

## MICHAEL BLISS SINGER, PhD, PH

*Water Research Institute & School of Earth and Ocean Sciences*  
*Cardiff University*  
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*United Kingdom*  
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Other Affiliation:

*Earth Research Institute (ERI)*  
*University of California Santa Barbara (UCSB)*

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### EDUCATION

#### **Donald Bren School of Environmental Science and Management**

University of California Santa Barbara, California (CA)

- Ph.D. Title: *Modeling Spatial and Temporal Patterns in Flow and Sediment Transport and Storage in Large, Lowland Rivers*. Advisor: Tom Dunne

June 2003

#### **The Evergreen State College (TESC), Olympia, Washington.**

- Area of Concentration: Environmental Science. Bachelors of Arts.

June 1993

#### **Tulane University, New Orleans, Louisiana.**

- Area of concentration: International Relations.

1989-1991

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### CURRENT APPOINTMENTS

#### **Deputy Director**

*Water Research Institute, Cardiff University, Wales, UK*

2019-

#### **Senior Lecturer**

*School of Earth and Ocean Sciences, Cardiff University, Wales, UK*

2017-

#### **Researcher**

*Earth Research Institute, University of California Santa Barbara, USA*

2017-

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### PREVIOUS APPOINTMENTS

#### **Lecturer**

*School of Earth and Environmental Sciences, University of St Andrews, Scotland, UK*

2007-2017

#### **Associate Researcher**

*Earth Research Institute, University of California Santa Barbara, USA*

2013-2017

#### **Assistant Researcher**

*Earth Research Institute, University of California Santa Barbara, USA*

2003-2013

#### **National Research Council Research Associate (Postdoc), United States National Academy of Sciences**

2005-2007

- Conducted research on the Sacramento Valley (Supervisor: Edmund Andrews)  
*National Research Program, United States Geological Survey, Menlo Park.*

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### PEER REVIEWED PUBLICATIONS

<http://people.eri.ucsb.edu/~bliss/publications.html>

**Advisee student and postdoc work denoted by \*. Journal is listed for invited revision. In prep papers will be submitted within the year.**

