/stumpf2005.pdf>
36. **Stumpf AJ** (2005). Surficial geology of Antioch Quadrangle, Lake County, Illinois and Kenosha County, Wisconsin: Illinois State Geological Survey, Illinois Preliminary Geologic Map, IPGM Antioch-SG, 1:24,000, <http://hdl.handle.net/2142/77846>.
37. **Stumpf AJ** (2004). Surficial geology of the Grayslake Quadrangle, Lake County, Illinois: Illinois State Geological Survey, Illinois Preliminary Geologic Map, IPGM Grayslake-SG, 1:24,000, <http://hdl.handle.net/2142/77819>.
38. **Stumpf AJ**, Weibel CP (2004). Soils and parent materials of the Spring Bay Quadrangle, Peoria and Woodford Counties, Illinois: Illinois State Geological Survey, Illinois Geologic Quadrangle Map, IGQ Spring Bay-SPM, 1:24,000, <http://hdl.handle.net/2142/77969>.
39. **Stumpf AJ**, Barnhardt ML, Hansel AK (2004). Surficial geology of the Wauconda Quadrangle, Lake and McHenry Counties, Illinois: Illinois State Geological Survey, Illinois Preliminary Geologic Map, IPGM Wauconda-SG, 1:24,000 (includes map notes), <http://hdl.handle.net/2142/77839>.
40. **Stumpf AJ**, Hansel AK, Barnhardt ML (2003). Geologic mapping of glacial drift aquifers in the Greater Chicago Area, Illinois: Illinois State Geological Survey Open File 2003-17, 6 p, <http://hdl.handle.net/2142/55839>.
41. Patterson CJ, Hansel AK, Mickelson DM, Quade DJ, Bettis EA III, Colgan PM, McKay ED III, **Stumpf AJ** (2003). Contrasting glacial landscapes created by ice lobes of the southern Laurentide Ice Sheet: in Quaternary Geology of the United States - INQUA 2003 Field Guide, D.J. Easterbrook (Ed.): Geological Society of America, p. 135 – 154.
42. Hansel AK, **Stumpf AJ**, Barnhardt ML (2002). Developing a preliminary 3-D model of the Quaternary geology of the Wauconda 7.5' Quadrangle. Geological Society of America, 3-D Mapping Workshop Extended Abstracts, Geological Survey of Canada, Open File 1449, p. 23 – 26, Denver CO, http://isgs.illinois.edu/sites/isgs/files/files/3Dworkshop/2002/hansel_abs.pdf.

43. Berg RC, McKay ED, Keefer DA, Bauer RA, Johnstone PD, Stiff BJ, Pugin A, Weibel CP, **Stumpf AJ**, Larson TH, Su W-J, Homrighous GT (2002). Three-dimensional geologic mapping for transportation planning in central – northern Illinois: Data selection, map construction, and model development. Geological Society of America, 3-D Mapping Workshop Extended Abstracts, Geological Survey of Canada, Open File 1449, p. 13 – 19, Denver CO, http://isgs.illinois.edu/sites/isgs/files/files/3Dworkshop/2002/berg_abs.pdf.
44. Levson VM, **Stumpf AJ**, Cook SJ, O'Brien EK, Weary GF, Meldrum DG, Hobday J, Churchill C, Ferbey T, Huntley DH, Lett R, Cleary KE, Dubois J, Rocha C (2002). Quaternary geology and Till Geochemistry of the Babine Copper Porphyry Belt (NTS 93 L/9, L/16, M/1, M/2, M/7, M/8): British Columbia Geological Survey, Bulletin 110, 278 p, <http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/BulletinInformation/BulletinsAfter1940/Pages/Bulletin110.aspx>.
45. McKay DE, Berg RC, Johnstone PM, **Stumpf AJ**, Weibel CP (2002). Surficial geology along the IL-29 project corridor. Final report submitted to Illinois Department of Transportation, 1:48,000.
46. Berg RC, Johnstone PM, and **Stumpf AJ** (2002). Soil parent materials along the IL-29 project corridor. Final report submitted to Illinois Department of Transportation, 1:48,000.
47. Hansel AK, **Stumpf AJ**, Barnhardt ML (2002). Quaternary geology of the Wauconda 7.5' Quadrangle - 3D Model, Lake and McHenry Counties, Illinois. Final geologic map submitted to United States Geological Survey for STATEMAP, 1:24 000.
48. Levson VM, Mate D, Dubois JE, O'Brien EK, Stewart A, **Stumpf AJ** (2002). Till Geochemistry of the Tetachuck Lake and Marilla Map Areas (NTS 93 F/5 and F/12): British Columbia Geological Survey, Open File 2002-11, 180 p, <http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/OpenFiles/2002/Pages/2002-11.aspx>.
49. Barnhardt ML, Hansel AK, **Stumpf AJ** (2001). Developing the database for 3-D modeling: acquiring, assembling, verifying, assessing, interpreting, and integrating source data. Geological Society of America, Geologic Models for Groundwater Flow Modeling Workshop Extended Abstracts, Illinois State Geological Survey, Open File Series 2001-1, 62 p, Normal IL, http://isgs.illinois.edu/sites/isgs/files/files/3Dworkshop/2001/barnhardt-hansel-stumpf_isgs_abs.pdf.
50. Barnhardt ML, **Stumpf AJ**, Hansel AK, Berg RC (2001). Quaternary geology of the Wadsworth 7.5' Quadrangle, Lake County Illinois, Kenosha County Wisconsin. Final geologic map submitted to United States Geological Survey for STATEMAP, 1:24 000. <http://isgs.illinois.edu/maps/isgs-quads/surficial-geology/statemap/wadsworth>.
51. **Stumpf AJ** Seaman AA (1998). Glacial ice flow from the McAdam (NTS 21 G/11) map area, York County, New Brunswick: New Brunswick Department of Natural Resources and Energy, Plate 1997-05, 1:50 000.
52. **Stumpf AJ** Seaman AA (1998). Surficial geology of the McAdam (NTS 21 G/11) map area, York county, New Brunswick: New Brunswick Department of Natural Resources and Energy, Plate 1997-04, 1:50 000.
53. Levson VM, **Stumpf AJ**, Stuart, AJ (1998). Quaternary geology and ice-flow studies in the Smithers and Hazelton map areas (93 L and M): implications for exploration. In Geological Fieldwork 1997. British Columbia Geological Survey, Paper 1998-1, p. 5.1 – 5.8, <http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Fieldwork/Documents/1997/levson.pdf>.

54. Levson VM, Cook SJ, Hobday J, Huntley DH, O'Brien EK, **Stumpf AJ**, Weary GW (1998). Till geochemistry of the Old Fort Mountain map area, north – central British Columbia: British Columbia Geological Survey, Open File 1997-10a,
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/OpenFiles/1997/Pages/OF1997-10.aspx>.
55. Levson VM, Cook SJ, Huntley DH, **Stumpf AJ**, Hobday J (1997). Preliminary till geochemistry – Old Fort Mountain area (93 M/1): British Columbia Geological Survey, Open File 1997-18,
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/OpenFiles/1997/Documents/OF1997-18.zip>.
56. **Stumpf AJ**, Broster BE, Levson VM (1997). Evaluating the use of till geochemistry to define buried mineral targets: a case study from the Bell Mine (93 L/16, M1), west – central British Columbia. In Geological Fieldwork 1996. Edited by B. Grant and J.M. Newell. British Columbia Geological Survey Branch, Paper 1997-1, p. 439 – 456,
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Fieldwork/Documents/1996/439-456-stumpf.pdf>.
57. Levson VM, Meldrum DG, Cook SJ, **Stumpf AJ**, O' Brien EK, Churchill C, Coneys AM, Broster BE (1997). Till geochemical studies in the Babine Porphyry Belt: Regional surveys and deposit-scale studies. In Geological Fieldwork 1996. Edited by B. Grant and J.M. Newell. British Columbia Geological Survey, Paper 1997-1, p. 457 – 466,
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Fieldwork/Documents/1996/427-438-levson.pdf>.
58. Levson VM, **Stumpf AJ**, Broster BE, Meldrum DG, O' Brien EK, Churchill C (1997). Quaternary geology and ice flow history in the Babine Porphyry Copper Belt, British Columbia. In Geological Fieldwork 1996. Edited by B. Grant and J.M. Newell. British Columbia Geological Survey, Paper 1997-1, p. 427 – 438,
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Fieldwork/Documents/1996/427-438-levson.pdf>.
59. **Stumpf AJ**, Huntley DH, Broster BE, Levson VM (1996). Detailed drift exploration studies: Babine Porphyry Belt (93 L/16 and 93 M/1), west-central British Columbia. In Geological Fieldwork 1995. Edited by B. Grant and J.M. Newell. British Columbia Geological Survey, Paper 1996-1, p. 37 – 44,
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Fieldwork/Documents/1995/037-044-stumpf.pdf>.
60. Huntley DH, **Stumpf AJ**, Levson VM, Broster BE (1996). Babine porphyry belt project: Quaternary geology and regional till geochemistry sampling in the Old Fort Mountain (93 M/01) and Fulton Lake (93 L/16) map areas, British Columbia. In Geological Fieldwork 1995. Edited by B. Grant and J.M. Newell. British Columbia Geological Survey, Paper 1996-1, p. 45 – 53,
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/Fieldwork/Documents/1995/045-054-huntley.pdf>.
61. **Stumpf AJ**, Huntley DH, Levson VM, O'Brien EK (1996). Surficial Geology and Quaternary Stratigraphy of the Fulton Lake area (NTS 93 L/16): British Columbia Geological Survey, Open File 1996-10, 1:50 000,
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/OpenFiles/1996/Documents/OF1996-10.pdf>.

62. **Stumpf AJ** (1995). Quaternary geology and dispersal patterns of the McAdam (NTS 21 G/11) map area, York County, New Brunswick. New Brunswick Department of Natural Resources and Energy, Mineral Resources, Open File 95-5, 217 p.
63. Seaman AA, **Stumpf AJ**, Bell G (1995). Till geochemistry of McAdam (NTS 21 G/11) map area, New Brunswick. New Brunswick Department of Natural Resources and Energy, Plates 95-13A (Au, Ag, As, Hg, Sb), 95-13B (Cu, Pb, Zn, Co, Ni) and 95-13C (Mn, Fe, Sn, W, Th, U).
64. **Stumpf AJ**, Seaman AA, Broster BE (1995). Variability of till in the McAdam (NTS 21 G/11) map area, York County, New Brunswick. In Geoscience Research 1994. Edited by J.P. Langton. New Brunswick Department of Natural Resources and Energy, Miscellaneous Report 15, p. 65 – 69.
65. Seaman AA, **Stumpf AJ**, Broster BE (1994). Till sampling of the McAdam (NTS 21 G/11) map area, York County, New Brunswick. In Current Research 1993. Edited by S.A.A. Merlini. New Brunswick Department of Natural Resources and Energy, Miscellaneous Report 12, p. 177 – 183.

INDUSTRY/TRADE PUBLICATIONS

1. **Stumpf A**, White M, Tate T (2024). The new synergy between geoscience and engineering, in International District Energy Association (eds), District Energy, First Quarter 2024.

PEER-REVIEWED CONFERENCE PAPERS

1. Zhao Z, **Stumpf A**, Lin Y-F, Wang X (2022). Impacts of prospective LEED building' s energy loads on a borehole heat exchanger: A case study in central Illinois. In: Research Conference Proceedings of International Ground Source Heat Pump Association Annual Conference, Las Vegas, NV, p. 173 – 181.
<http://dx.doi.org/10.22488/okstate.22.000030>.
2. Spittle J, Acuña J, Bernier M, Cimmino M, Fang Z, Gehlin S, Javed S, Liu X, Rees S, **Stumpf A** (eds) (2022). Research Conference Proceedings of International Ground Source Heat Pump Association Annual Conference, Las Vegas, NV, 290 p. <http://dx.doi.org/10.22488/okstate.22.000010>
3. Baser T, Kim K, Tarpey E, Makhnenko R, **Stumpf A** (2020). Experimental investigation of coupled thermo-hydraulic properties of glacial tills. Proceedings, Geo-Congress 2020, Minneapolis, MN.
<https://ascelibrary.org/doi/pdf/10.1061/9780784482827.001>.
4. Ismail A, Mayle M, **Stumpf A**, Thomason J, Atekwana E, Larson T (2018). Geophysical imaging of sustainable water resources in complex geological settings: Case studies from USA and Africa. In Proceedings of 8th International Conference on Water Resources and Arid Environments 2018, Riyadh, Saudi Arabia, December 3-5, 2018.
5. **Stumpf AJ** (2018). Geothermal research at UIUC; Supporting future energy needs, in H. Thorleifson, eds., Geologic Mapping Forum 2018 Abstracts, Minnesota Geological Survey, Open File Report OFR-18-1, 107 p, <http://hdl.handle.net/11299/194852>.
6. **Stumpf AJ**, Thomason JF, Brown SE, Atkinson LA, Ross M (2012). Integration of geophysical data in 3-D geologic models of northeastern Illinois, in S.R. Slattery and N. Atkinson, eds., Energy Resources Conservation Board/Alberta Geological Survey Three-Dimensional Geological Modeling Workshop, Energy Resources

Conservation Board, ERCB/AGS Information Series Report 141, 17 p,
http://ags.aer.ca/publications/INF_141.html.

7. Atkinson LA, Ross M, **Stumpf AJ**, Ismail AM (2011). Sedimentology and 3-D architecture of subsurface facies of the Illinoian deglaciation in east-central Illinois, USA. In: Proceedings of the Geohydro 2011- Joint Meeting of the Canadian Quaternary Association (CANQUA) and the Canadian Chapter of the International Association of Hydrogeologists (IAH-CNC), Quebec City, PQ, August 2011.
8. Ismail AM, Kontar KA, Smith EC, Phillips AC, **Stumpf AJ** (2009). Misleading interpretation of shallow seismic methods: Three case studies from MASW, P-wave reflection and S-wave reflection surveys: SAGEEP, Proceedings, p. 20 – 29, Fort Worth, TX, CD-ROM edition.
9. **Stumpf AJ**, Broster BE, Levson VM, Geertsema M, Schwab JW (1998). Stability of glacial silt and clay deposits in central British Columbia. In Engineering geology, a global view from the Pacific Rim. Edited by D. Moore and O. Hungr. Proceedings, 8th International Congress, International Association for Engineering Geology and the Environment, Balkema, Rotterdam, 3: 1897 – 1903.

INVITED TALKS

1. “*Geothermal Resources – Opportunities for Decarbonizing Building Heating and Cooling Systems*” , September 14, 2023, Symposium on Opportunities and Challenges in the XXI Century - I-MMÁS program (presented remotely).
2. “*Geothermal 101*” , July 18, 2023, Midwest Governors Association (presented remotely).
3. “*Illinois Geothermal Coalition: Supporting the Electrification of Illinois Communities*” , Dec. 2, 2021, DPI CURES Community Project Lab: Sustainable Solutions for Rural, Small and Medium Sized Illinois Communities Facing a Changing Climate, University of Illinois Springfield, Springfield, IL (presented remotely).
4. “*Geothermal at the University of Illinois at Urbana-Champaign*” , March 16, 2021, Geothermal Alliance of Illinois annual conference (presented remotely).
5. “*Feasibility of a Deep Direct-Use Geothermal System at the University of Illinois Urbana-Champaign*” , Nov. 2018, Cornell University, Ithaca, NY.
6. “*Feasibility of a Deep Direct-Use Geothermal System at the University of Illinois Urbana-Champaign*” , Oct. 16, 2018, Geothermal Resources Council Annual Meeting, Reno, NV.
7. “*Deep Direct Use Project at University of Illinois Urbana-Champaign*” , March 13, 2018, Geothermal Alliance of Illinois annual conference, Bloomington, IL.
8. “*Deep Direct Use Reservoirs*” , February 19, 2018, Great Lakes SedHEAT Incubator Workshop, Cleveland, OH.
9. “*Geothermal Exchange: New Research on UIUC Campus*” , Nov. 30, 2017, Geology Colloquium, UIUC Department of Geology, Urbana, IL.
10. “*Studies of Ground Source Geothermal Exchange at UIUC*” , Sept. 8, 2017, Ven Te Chow Hydrosystems Laboratory Seminar Series, UIUC Department of Civil and Environmental Engineering, Champaign, IL.
11. “*Geology and the Mahomet aquifer*” , Aug. 21, 2016, A Look at Water Resources “Mahomet Aquifer” , Museum of the Grand Prairie, Mahomet IL.