48. \*Kipkemai, I., Michaelides, K., \*\*Singer, M.B.\*\*, Rosolem, R. (In Preparation); Climatic expression of rainfall on soil moisture dynamics in drylands In Prep.
47. **Singer, M.B.**, \*Quaglia, R., Jones, O., Michaelides, K., Rosolem, R.; STORM 2.0: A simple decision-support tool for exploring the impacts of climate and climate change at or near the land surface In Prep.
46. \*Warter, M., **Singer, M.B.**, Roberts, D., Cuthbert, M.O., \*Sabathier, R., Stella, J., Caylor, K.; Onset, propagation, and recession of the 2012-2016 drought in Southern California In Prep.
45. \*Sabathier, R., **Singer, M.B.**, Roberts, D., Caylor, K., Stella, J.; Vegetation response to climate-controlled water availability in the Arizona desert In Prep.
44. \*Adloff, M., Mitchell, D., Michaelides, K., **Singer, M.B.**, Funk, C., \*Mehrnegar, N.; Climate trends in arid East Africa and implications for water resources In Prep.
43. \*Quichimbo, A., **Singer, M.B.**, Cuthbert, M.O.; Surface water-groundwater interactions in ephemeral stream systems and implications for dryland water resource management In Review
42. \*Mehrnegar, N., Jones, O., **Singer, M.B.**, Schumacher, M., Bates, P., Forootan, E.; Comparing global hydrological models and merging them with GRACE data by dynamic model data averaging (DMDA), *Advances in Water Resources* In Revision
41. **Singer, M.B.**, Grieve, S.W.D., \*Chen, S-A, Michaelides, K.; Climatic signatures within the world's drainage basin morphometrics In Review
40. \*Sargeant, C.I., **Singer, M.B.**, Vallet-Coulomb, C.; Identification of Source-water Oxygen isotopes in trees Toolkit (ISO-Tool) for deciphering historical water use by forest trees, *Water Resources Research* In Review
39. \*Chen, S-A., Michaelides, K., Grieve, S.W.D. (In Press), **Singer, M.B.**; Aridity is expressed in river topography profiles globally, *Nature*, doi:10.1038/s41586-019-1558-8. pdf 2019
38. Washburn, S.J., Blum, J.D., Donovan, P.M., **Singer, M.B.**; Isotopic evidence of methyl- and inorganic mercury photoreduction and retention on particles in surface waters of Central California, USA, *Science of the Total Environment*, 674: 451-461, doi:10.1016/j.scitotenv.2019.04.145. pdf 2019
37. \*Nakamura T., **Singer M.B.**, Gabet E. Remains of the 19th Century: Deep storage of contaminated hydraulic mining sediment along the Lower Yuba River, California, *Elementa: Science of the Anthropocene*, 6(1), doi: 10.1525/elementa.333. pdf 2018
36. **Singer, M.B.**, Michaelides, K., Hobbey, D.E.J.; STORM 1.0: A simple, flexible, and parsimonious stochastic rainfall generator for simulating climate and climate change, *Geoscientific Model Development*, 11, 3713-3726, doi: 10.5194/gmd-11-3713-2018. pdf 2018
35. Phillips, C.B., Hill, K.M., Paola, C., **Singer, M.B.**, Jerolmack, D.J.; Effect of flood hydrograph duration, magnitude, and shape on bed-load transport dynamics, *Geophysical Research Letters*, doi: 10.1029/2018GL078976. pdf 2018  
*This paper was selected as an [AGU Editor's Highlight](#).*
34. Michaelides, K., \*Hollings, R., **Singer, M.B.**, Nichols, M., Nearing, M.; Spatial and temporal analysis of hillslope-channel coupling and implications for the longitudinal profile in a dryland basin, *Earth Surface Processes and Landforms*, 43: 1608–1621, doi: 10.1002/esp.4340. pdf 2018
33. \*Evans, C., Dritschel, D., **Singer, M.B.**; Modelling subsurface hydrology in floodplains, *Water Resources Research*, doi: 10.1002/2017WR020827. pdf 2018