12. “*Geology for hydrosystems research*” , Dec. 6, 2013, Ven Te Chow Hydrosystems Seminar Series, UIUC Department of Civil and Environmental Engineering, Champaign, IL.
13. “*Digging for Water: New Insights on the Mahomet Aquifer in Central Illinois*” , May 21, 2013, Association of Engineering Geologists – Chicago Chapter, Chicago IL.
14. “*Geology of the Mahomet Aquifer*” , Nov. 15, 2012, USGS Hydraulic Engineering Luncheon, US Geological Survey, Urbana, IL.
15. “*Mahomet Aquifer*” , March 29, 2012, East Central Illinois Regional Water Stakeholders' Conference, Champaign, IL.
16. “*Integration of geophysical data in 3-D geologic models*” , Jan. 12. 2012, Alberta Geological Survey, Edmonton, AB.
17. “*Water supply planning in Illinois*” , Jan, 2012, Geoscience Canada, Vancouver, BC, Canada.
18. “*Geology, hydrogeology, and geophysics of the Mahomet Aquifer in Champaign County and adjacent areas*” , Sept. 2011, Mahomet Aquifer Consortium, Champaign, IL.
19. “*Geology of the Mahomet Aquifer*” , Feb. 28, 2011, East Central Illinois Regional Water Planning Committee, Bloomington, IL.
20. “*Subsurface geology of central Illinois*” , Sept. 2010, University of Waterloo, Department of Earth and Environmental Sciences, Waterloo, ON, Canada.
21. “*Quaternary geology of the Tierra del Fuego region, Argentina*” , Nov. 2006, University of Illinois, Urbana, IL.
22. “*Subsurface geologic data collection in east-central Illinois*” , Aug. 2006, Board of Natural Resources and Conservation, Bondville, IL.
23. “*Publishing interactive geologic maps in Adobe Acrobat*” , March 2004, Illinois GIS Association Spring Conference, Springfield, IL.

TEACHING EXPERIENCE

- 1) Lecturer: 3-hour lab for Environmental Geology (GEOL 380) course, UIUC Department of Geology (since 2012)
- 2) Lecturer: Field course in Water Resources Field Methods (CEE 458), UIUC Department of Civil and Environmental Engineering (since 2012)
- 3) Led technical demonstrations and tour of geothermal research infrastructure to various US and International organizations (since 2016)
- 4) Led field trips of the Intensively Managed Landscapes Critical Zone Observatory to various US and International organizations (since 2013)
- 5) Lecturer: Design Workshop Studio: Surface Studio (LA 336 / LA 438) for Department of Landscape Architecture in April 2017.
- 6) Co-led field trip of the Upper Sangamon River Basin to Geological Society of America North Central Section in April 2016.

- 7) Lecturer: I-STEM Prairie Research Institute, Science camp for high school students interested in pursuing careers in Science, Technology, Engineering, and Mathematics, half-day field course in July 2013/2014
- 8) Instructor: 2-day field course on Practical Geophysics for Engineering, Archaeology, and Hydrogeology sponsored by Illinois State Geological Survey in September 2012
- 9) Co led public field trips to Ferne Clyffe State Park, Starved Rock and Matthiessen State Parks, Pere Marquette State Park, Moraine Hills State Park, and Kickapoo State Park for Illinois State Geological Survey between 2005 and 2012)
- 10) Instructor: Natural Illinois Expo for Prairie Research Institute (2006 – 2012)
- 11) Co-led field trip for Friends of the Pleistocene field conference to Ancient Mississippi River Valley in 2005
- 12) Instructor: Illinois Soil Classifiers annual field conference in 2004
- 13) Lecturer: Air Photo Interpretation and Remote Sensing, University of New Brunswick in 1999
- 14) Lecturer: Glacial Geology, University of New Brunswick in 1999

SCHOLARLY COLLABORATION

Scholar	Institution	Status	Role	Thesis/Project Title	Year ended
Brian Saccardi	Prairie Research Institute	Post-Doctoral Research Associate	Co-Supervisor	CINet – Critical Zone Science	
Ana Constância Trindade	Department of Materials Science and Engineering, University of Illinois Urbana-Champaign	Post-Doctoral Research Associate	Collaborator	Mechanical characterization of geopolymer composites under distinct solicitations	
Honglei Liu	China University of Mining and Technology, Beijing, China	Visiting Scholar	Collaborator	Monitoring on groundwater and surface water interactions using DTS	2019
Wenjie Sun	China University of Mining and Technology, Beijing, China	Visiting Scholar	Collaborator	Impacts of flowing groundwater on heat transport	2018
Yingchun Ge	Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, Lanzhou, China	Visiting Scholar	Collaborator	Groundwater and Global Energy Security	2018
Shuheng Zhong	China University of Mining and Technology, Beijing, China	Visiting Scholar	Collaborator	From 3-D Hydrostratigraphic Model to 3-D Printed Object	2016
Yaqi Luo	China University of Mining and Technology	PhD Student	Supervisor	Subsurface heat transport simulation with periodic	2018

				surface temperature signals and groundwater flow	
--	--	--	--	--	--

SUPERVISION

Graduate Students

Student	Institution	Thesis	Role	Thesis/Project Title	Year graduated
Sayan Mukherjee	Department of Earth, Atmospheric, and Planetary Sciences Purdue University	PhD	Co-Advisor; Thesis Committee	Groundwater level monitoring using ambient noise seismology	
Katherine Nieto	Department of Civil and Environmental Engineering, University of Illinois Urbana-Champaign	MSc	Co-Advisor; Thesis Committee	Feasibility of community geothermal systems in urban areas	
Anjali Thota	Subsurface Opportunities + Innovations Laboratory, Department of Civil and Environmental Engineering, Northwestern University	PhD	Internship Supervisor	Modeling subsurface heat island across the Chicago	
Josiane Jello	Department of Civil and Environmental Engineering, University of Illinois Urbana-Champaign	PhD	Co-Advisor; Thesis Committee	Geostructural modeling of underground thermal energy systems	
Devon Samuel	Department of Materials Science and Engineering, University of Illinois Urbana-Champaign	PhD	Supervisor	Geopolymer composites for refractory, corrosion-resistant, and structural applications.	
Jiale Lin	Department of Civil and Environmental Engineering, University of Illinois Urbana-Champaign	PhD	Supervisor	Modeling of geothermal borefields	
John Zhao	Department of Biological and Agricultural Engineering, University of Illinois Urbana-Champaign	PhD	Co-Advisor; Thesis Committee	Assessing the impacts of geological factors on the thermo-economic performance of ground source heat pump systems	2023
Grant Hagedorn	Department of Earth and Environmental Sciences, University of Waterloo	MSc	Co-Advisor; Thesis Committee	Paleo-Ice sheet and deglacial history of the southwestern Great Slave Lake Area	2022
Andrew Watson	Department of Geography-Geology-Environment, Illinois State University	MSc	Co-Advisor; Thesis Committee	Surficial geology of the Gibson City East Quadrangle	2019
Zhaowang Lin	Department of Civil and Environmental Engineering, University of Illinois Urbana-Champaign	MSc	Supervisor	Geothermal exchange and deep direct-use studies at U of IL campus	2018
Ming Li	Purdue University, Department of Earth and Atmospheric Sciences	PhD	Collaborator	Correlative assessment of two predictive soil hydrology models with measured surface soil geochemistry	2018

Alejandro Botero	Department of Agricultural Engineering, University of Illinois Urbana-Champaign	PhD	Collaborator	Non-market value of watershed management enhancements: An integration of hydro-ecologic and economic assessments	2018
Qina Yan	Department of Civil and Environmental Engineering, University of Illinois Urbana-Champaign	PhD	Collaborator	Effects of landscape evolution on soil organic carbon dynamics in intensively managed agricultural landscapes	2018
Mingjing Yu	Department of Geography, University of Illinois Urbana-Champaign	PhD	Supervisor	Provenance of surface water in Upper Sangamon River Basin	2017
Adam McDaniel	College of Engineering, University of Wisconsin-Madison	MEng	Collaborator	Fiber optic distributed temperature sensing (DTS) to monitor low temperature geothermal heat exchange.	2017
Thomas Satrom	Energy and Sustainability Engineering, University of Illinois Urbana-Champaign	MEng	Co-Advisor	No thesis	2017
John Flanagan	Energy and Sustainability Engineering, University of Illinois Urbana-Champaign	MEng	Co-Advisor	No thesis	2017
Ellyn Rickels	Department of Geography/Geology, Illinois State University	MSc	Co-Advisor; Thesis Committee	Surficial Geology and Provenance of Glacial Deposits of the Saybrook 7.5 Minute Quadrangle, McLean County, Illinois	2016
Lisa Atkinson	Department of Earth and Environmental Sciences, University of Waterloo	MSc	Co-Advisor; Thesis Committee	Subsurface analysis of Late Illinoian deglacial sediments in east-central Illinois, United States, and Its implications for hydrostratigraphy	2011
Erin Roche	Department of Geography/Geology, Illinois State University	MSc	Co-Advisor; Thesis Committee	Three-dimensional geology of Quaternary units above the Decatur, Illinois CO ₂ sequestration test site	2009