32. **Singer, M.B.**, Michaelides, K.; Deciphering the expression of climate change within the Lower Colorado River basin by stochastic simulation of convective rainfall, *Environmental Research Letters*, 12:104011, doi: 10.1088/1748-9326/aa8e50. [pdf](#) 2017
31. Jaeger, K., Sutfin, N.A., Tooth, S., Michaelides, K., **Singer, M.B.**; Geomorphology and sediment regimes of intermittent rivers and ephemeral streams; in Datry, T., Bonada, N., Boulton, A. (eds.), *Intermittent Rivers and Ephemeral Streams*, pp.21-49, Academic Press, Burlington, doi: 10.1016/B978-0-12-803835-2.00002-4. [pdf](#) 2017
30. Donovan, P.M., Blum, J.D., **Singer, M.B.**, Marvin-DiPasquale, M., Tsui, M.T.K.; Methylmercury degradation and exposure pathways in streams and wetlands impacted by historical mining, *Science of the Total Environment*, 568: 1192-1203, doi: 10.1016/j.scitotenv.2016.04.139. [pdf](#) 2016
29. **Singer, M.B.**, Harrison, L.R., Donovan, P.M., Blum, J.D., Marvin-DiPasquale, M.; Hydrologic indicators of hot spots and hot moments of mercury methylation potential along river corridors, *Science of the Total Environment*, 568: 697-711doi: 10.1016/j.scitotenv.2016.03.005. [pdf](#) 2016
28. Donovan, P.M., Blum, J.D., **Singer, M.B.**, Marvin-DiPasquale, M., Tsui, M.T.K.; Isotopic composition of inorganic and methylmercury downstream of historical gold mining, *Environmental Science and Technology*, 50(4):1691–1702, doi: 10.1021/acs.est.5b04413. [pdf](#) 2016
27. \*Sargeant, C.S., **Singer, M.B.**; Sub-annual variability in historical water source use by Mediterranean riparian trees, *Ecohydrology*, doi: 10.1002/eco.1730. [pdf](#) 2016  
*This paper received the [Ignacio Rodriguez-Iturbe Publication Award](#) commending the Best Publication in *Ecohydrology* for 2016.*
26. \*Higson, J.L., **Singer, M.B.**; The impact of streamflow hydrographs on sediment supply from terrace erosion, *Geomorphology*, 248:475-488, doi: 10.1016/j.geomorph.2015.07.037. [pdf](#) 2015  
*This paper was the 6<sup>th</sup> most downloaded article in *Geomorphology* from Sep to Dec 2015.*
25. **Singer, M.B.**; Impact scales of fluvial response to management along the Sacramento River, California, USA: Transience versus persistence, in Hudson, P.F. & H. Middlekoop (eds.), *Geomorphic Approaches to Integrated Floodplain Management of Lowland Fluvial Systems in North America and Europe*, pp. 53-85, Springer New York, doi: 10.1007/978-1-4939-2380-9\_4. [pdf](#) 2015
24. \*Slater, L.J., **Singer, M.B.**, Kirchner, J.W.; Hydrologic versus geomorphic drivers of trends in flood hazard. *Geophysical Research Letters*, doi: 10.1002/2014GL02482. [pdf](#) 2015  
*This paper has received [media attention](#).*  
*It was also selected as an [AGU Universe Publication Highlight \(9 April, Volume 6, Issue 7, 2015\)](#).*
23. **Singer, M.B.**, Michaelides, K.; How is topographic simplicity maintained in ephemeral, dryland channels?, *Geology*, 42(12):1091-1094, doi:10.1130/G36267.1. [pdf](#) 2014  
*This paper has received [media attention](#).*
22. **Singer, M.B.**, \*Sargeant, C., Piégay, H., Riquier, J., Wilson, R.J.S., \*Evans, C.M.; Floodplain ecohydrology: Climatic, anthropogenic, and local physical controls on partitioning of water sources to riparian trees, *Water Resources Research*, 50(5): 4490-4513, doi:10.1002/2014WR015581. [pdf](#) 2014
21. Michaelides, K., **Singer, M.B.**; Impact of coarse sediment supply from hillslopes to the channel in runoff-dominated, dryland fluvial systems, *Journal of Geophysical Research-Earth Surface*, 119(6), doi:10.1002/2013JF002959. [pdf](#) 2014  
*This paper was selected as an [EOS Research Spotlight](#).*
20. **Singer, M.B.**, Aalto, R., James, L.A., \*Kilham, N.E., \*Higson, J.L., Ghoshal, S.; Enduring legacy of toxic fans via episodic redistribution of California gold mining debris. *Proceedings of the National Academy of Sciences (PNAS)*, 110(46): 18436-18441, doi:10.1073/pnas.1302295110. [pdf](#) 2013  
*This paper has received [media attention](#).*
19. \*Slater, L.J., **Singer, M.B.**; The imprint of climate and climate change in alluvial riverbeds: Continental