Undergraduate Students

- 1) Katherine Dwyer, Department of Earth Science and Environmental Change, University of Illinois Urbana-Champaign 2024
- 2) Laila Ismail, Department of Geography and GIS, University of Illinois Urbana-Champaign, 2024
- 3) Tessa Kleiner, Department of Civil and Environmental Engineering, University of Illinois Urbana-Champaign, 2024
- 4) Nate Dixon, Department of Earth Science and Environmental Change, University of Illinois Urbana-Champaign 2024
- 5) Eduard Brown, Department of Earth Science and Environmental Change, University of Illinois Urbana-Champaign, 2023
- 6) Sophie Rack, Department of Earth Science and Environmental Change, University of Illinois Urbana-Champaign, 2023

- 7) Elise Bortell, Department of Earth Science and Environmental Change, University of Illinois Urbana-Champaign, 2023
- 8) Jessica Ramirez, Department of Earth Science and Environmental Change, University of Illinois Urbana-Champaign, 2023
- 9) Jeff (Hongyu) Xiao, Department of Earth Science and Environmental Change, University of Illinois Urbana-Champaign, 2023
- 10) Adrika Vats, Mechanical Engineering, University of Illinois Urbana-Champaign, 2023
- 11) Aman Mehta, Mechanical Engineering, University of Illinois Urbana-Champaign, 2023
- 12) Jason (Wenzhe) Mi, Earth, Society, and Environmental Sustainability, University of Illinois Urbana-Champaign, 2022
- 13) Julia Margaslia, Earth, Society, and Environmental Sustainability, University of Illinois Urbana-Champaign, 2022
- 14) Michelle Verlinksy, Earth, Society, and Environmental Sustainability, University of Illinois Urbana-Champaign, 2022
- 15) Justin Vozzo, College of Agriculture, Consumer, and Environmental Sciences, University of Illinois Urbana-Champaign, 2016
- 16) Tiffany Sevilla, Department of Civil and Environmental Engineering, Northwestern University, 2014
- 17) Michael DeLucia, Department of Geology, University of Illinois, Urbana-Champaign, 2014
- 18) Qina Yan, Department of Civil & Environmental Engineering, University of Illinois Urbana-Champaign, 2014
- 19) Kun Jia, Department of Earth and Environmental Sciences, University of Waterloo, 2011; Thesis: "Sedimentology of the Vandalia Member till of the penultimate glaciation in central Illinois and implications on the hydrostratigraphy"
- 20) Dawn Heckmann, Department of Geography, University of Illinois at Urbana-Champaign, 2011
- 21) Lisa Atkinson, Department of Earth and Environmental Sciences, University of Waterloo, 2009; Thesis: "Three-Dimensional Mapping of East Central Illinois using gOcad®"
- 22) Dan Stevenson, Department of Geography, University of Illinois, 2008
- 23) Tim Hodson, Department of Geology, University of Illinois at Urbana-Champaign, 2008
- 24) Emma Sohn, School of Architecture, University of Illinois at Urbana-Champaign, 2007
- 25) Bryce Willems, Department of Geography-Geology, Illinois State University, 2003
- 26) Jessica Palmer, Department of Geography, University of Illinois at Urbana-Champaign, 2006
- 27) Gabe Sanchez, Department of Geography, University of Illinois at Urbana-Champaign, 2004
- 28) Kyle Massey, Department of Geography, University of Illinois at Urbana-Champaign, 2004
- 29) Matthew Jefferson, Department of Geography, University of Illinois at Urbana-Champaign, 2003
- 30) Brian Boes, Department of Geography, University of Illinois at Urbana-Champaign, 2003
- 31) Karly Hellrung, Department of Geography, University of Illinois at Urbana-Champaign, 2002

- 32) Matthew Welsh, Department of Geology & Environmental Geosciences, Northern Illinois University, 2002
- 33) David Kulczycki, Department of Geology & Environmental Geosciences, Northern Illinois University, 2001
- 34) Brian Luman, Department of Geography, University of Illinois at Urbana-Champaign, 2000

CONFERENCE ABSTRACTS

1. Curry B, Grimley D, Phillips A, Mandera KM, **Stumpf A**, Lund DM, Hamilton MS (2023). Quaternary deposits of Illinois: Map update. Geological Society of America, Abstracts with Programs, v. 55, no. 3, <http://dx.doi.org/10.1130/abs/2023NC-387066>.
2. Grimley D, Curry B, Mandera KM, Phillips A, **Stumpf A**, Dendy-Metz S, Lund DM, Hamilton MS (2023). A new statewide Quaternary map of Illinois: Current progress and new findings. Geological Society of America, Abstracts with Programs, v. 55, no. 2, <http://dx.doi.org/10.1130/abs/2023SE-385929>.
3. Banerjee P, Rhoads BL, Anders AM, **Stumpf A** (2022). Reconstructing the dynamics of a meandering river in an intensively managed landscape through analysis of floodplain deposits. American Geophysical Union Fall Meeting, Chicago, IL, December 12 – 16, Paper EP35D-1364, <https://agu.confex.com/agu/fm22/meetingapp.cgi/Paper/1138578>.
4. Dere A, Frantal I, Alderink K, Stock D, Corral G, Sutula O, Sargent S, Filley T, Welp L, Jimenez-Castaneda M, **Stumpf A**, Wennerdahl H, Bauer E, Keefer L, Blair N, Druhan J, Schaeffer S, Rhoads B, Anders A, Kumar P (2022). Measuring solute and gas fluxes through the Management Induced Reactive Zone (MIRZ) in agriculture and restored prairie soils. The 12th International Geochemistry of the Earth's Surface Symposium (GES12), Zurich July 24 – 29. Zenodo. <https://doi.org/10.5281/zenodo.6828870>.
5. Samuel D, **Stumpf A**, Kriven W (2020). Thermal conductivity and flexure strength of geopolymer composites for geothermal housing foundations. Final Program, 44th International Conference & Exposition on Advanced Ceramics & Composite, Daytona Beach, FL, January 27 – 31, Paper ICACC-S16-021-2020, https://ceramics.org/wp-content/uploads/2018/09/ICACC20_Abstacts_WebFinal.pdf.
6. Liu H, Lin Y-F, **Stumpf AJ**, Valocchi A, Sargent SL (2019). Multiphysical coupled modeling for distributed thermal response testing of heterogeneous lithologies. Geological Society of America Abstracts with Programs, v. 51, no. 5, <http://dx.doi.org/10.1130/abs/2019AM-337330>.
7. **Stumpf AJ**, Lin Y-F, Attalla M, Cai X (2019). Geothermal energy: An integral component on the pathway to carbon neutrality at the University of Illinois at Urbana-Champaign. Geological Society of America Abstracts with Programs, v. 51, no. 5, <http://dx.doi.org/10.1130/abs/2019AM-336924>.
8. Ellett KM, Western AW, Abesser C, **Stumpf AJ** (2019). The untapped potential of anthropogenic geothermal resources. Geological Society of America Abstracts with Programs, v. 51, no. 5, <http://dx.doi.org/10.1130/abs/2019AM-339037>.
9. Lin Y-F, **Stumpf AJ**, Frailey SM, Holcomb FH (2019). Feasibility of deep direct-use heating for district-scale energy systems over the Illinois Basin. Geological Society of America Abstracts with Programs, v. 51, no. 5, <http://dx.doi.org/10.1130/abs/2019AM-337671>.