- USA, 1950-2011. *Geology*, 41(5):595-598, doi:10.1130/g34070.1. [pdf](#) 2013  
*This paper won a prize for the best student-led peer-reviewed journal article for 2013 within the Landscape Dynamics Theme of the Scottish Alliance for Geosciences, Society, and the Environment (SAGES).*
18. Donovan, P.M, Blum, J.D., Yee, D., Gehrke, G.E., **Singer, M.B.**; An isotopic record of mercury in San Francisco Bay sediment. *Chemical Geology*, 349–350:87-98, doi:10.1016/j.chemgeo.2013.04.017. 2013
17. **Singer, M.B.**, Stella, J.C., Dufour, S., Piegay, H., Wilson, R.J.S., \*Johnstone, L.; Contrasting water-uptake and growth responses to drought in co-occurring riparian tree species. *Ecohydrology*, 6(3):402-412, doi:10.1002/eco.1283. [pdf](#) 2013
16. \*Kilham, N.E., Roberts, D., **Singer, M.B.**; Remote sensing of suspended sediment concentration during turbid flood conditions on the Feather River, California—a modeling approach. *Water Resources Research*, 48, W01521, doi:10.1029/2011WR010391. [pdf](#) 2012
15. \*Springborn, M., **Singer, M.B.**, Dunne, T.; Sediment-adsorbed total mercury flux through Yolo Bypass, the primary floodway and wetland in the Sacramento Valley, California. *Science of the Total Environment*, 412-413: 203-213, doi:10.1016/j.scitotenv.2011.10.004. [pdf](#) 2011
14. **Singer, M.B.**; Transient response in longitudinal grain size to reduced gravel supply in a large river. *Geophysical Research Letters*, 37, L18403, doi:10.1029/2010GL044381. [pdf](#) 2010
13. \*Ghoshal, S., James, L.A., **Singer, M.B.**, Aalto, R.; Channel and floodplain change analysis over a 100-year period: Lower Yuba River, California. *Remote Sensing*, 2(7):1797-1825, doi:10.3390/rs2071797. [pdf](#) 2010
12. Dunne, T., Constantine, J.A., **Singer, M.B.**; The role of sediment transport and sediment supply in the evolution of river channel and floodplain complexity. *Transactions, Japanese Geomorphological Union*, 31(2):155-170. [pdf](#) 2010
11. James, L.A., **Singer, M.B.**, \*Ghoshal, S., Megison, M.; Historical channel changes in the lower Yuba and Feather Rivers, California: Long-term effects of contrasting river-management strategies. *Geological Society of America Special Paper*, 451:57-81, doi:10.1130/2008.2451(04). [pdf](#) 2009
10. **Singer, M.B.**, Aalto, R.; Floodplain development in an engineered setting. *Earth Surface Processes and Landforms*, 34(2):291-304, doi:10.1002/esp.1725. [pdf](#) 2009
9. **Singer, M.B.**; Downstream patterns of bed-material grain size in a large, lowland alluvial river subject to low sediment supply. *Water Resources Research (Rapid Communication)*, 44, W12202, doi:10.1029/2008WR007183. [pdf](#) 2008
8. **Singer, M.B.**; A new sampler for extracting bed material sediment from sand and gravel beds in navigable rivers. *Earth Surface Processes and Landforms*, 33(14):2277-2284, doi:10.1002/esp.1661. [pdf](#) 2008
7. **Singer, M.B.**, R. Aalto, James, L.A.; Status of the lower Sacramento Valley flood-control system within the context of its natural geomorphic setting. *Natural Hazards Review*, 9(3):104-115, doi:10.1061/(ASCE)1527-6988(2008)9:3(104). [pdf](#) 2008
6. James, L.A., **Singer, M.B.**; Development of the lower Sacramento Valley flood-control system: An historical perspective. *Natural Hazards Review*, 9(3):125-135, doi:10.1061/(ASCE)1527-6988(2008)9:3(125). [pdf](#) 2008
5. **Singer, M.B.**; Influence of major dams on hydrology through the drainage network of the Sacramento Valley, California. *River Research and Applications*, 23(1):55-72, doi:10.1002/rra.968. [pdf](#) 2007
4. **Singer, M.B.**, Dunne, T.; Modeling the influence of river rehabilitation scenarios on bed material sediment flux in a large river over decadal timescales. *Water Resources Research*, 42, W12415, doi:10.1029/2006WR004894. [pdf](#) 2006
3. **Singer, M.B.**, Dunne, T.; An empirical-stochastic, event-based program for simulating inflow from a tributary network: Framework and application to the Sacramento River basin, California.

- Water Resources Research*, 40, W07506, doi:10.1029/2003WR002725. [pdf](#) 2004
2. **Singer, M.B.**, Dunne, T.; Modeling decadal bed-material sediment flux based on stochastic hydrology. *Water Resources Research*, 40, W03302, doi:10.1029/2003WR002723. [pdf](#) 2004
1. **Singer, M.B.**, Dunne, T.; Identifying eroding and depositional reaches of valley by analysis of suspended-sediment transport in the Sacramento River, California. *Water Resources Research*, 37(12):3371-3382, doi:10.1029/2001WR000457. [pdf](#) 2001

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## INVITED BOOK CHAPTERS

- Singer, M.B.**; Impact scales of fluvial response to management along the Sacramento River, California, USA: Transience versus persistence, in Hudson, P.F. & H. Middlekoop (eds.), *Geomorphic Approaches to Integrated Floodplain Management of Lowland Fluvial Systems in North America and Europe*, pp. 53-85, Springer New York, doi: 10.1007/978-1-4939-2380-9\_4. 2015
- Jaeger, K., Sutfin, N.A., Tooth, S., Michaelides, K., **Singer, M.B.**; Geomorphology and sediment regimes of intermittent rivers and ephemeral streams; in Datry, T., Bonada, N., Boulton, A. (eds.), *Intermittent Rivers and Ephemeral Streams*, pp. 21-49, Academic Press, Burlington, doi: 10.1016/B978-0-12-803835-2.00002-4. 2017

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## NON-PEER REVIEWED CONTRIBUTIONS

- Singer, M.B.**; How understanding regional rainstorms will help the world manage climate change, <http://bit.ly/2yWv9d4>, *The Conversation* 2017
- Singer, M.B.**; Book Review of 'Erosion and Sedimentation' by P.Y. Julien, *Geological Magazine* 2011
- \*Tena, A, **Singer, M.B.**, Batalla, R.J.; El uso de FLUVIAL-12 para el diseño y la evaluación de crecidas de mantenimiento en el bajo Ebro, in Ubeda, X., Vericat, D., Batalla, R.J. (eds.), *Avances de la Geomorfología de España*, p. 289-292. 2010
- James, L.A., **Singer, M.B.**, Aalto, R.; Field trip guide and road log: Tracking hydraulic mining sediment in the Sierra Foothills and Sacramento Valley. *Proceedings of the American Association of Geographers Annual Meeting* 2007
- Singer, M.**; Modeling Spatial and Temporal Patterns in Flow and Sediment Transport and Storage in Large, Lowland Rivers. PhD Dissertation, *University of California Santa Barbara* 2003

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## CURRENT AND PAST TEACHING

**Senior Lecturer, Cardiff University.** 2017-

### Teaching

- EAT109: 'Water in the Environment', ~40 students, MSc, 11 × 2-hr lectures/4 × 3-hr practicals.
- EA1202: 'Snowdonia Residential Field Trip', ~40 students, BSc, 6 days.
- EA2219: 'Hydrologic Cycle-Residential Field Trip (SE France)', ~50 students, Year 2, 5 residential field days.
- EA2219: 'Water in the Environment', ~50 students, Year 2, 9 × 2-hr lectures/3 × 3-hr practicals.

**Lecturer, University of St Andrews.** 2007-2017

### Past Teaching

- ES1002: 'Hydrologic Cycle', ~100 students, Year 1, 5 × 1-hr lectures/2 × 4-hr practical.
- ES2003: 'Water, Mines, and Contamination', ~35 students, Year 2, 2 × 1-hr lectures/1 × 4-hr practical.
- ES1001: 'Earth Surface Processes', ~100 students, Year 1, 5 × 1-hr lectures.
- ES5011: 'Water in the Environment', ~10-20 students, Years 3, 4, & 5, 10 × 2-hr lectures / 4 × 3-hr practicals.
- ES3004: 'Processes and Products in Sedimentary Systems', ~20-40 students, Years 3 & 4, 6 × 1-hr lectures.
- ES2003: 'Field Class', ~35 students, Year 2, 6-day residential trip to Rio Tinto, Spain.
- GG4298/ES4297: Ongoing advising and marking of undergraduate student theses (2-3 per year).