10. **Stumpf AJ**, Lin Y-F (2018). Thermogeology assessments of geothermal energy in the shallow heterogeneous subsurface. Geological Society of America Abstracts with Programs, v. 50, no. 6, <http://dx.doi.org/10.1130/abs/2018AM-324768>.
11. Lin Y-F, **Stumpf AJ**, Kumar P, Sargent S (2018). Measuring earth's vital sign—temperature—in four dimensions. Geological Society of America Abstracts with Programs, v. 50, no. 6, <http://dx.doi.org/10.1130/abs/2018AM-320737>.
12. Liu H, Lin Y-F, **Stumpf AJ**, Sargent S, and Kumar P (2018). Identifying groundwater and surface water interaction zones using fiber-optic distributed temperature sensing. Geological Society of America Abstracts with Programs, v. 50, no. 6, <http://dx.doi.org/10.1130/abs/2018AM-320878>.
13. **Stumpf AJ**, Berg RC, Curry BB, Thomason J (2018). Changing roles of state geological surveys in the United States: Experiences from Illinois. Resources for Future Generations conference, Vancouver, BC, Canada, June 16-21, 2018, <http://rfg2018.gibsongroup.ca/pdf/rfg2411.pdf>.
14. Liu H, Lin YF, **Stumpf AJ**, Kumar P, Sargent S (2018). Spatial and temporal pattern monitoring on groundwater and surface water interactions using fiber-optic distributed temperature sensing. Geological Society of America Abstracts with Programs, North-Central Section, v. 50, no. 4, <http://dx.doi.org/10.1130/abs/2018nc-312754>.
15. Lin T-F, Y Ge, **Stumpf A** (2017). Groundwater and global energy security: National Groundwater Association Groundwater Summit, Nashville, TN, December 4 – 7, 2017. <https://ngwa.confex.com/ngwa/2017gws/webprogram/Paper11891.html>
16. Yu M, Rhoads BL, **Stumpf AJ** (2017). Floodplains as a source of fine sediment in grazed landscapes: tracing the source of suspended sediment in the headwaters of an intensively managed agricultural landscape: American Geophysical Union Fall Meeting, New Orleans, LA, November 11 – 15, Abstract EP51A-1634. <https://agu.confex.com/agu/fm17/meetingapp.cgi/Paper/279043>
17. **Stumpf AJ**, Lin Y-F (2017). Thermophysical characterization of the heterogeneous subsurface. Geological Society of America Abstracts with Programs, v. 49, no. 6, <http://dx.doi.org/10.1130/abs/2017AM-306733>.
18. Kumar P, et al. (2016). Anthropogenic reorganization of critical zone in intensively managed landscapes: American Geophysical Union Fall Meeting, San Francisco, CA, December 12-16, Abstract EP42B-08, <https://agu.confex.com/agu/fm16/meetingapp.cgi/Paper/168792>.
19. Lin Y-F, Luo Y, Kumar P, **Stumpf AJ** (2016). Characterizing vertical heat transport in the Critical Zone by using fiber-optic distributed temperature sensing: Asia Oceania Geosciences Society, Abstracts with Programs, HS05-D1-AM2-302B(L3S)-001.
20. Lu N, et al. (2016). Ecological processes revealed by the watershed microbiome of an intensively managed agricultural landscape. 16th International Symposium on Microbial Ecology, International Society for Microbial Ecology, Montreal, PQ, August 21-26, Poster 362B.
21. Stohr C, **Stumpf AJ**, Barrett M, Filippini H, Luman D (2016). Identification of defects in earthen-covered landfills by remote sensing: North-Central Section, Geological Society of America, Abstracts with Programs, v. 48, no. 5, <https://doi.org/10.1130/abs/2016NC-275140>.
22. Zhong S, **Stumpf AJ**, Lin Y-F (2016). From 3-D hydrostratigraphic model to 3-D printed aquifer model: North-Central Section, Geological Society of America, Abstracts with Programs, v. 48, no. 5, <https://doi.org/10.1130/abs/2016NC-275384>.

23. Grimley D, Labotka D, Huot S, Wang J, **Stumpf AJ**, Miao X, Caron O, and Wang H (2016). Deciphering the last glacial chronology, Upper Sangamon River Basin, Illinois: North-Central Section, Geological Society of America, Abstracts with Programs, v. 48, no. 5, <https://doi.org/10.1130/abs/2016NC-275368>.
24. Wang H, Curry B, McKay D, Berg R, **Stumpf AJ**, Huot S, Keen-Zebert A (2016). Evidence of meltwater megafloods near the southernmost ice margins of the Laurentide Ice Sheet between 20.5 and 18.5 ka: North-Central Section, Geological Society of America, Abstracts with Programs, v. 48, no. 5, <https://doi.org/10.1130/abs/2016NC-275360>.
25. Stohr C, Cartwright K, Berg R, **Stumpf AJ** (2016). Origins, influences and contributions of Illinois State Geological Survey to landfill studies and groundwater protection: North-Central Section, Geological Society of America, Abstracts with Programs, v. 48, no. 5, <https://doi.org/10.1130/abs/2016NC-275131>.
26. Luo Y, Lin Y-F, Kumar P, **Stumpf AJ** (2016). Subsurface heat transport simulation with periodic surface temperature signals and groundwater flow: North-Central Section, Geological Society of America, Abstracts with Programs, v. 48, no. 5, <https://doi.org/10.1130/abs/2016nc-275481>.
27. Lin Y-F, **Stumpf A**, Luo Y, Kumar P (2015). Integrating distributed temperature sensing and geological characterization to quantify spatiotemporal variability in subsurface heat transport within the Critical Zone, American Geophysical Union Fall Meeting, San Francisco, CA, December 14-18, Abstract H53E-1702, <https://agu.confex.com/agu/fm15/meetingapp.cgi/Paper/70895>.
28. Yu M, Rhoads B, Anders A, **Stumpf A** (2015). Tracing suspended sediment sources in the Upper Sangamon River Basin using conservative and non-conservative tracers, American Geophysical Union Fall Meeting, San Francisco, CA, December 14-18, Abstract EP21C-0912, <https://agu.confex.com/agu/fm15/meetingapp.cgi/Paper/85460>.
29. Lin Y-F, **Stumpf AJ**, Luo Y, Kumar P (2015). Using distributed temperature sensing to monitor potential subsurface temperature changes in an intensively managed landscape. Geological Society of America Abstracts with Programs, Baltimore, MD, October 18-22, 47(7): 30, <https://gsa.confex.com/gsa/2015AM/webprogram/Paper266331.html>.
30. Rickels ES, Malone DM, **Stumpf AJ**, Thomason J (2015). Archean provenance of granite cobbles in Woodfordian tills in central Illinois. Geological Society of America Abstracts with Programs, Baltimore, MD, October 18-22, 47(7): 789, <https://gsa.confex.com/gsa/2015AM/webprogram/Paper266331.html>.
31. Yan Q, Iwasaki T, Kumar P, Parker G, **Stumpf A**, Rhoads B, Keefer L (2015). Understanding the characteristics of river valley topography using flood model: North-Central Section, Geological Society of America, Abstracts with Programs, 47(5): 85, <https://gsa.confex.com/gsa/2015NC/webprogram/Paper255952.html>.
32. Yan Q, Kwang J, Kumar P, Anders A, Rhoads B, **Stumpf A**, Keefer L (2015). Ridge migration modeling with human activities: North-Central Section, Geological Society of America, Abstracts with Programs, 47(5): 91, <https://gsa.confex.com/gsa/2015NC/webprogram/Paper255964.html>.
33. **Stumpf AJ**, Atkinson LA, Dey WS, Ross MA (2014). Development of a 3-dimensional geological model of buried valleys in east-central Illinois. Geological Society of America Abstracts with Programs, Vancouver, BC, October 18-22, 46(6): 686, <https://gsa.confex.com/gsa/2014AM/webprogram/Paper243752.html>.
34. Stumpf AJ, Stohr CJ, Keefer DA, Atkinson LA (2013). Quantitative analyses of the distribution and dimension of buried glacial channels as a groundwater resource, Association of Engineering and Environmental Geologists

- Annual Meeting, Seattle, WA, September 11-15, p. 86,
www.aegweb.org/docs/defaultsource/events/aeg_seattle13_program_081913.pdf
35. **Stumpf AJ** et al. (2013). Ice streams: A possible control on ice sheet dynamics of the Penultimate Glaciation in Illinois, United States. Canadian Quaternary Association Biennial Meeting, Edmonton, AB, Canada, August 21-24.
 36. Wang H., **Stumpf AJ**, Lowell TV (2012). Phase relationship of moisture distribution between the Midwest and Southwest of the United States during the last termination, American Geophysical Union Fall Meeting, San Francisco, CA, December 3-7, Abstract PP51B-2128,
<http://fallmeeting.agu.org/2012/eposters/eposter/pp51b-2128/>.
 37. Ismail AM, Anderson N, **Stumpf AJ**, Dey WS (2012). Comparing shear wave velocity measurements from MASW and downhole seismic methods. Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP), Tucson, AZ, March 2012,
<http://library.seg.org/doi/abs/10.4133/1.4721743>.
 38. **Stumpf AJ** (2012). Research collaborations for water-supply planning in Illinois: United States. 4th International Professional Geology Conference, Vancouver BC, January 2012.
 39. Atkinson LA, Ross MA, **Stumpf AJ**, Dey WS (2011). 3-D Geological modeling of subsurface facies assemblages correlated to the Illinoian deglaciation in east-central Illinois, United States. Geological Society of America Abstracts with Programs, Minneapolis, MN, October 9-12, 43(5): 627,
<https://gsa.confex.com/gsa/2011AM/webprogram/Paper196111.html>.
 40. Atkinson LA, Ross MA, **Stumpf AJ**, Ismail, A (2011). Sedimentology and 3-D architecture of subsurface facies of the Illinoian deglaciation in east-central Illinois, United States. Geological Society of America Abstracts with Programs, Minneapolis, MN, October 9-12, 43(5): 559,
<https://gsa.confex.com/gsa/2011AM/webprogram/Paper196020.html>.
 41. Stiff BJ, Roadcap GS, **Stumpf AJ**, Dey WS, Berg RC (2011) .Visualizing the Mahomet aquifer for planners in central Illinois. Geological Society of America Abstracts with Programs, Minneapolis, MN, October 9-12, 43(5): 240, <https://gsa.confex.com/gsa/2011AM/webprogram/Paper194762.html>.
 42. Stohr CJ, **Stumpf AJ**, Stiff BJ, Haneberg W (2011). Describing inaccessible outcrops along the Middle Fork of the Vermilion River, Illinois. Geological Society of America Abstracts with Programs, Minneapolis, MN, October 9-12, 43(5): 449, <https://gsa.confex.com/gsa/2011AM/webprogram/Paper197104.html>.
 43. Wang H, **Stumpf AJ**, Lowell T (2011). Evidence of Younger Dryas aridity in dune-paleosol successions in the Midwest of U.S.A. In: Proceedings of the XVII International Quaternary Association Congress, Bern, Switzerland, August 2011.
 44. Kontar YA, **Stumpf AJ** (2010). Study of impact of groundwater cascading on bio-geochemical parameters of Lake Michigan: Eos, Transactions, American Geophysical Union, Fall Meeting Suppl., abs. NH11A-1102 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec. 2010,
<http://abstractsearch.agu.org/meetings/2010/FM/sections/NH/sessions/NH11A/abstracts/NH11A-1102.html>.
 45. Wang H, **Stumpf AJ**, Berg RC, McKay ED III (2010). Evidence of a 700-year Lake Agassiz megaflood in the slackwater deposits of Mississippi River tributaries: Eos, Transactions, American Geophysical Union, Fall

- Meeting Suppl., abs. EP21C-0756 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec. 2010, <http://abstractsearch.agu.org/meetings/2010/FM/sections/EP/sessions/EP21C/abstracts/EP21C-0756.html>.
46. Wang H, **Stumpf AJ**, Miao X (2010). A complete sedimentary record from last glacial termination to early Holocene in Midwestern dune field: Geological Society of America Abstracts with Programs, Denver, CO, October 31-November 3, 42(5): 518, <https://gsa.confex.com/gsa/2010AM/webprogram/Paper180212.html>.
 47. Ismail AM, **Stumpf AJ**, Dey WS (2010). Downhole P- and S-wave velocity measurements to aid in characterization of glacial sediments in central Illinois, United States: Egyptian Geophysical Society, Program with Abstracts, Cairo, Egypt on March 15, 2010.
 48. Ismail AM, **Stumpf AJ**, Dey WS (2010). High resolution seismic imaging of bedrock surface and overlying glacial deposits in Champaign County, east-central Illinois, United States: Egyptian Geophysical Society, Program with Abstracts, Cairo, Egypt on March 15, 2010.
 49. Ismail AM, **Stumpf AJ**, Dey WS (2009). Seismic characterization of glacial sediments in central Illinois based on downhole seismic measurements: Geological Society of America, Program with Abstracts, Portland, OR, October 18-21, 2009, 41(7): 373, <https://gsa.confex.com/gsa/2009AM/webprogram/Paper164511.html>.
 50. Grimley DA, Geiger E, Phillips AC, Webb N, **Stumpf AJ** (2009). Illinoian and Pre-Illinoian paleoecology and paleoenvironments in central and southern Illinois: North-Central Section, Geological Society of America, Abstracts with Programs, 41(4): 58, <https://gsa.confex.com/gsa/2009NC/webprogram/Paper155150.html>.
 51. Dey WS, **Stumpf AJ** (2008). Mapping the Mahomet aquifer beneath Champaign County. Illinois Water Conference 2008, Program with Abstracts, Champaign IL, <http://web.extension.illinois.edu/iwrc/pdf/presentations/William%20Dey.pdf>.
 52. **Stumpf AJ**, Dey WS (2008). Mapping Quaternary aquifers in Champaign County, Illinois. Midwest Ground Water Conference, Dubuque IA.
 53. Roche E, Malone D, **Stumpf AJ** (2008). Surficial Geology of parts of the Forsyth, Argenta, Long Creek, and Decatur 7.5 Minute Quadrangles, Macon County, IL. 2008 Joint Meeting of The Geological Society of America, Soil Science Society of America, American Society of Agronomy, Crop Science Society of America, Gulf Coast Association of Geological Societies with the Gulf Coast Section of SEPM, Houston TX, 40(6): 359, <https://gsa.confex.com/gsa/2008AM/webprogram/Paper149879.html>.
 54. Johnson DL, Johnson DN, Horwath Burnham JL, Wang H, Hackley KC, **Stumpf AJ**, Cahill RA (2008). Predictive biodynamic principles resolve two long-standing topographic-landform-soil issues: mima mounds and soil stone-layers. 2008 Joint Meeting of The Geological Society of America, Soil Science Society of America, American Society of Agronomy, Crop Science Society of America, Gulf Coast Association of Geological Societies with the Gulf Coast Section of SEPM, Houston TX, 40(6): 209, <https://gsa.confex.com/gsa/2008AM/webprogram/Paper148250.html>.
 55. Stohr CJ, Kemmis TJ, **Stumpf AJ**, Thomason JF (2008). Using a reflectorless total station to remotely describe a deltaic kame terrace sequence in the Fox River valley, northeastern Illinois. Geological Society of America North-Central Section Meeting, Program with Abstracts, Paper No. 7-4, Evansville KY, 40(5): 12, <https://gsa.confex.com/gsa/2008NC/webprogram/Paper136973.html>.
 56. Stohr CJ, Darmody RG, Wimmer B, Hackley K, Iranmanesh A, Krapac I, Byers D, **Stumpf AJ**, Luman DE, Brown SE (2008). Thermal infrared detection of simulated CO₂ leakage in cropland: Application to post

- injection deep sequestration. Geological Society of America North-Central Section Meeting, Evansville KY, 40(5): 83, <https://gsa.confex.com/gsa/2008NC/webprogram/Paper137652.html>.
57. Stohr CJ, Darmody RG, Wimmer W, Hackley K, Iranmanesh A, Krapac I, Byers D, **Stumpf AJ**, Luman DE, Brown SE (2008). Thermal infrared detection of simulated CO₂ leakage in cropland: Application to deep sequestration. Sixth Annual Conference on Carbon Capture & Sequestration, Pittsburgh PA. http://www.alrc.doe.gov/publications/proceedings/07/carbon-seq/data/papers/p1_043.pdf
58. Johnson DL, **Stumpf AJ**, Johnson DN (2007). Loess-and caliche-bearing biomantles and cold-dry desiccation features in Tehuelche gravels, Santa Cruz Province, Patagonia: Geological Society of America North-Central Section Meeting, Lawrence KS, 39(3):16, <https://gsa.confex.com/gsa/2007SC/webprogram/Paper120131.html>.
59. **Stumpf AJ**, Phillips AC, Pociask GE, Smith LR, White WP (2007). Mass wasting and its control on channel behaviour and valley formation in the Partridge Creek watershed, Illinois River valley. Geological Society of America Second Shlomon Specialty Conference in Engineering Geology - Mass Wasting in Disturbed Watersheds, Proceedings, Durango CO.
60. Stohr CJ, **Stumpf AJ**, Stiff BJ, Blakley C, Walgren D, Sonie N (2005). Downhole, natural-gamma logging in support of geologic mapping and hydrogeologic investigations in northeastern Illinois. Midwest Ground Water Conference, Program with Abstracts, Urbana, IL. Illinois State Geological Survey Open File 2005-13, p. 49. <http://library.isgs.uiuc.edu/Pubs/pdfs/ofs/2005/ofs2005-13.pdf>
61. **Stumpf AJ**, Hansel AK (2005). Cooperative geologic mapping for applied earth science in Wauconda, Illinois: Geological Society of America, Salt Lake City UT, 37(7): 146, <https://gsa.confex.com/gsa/2005AM/webprogram/Paper92280.html>
62. Hansel AK, Stiff BJ, Larson DR, Barnhardt ML, **Stumpf AJ** (2004). Using 3-D models to visualize the hydrogeologic setting for groundwater resources planning: Geological Society of America Abstracts with Programs, 36(5): 576, <https://gsa.confex.com/gsa/2004AM/webprogram/Paper79394.html>.
63. Stiff BJ, **Stumpf AJ**, Barnhardt ML (2004). Managing a geologic database for groundwater applications: Geological Society of America Abstracts with Programs, Denver CO, 36(5): 576, <https://gsa.confex.com/gsa/2004AM/webprogram/Paper79598.html>.
64. Hansel AK, Dixon-Warren AB, **Stumpf AJ**, Barnhardt ML, Stiff BJ, Pugin AJM (2004). The application of three-dimensional geologic mapping for groundwater management in north-eastern Illinois. Geological Association of Canada – Mineralogical Association of Canada, Program with Abstracts, St. Catherines, ON, 29: 464, http://gac.esd.mun.ca/gac_2004/search_abs/sub_program.asp?sess=98&form=10&abs_no=468.
65. Stohr CJ, Curry BB, Dixon-Warren AB, Barnhardt ML, Larson DR, Phillips A, **Stumpf AJ**, Duval J, Guttman B, Korth D (2004). Downhole geophysical logging for Quaternary mapping applied to hydrogeologic and environmental issues. Geological Society of America North-Central Section Meeting, Program with Abstracts, St. Louis, MO, 36(3): 44, <https://gsa.confex.com/gsa/2004NC/webprogram/Paper71449.html>
66. Hansel AK, Barnhardt ML, **Stumpf AJ**, Stiff BJ (2003). Three-dimensional geologic mapping and groundwater applications in northeastern Illinois. Geological Society of America, Program with Abstracts, Seattle, WA, 35(6): 66, <https://gsa.confex.com/gsa/2003AM/webprogram/Paper61566.html>
67. Barnhardt BL, Stiff BJ, Hansel AK, **Stumpf AJ**, Dixon-Warren AB, Luman DE, Stohr CJ (2003). New protocols, processes, products, and applications of 3-D geologic mapping in northeastern Illinois. Geological

- Society of America, Program with Abstracts, Seattle, WA, 35(6): 66,
<https://gsa.confex.com/gsa/2003AM/webprogram/Paper64119.html>.
68. **Stumpf AJ**, Phillips AC (2003). Mapping of America's heartland: The status of quadrangle scale geologic mapping at the Illinois State Geological Survey. Canadian Quaternary Association, Program with Abstracts, Halifax, NS, p. 116.
 69. **Stumpf AJ**, Broster BE (2003). The assessment of landslide risk in unconsolidated glacial deposits. Geological Association of Canada – Mineralogical Association of Canada, Program with Abstracts, Vancouver BC. http://gac.esd.mun.ca/gac_2003/search_abs/sub_program.asp?sess=98&form=10&abs_no=640
 70. Horwath JL, Johnson DL, **Stumpf AJ** (2002). Evolution of a gravelly mima-type moundfield in southwestern Missouri. Geological Society of America, Program with Abstracts, Denver, CO, 34(6): 369,
<https://gsa.confex.com/gsa/2002AM/webprogram/Paper46417.html>.
 71. Pugin AJM, Larson TH, Sargent S, Sieving J, **Stumpf AJ**, Young TC, Nelson RS (2002). Geophysical mapping of the Teays-Mahomet Bedrock Valley reveals possible hydraulic window. Geological Society of America, Program with Abstracts, Denver, CO, 34(6): 228, <https://gsa.confex.com/gsa/2002AM/webprogram/Paper39338.html>.
 72. Barnhardt ML, **Stumpf AJ**, Pugin A (2001). Quadrangle-scale mapping in support of 3-D modeling of Quaternary deposits in northeastern Illinois. Geological Society of America, Program with Abstracts, Boston, MA, 33(6): A268, <https://gsa.confex.com/gsa/2001AM/webprogram/Paper23810.html>.
 73. Levson VM, Ferbey T, Mate DJ, **Stumpf AJ** (2001). Complex glacial dynamics and mineral dispersal in the central Canadian Cordillera. Canadian Quaternary Association, Program with Abstracts, Whitehorse, YK. Government of the Yukon, Heritage Branch, Occasional Papers in Earth Sciences No. 1, p. 48,
http://www.tc.gov.yk.ca/publications/CanQua_Program_Abstracts_2001.pdf.
 74. **Stumpf AJ**, Broster BE, Levson VM (2000). New evidence for changes in ice and drainage divides of the Late Wisconsinan Fraser Glaciation in west – central British Columbia, Canada. Geological Society of America, Program with Abstracts, Reno, NV.
 75. **Stumpf AJ** (2000). Quaternary geology and history of the Fulton River Quadrangle (NTS 93L/NE), central British Columbia, Canada. Geological Society of America, Cordilleran Section, Vancouver, BC, 32(6): A-70.
 76. **Stumpf AJ**, Broster BE (2000). Slope instability associated with glacial lake sediments: Examples from central British Columbia. Geological Society of America, Cordilleran Section, Vancouver, BC, 32(6): A-70.
 77. Levson VM, **Stumpf AJ** (2000). An interior Cordilleran ice divide in north-central British Columbia. Geological Society of America, Cordilleran Section, Vancouver, BC, 32(6): A-24.
 78. **Stumpf AJ**, Broster BE (2000). The application of stratigraphic and mapping studies in delineation of landslide hazards: an example from British Columbia. Atlantic Geoscience Society and the Environmental Earth Sciences Division of the Geological Association of Canada, Program with Abstracts, Fredericton, NB,
<http://journals.hil.unb.ca/index.php/ag/article/view/1985/2349>.
 79. **Stumpf AJ**, Broster BE (1999). Cordilleran ice streaming from north – central interior British Columbia and outlets through the Coast and Rocky Mountains. Canadian Quaternary Association, Program with Abstracts, Calgary, AB.
 80. **Stumpf AJ**, Broster BE (1999). Upslope flow and reversals during growth of the Cordilleran Ice Sheet, British Columbia, Canada. Geological Society of America, Program with Abstracts, Denver, CO, 31(7): 258.

81. Levson VM, **Stumpf AJ**, Broster BE (1999). The influence of glacial flow reversals on geochemical dispersal in central Canadian Cordillera. International Geochemical Exploration Symposium, Proceedings, Vancouver, BC.
82. Levson VM, Mate D, Stuart AJ, **Stumpf AJ** (1999). Quaternary geology and drift prospecting studies in north central Stikinia. Cordilleran Round-up, Programs with Abstracts, Vancouver, BC.
83. Levson VM, Plouffe A, **Stumpf AJ**, Cook SJ (1999). Pleistocene ice flow and dispersal processes in central Stikinia: new interpretations and geochemical tools for mineral discovery in till covered areas. Cordilleran Round-up, Program and Abstracts, Vancouver, BC.
84. **Stumpf AJ**, Broster BE, Levson VM (1998). Anomalous westward flow of the Cordilleran Ice Sheet during the Late Wisconsinan Glaciation of central British Columbia. Geological Society of America, Program and Abstracts, Toronto, ON, 30(7): A165.
85. **Stumpf AJ** (1998). Stability of glacial silt and clay deposits in central British Columbia. A global view from the Pacific Rim. International Association of Engineering Geology and the Environment, Program and Abstracts, Vancouver, BC.
86. **Stumpf AJ**, Broster BE (1998). Wisconsinan glaciolacustrine sedimentation in central British Columbia, Canada: Babine Lake – Bulkley River area. American Quaternary Association, Program and Abstracts, p. A164, Puerto Vallarta, Mexico.
87. Broster BE, **Stumpf AJ** (1998). Landward shifts of Late Wisconsinan ice growth centres and reversals in ice flow directions along the Atlantic and Pacific coasts of Canada. American Quaternary Association, Program and Abstracts, p. A93, Puerto Vallarta, Mexico.
88. Broster BE, **Stumpf AJ** (1998). Shifts of coastal centres to inland locations during the Late Wisconsinan. Geological Association of Canada – Mineralogical Association, Program with Abstracts, Quebec City, PQ.
89. **Stumpf AJ**, Broster BE (1998). Glacial dispersal in areas of variable terrain: examples from west – central British Columbia. Atlantic Geoscience Conference, Program and Abstracts, Wolfville, NS, <http://journals.hil.unb.ca/index.php/ag/article/view/2040/2404>.
90. Levson VM, **Stumpf AJ** (1998). Glacial controls on geochemical transport distance and direction in north-central Stikinia: implications for exploration. Cordilleran Round-up, Exploration Methods '98 – Pathways, Extended Abstracts, Vancouver, BC.
91. **Stumpf AJ**, Broster BE, Levson VM, Plouffe A, Huntley DH (1997). Chronology of Fraser Glaciation ice flow in west – central, British Columbia: a new interpretation. Canadian Quaternary Association, Program with Abstracts, p. 78, Montréal, PQ.
92. **Stumpf AJ**, Plouffe A, Levson VM, Broster BE (1997). Complex paleogeomorphology system in west-central British Columbia: Landform evidence from aerial photography and satellite imaging. Canadian Quaternary Association, Program with Abstracts, Montréal, PQ, p. 79.
93. Levson VM, **Stumpf AJ** (1997). Stratigraphy and significance of pre-late Wisconsinan lacustrine and glaciolacustrine sequence in the Nechako Plateau, British Columbia. Canadian Quaternary Association, Program with Abstracts, Montréal, PQ, p. 40.
94. **Stumpf AJ**, Broster BE, Levson VM (1997). Paleogeomorphic and environmental significance of glaciolacustrine sediments exposed in the Bulkley River valley, west – central British Columbia. Geological Association of Canada – Mineralogical Association, Program with Abstracts, Ottawa, ON, p. T18-12.

95. **Stumpf AJ**, Broster BE, Levson VM (1997). Evaluating the use of till geochemistry to define buried mineral targets: A case study from Bell Mine (93 L/16, M/1), west – central British Columbia. Cordilleran Geology and Exploration Round-up, Program with Abstracts, Vancouver, BC.
96. **Stumpf AJ**, Broster BE, Huntley DH (1996). Drift exploration in areas of known porphyry copper mineralization: an example from Babine Lake, British Columbia. Geological Association of Canada-Mineralogical Association of Canada, Program with Abstracts, Winnipeg, MB, p. A14.
97. Levson VM, Huntley DH, **Stumpf AJ** (1996). Paleohydrogeography and sedimentology of large late Wisconsinan glacial lakes in central British Columbia. Geological Association of Canada-Mineralogical Association of Canada, Program with Abstracts, Winnipeg, MB, p. C18.
98. **Stumpf AJ**, Broster BE (1995). Quaternary geology and dispersal patterns of the McAdam (NTS 21 G/11) map area, York County, New Brunswick. Canadian Quaternary Association, Program and Abstracts, St. John's, NF, p. CA48.

OTHER PUBLICATIONS

1. **Stumpf AJ**, Schroeder P, Kumar P, Papanicolaou, T and others (2018). Critical Zone Observatory Intensively Managed Landscapes Upper Sangamon River Basin east-central Illinois. Field trip guide for 55th Clay Minerals Society Annual Meeting. Held June 12, 2018.
2. Kumar P, **Stumpf AJ**, and others (2015). Field trip guide for IMLCZO site visit. Held May 4 – 6, 2015.
3. **Stumpf AJ**, Bettis EA III, Elrick S (2014). Weathering profiles in the Intensively-Managed Landscape Critical Zone Observatory, Illinois and Iowa (Appendix 9). In Riebe, C. S. and Chorover, J. (eds.), Report on Drilling, Sampling, and Imaging the Depths of the Critical Zone, an NSF Workshop. Open Project Report to the Critical Zone Community, <https://criticalzone.org/images/national/associated-files/1National/CZDrillingImagingWorkshop.pdf>.
4. **Stumpf AJ** (2012). Development of a database for geological field observations, west-central British Columbia: Mineral Exploration Roundup, Vancouver, BC, January 24-29, 2012, http://www.geosciencebc.com/i/pdf/Roundup2012/Stumpf_Roundup12.pdf.
5. **Stumpf AJ** (2011). Quaternary geology and till geochemistry of the Bulkley River Valley, west-central British Columbia. Mineral Exploration Roundup, Vancouver, BC, January 23-28, 2011, http://www.geosciencebc.com/i/pdf/Roundup2011/Stumpf_Roundup11.pdf.
6. Stumpf AJ (2010). Preliminary results of till geochemistry sampling from the Bulkley River area, central British Columbia, Canada. Mineral Exploration Roundup, Vancouver, BC, January 24-29, 2010, http://www.geosciencebc.com/i/pdf/Roundup2010/Stumpf_Roundup10.pdf.
7. Stumpf AJ (2003) 3-D geologic mapping for mineral resource and groundwater exploration, Smithers British Columbia, Canada. 3-D Geological Mapping: Geostatistical Analysis and Visualization, A Geomatics for Informed Decisions (GEOIDE). Geological Survey of Canada (GSC) Workshop, Ottawa, ON.
8. **Stumpf AJ** (2003). 3-D geologic mapping for mineral resource and groundwater exploration, Smithers British Columbia, Canada. Cordilleran Round-up, Vancouver, BC.

9. **Stumpf AJ** (1998). Ice flow and its implications for drift prospecting in central British Columbia. Workshop sponsored by the Geological Association of Canada, Cordilleran Section, Simon Fraser University, Vancouver, British Columbia.
10. Plouffe A, Levson VM, **Stumpf AJ** (1997). Glacial history and till geochemical studies on the Nechako Plateau: implications for mineral exploration. Cordilleran Geology and Exploration Round-up, Program with Abstracts, Vancouver, BC.
11. Levson VM, **Stumpf AJ** (1996). Mineral dispersal in glaciated areas: base studies from the Nechako Plateau. Cordilleran Geology and Exploration Round-up, Program with Abstracts, Vancouver, BC, p. D-39.

MEDIA INTERVIEWS

- Sustainable Chicago Geothermal project, February 2, 2024, WBEZ Chicago.
- Geothermal Networks, February 2, 2024, WBUR Boston.
- “No wind, no sun, no problem! Energy costs could be driven down with thermal batteries by Illinois” , March 22, 2023, Illinois Public Media, <https://illinoisnewsroom.org/no-wind-no-sun-no-problem-energy-costs-could-be-driven-down-with-thermal-batteries>
- “Round Table: Water and C-U” , June 29, 2016, Smile Politely, http://www.smilepolitely.com/culture/a_recap_of_round_table_water_and_cu/
- “A conversation with an ISGS geologist about the local water supply” , March 19, 2013, Smile Politely, http://smilepolitely.com/culture/a_conversation_with_an_isgs_geologist_about_the_local_water_supply/.
- “It's not exactly paydirt, but good soil makes a big difference in a drought” , July 19, 2012, WBEZ Radio Chicago, <http://www.wbez.org/its-not-exactly-paydirt-good-soil-makes-big-difference-drought-101038>.
- “Scientists uncover more details about aquifer” , April 9, 2012, Illinois Farm Bureau – Farmweek, http://issuu.com/farmweek/docs/farmweek_april_9_2012/8#print.
- “Geologists conduct drilling demonstration at Naturally Illinois Expo” , March 16, 2009, Daily Illini, <http://dailyillini.com/news/2009/03/16/geologists-conduct-drilling-demonstration-at-naturally-illinois-expo-3/>.
- “Mahomet Aquifer uncovered” , June 2008, WICD TV channel 15.
- “Digging Deep” , July 12, 2008, News Gazette.
- “Researchers use high-tech tools to ‘see’ underground” , August 2007, News Gazette.
- “Excavation for subdivision puts geologists in a hole” , July 23, 2006, News Gazette.