- ES4002: Ongoing advising and marking of review essays (2-3 per year).
- ES2901: 'Water Driven Earth Surface Processes', ~25 adult (evening degree) students, 2 × 3-hr lectures.
- ES4008: 'Isotope hydrology of the Rhône Basin, France', Field Class, ~10 students, Year 4, 6-day residential trip.
- EG3021/EG3032: 'Contemporary Environmental Problems: Applications and Solutions', ~20-40 students, Years 3 & 4, 4 × 2 hr lectures / 2 × 3 hr practicals.
- ES3005/GG3201: 'Methods of Measurement/Topog.', ~30 students, Year 3, 2 × 2-hr lectures/1 × 4-hr practical.
- GG3095/GG3266: 'Rivers and Floodplains', ~20-40 students, Year 3 & 4, 10 × 2-hr lectures/1 × 4-hr practical.
- GG2001: 'Regional Geography of the Himalaya', ~70-120 students, Year 2, 9 × 1-hr lectures/1 × 4-hr practical.
- GG2002: 'Catchments and Drainage Basins', ~80-120 students, 4 × 1-hr lectures.
- GG3201: 'Advanced Topics in Physical Geography (Numerical Modeling)', ~5 students, Year 4, 2 × 4-hr practical.
- GG4204: 'Advanced Debates (Fracking)', ~35 students, Year 4, 1 × 4-hr practical.
- GG3201: 'Data Analysis Case Study: Hubbard Brook', ~25 students, Year 3, 3 × 2-hr lectures/1 × 4-hr practical.

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## INVITED PRESENTATIONS

Institute of Water 2019 Autumn Forum	Cardiff, UK	2019
School of Environmental Science, Simon Fraser University	Burnaby, Canada	2019
Pint of Science	Cardiff, UK	2019
SERDP, US Department of Defense	San Antonio, TX USA	2019
Water Research Institute, Cardiff University	Cardiff, UK	2018
SERDP, US Department of Defense	Washington, DC, USA	2017
Swiss Federal Institute of Technology ETH	Zürich, Switzerland	2017
Swiss Federal Institute for Forest, Snow and Landscape Research WSL	Birmensdorf, Switzerland	2017
School of Engineering and Geosciences, Newcastle University	Newcastle, UK	2017
School of Earth and Ocean Sciences, Cardiff University	Cardiff, UK	2016
Department of Earth & Environmental Sciences, University of Michigan	Ann Arbor, MI	2016
Department of Geography, Simon Fraser University	Burnaby, Canada	2016
Department of Geography and Environment, Southampton University	Southampton, UK	2016
Department of Geography, Loughborough University	Loughborough, UK	2016
École Normale Supérieure de Lyon	Lyon, France	2015
St Anthony Falls Laboratory, University of Minnesota	Minneapolis, MN	2015
IRSTEA, Université Claude Bernard Lyon 1	Lyon, France	2015
ISRivers Conference Workshop on River Science and Management	Lyon, France	2015
<a href="#">Keynote, 'Reclaiming the Sierra 2015: The New Gold Rush'</a>	Sacramento, CA	2015
Rhône-Sacramento River Management Workshop	Berkeley, CA	2014
American Geophysical Union Fall Meeting	San Francisco, CA	2014
Department of Environmental Sciences, University of California Riverside	Riverside, CA	2014
Department of Geosciences, University of Massachusetts Amherst	Amherst, MA	2014
Postgraduate Society, University of St Andrews	St Andrews, UK	2013
CEREGE, Université Aix-Marseilles	Aix-en-Provence, France	2013
Geological and Planetary Sciences, Caltech	Pasadena, CA	2013
School of Geographical and Earth Sciences, University of Glasgow	Glasgow, UK	2013
School of Geosciences, University of Edinburgh	Edinburgh, UK	2012
Department of Civil Engineering, University of Bristol	Bristol, UK	2012
New Mexico Institute of Mining and Technology	Socorro, NM	2012
Geography Society, University of Durham	Durham, UK	2011
United States Geological Survey	Menlo Park, CA	2011
Keynote, 4th International Seminar on Small Catchments Dynamics	Israel	2010
School of Geography, University of Edinburgh	Edinburgh, UK	2010
Department of Geography, University of Durham	Durham, UK	2009
School of Geographical Sciences, University of Bristol	Bristol, UK	2008
Department of Environment and Soil Sciences, University of Lleida	Lleida, Spain	2008
Department of Geography, University of Exeter	Exeter, UK	2008
United States Geological Survey/Sacramento State University	Sacramento, CA	2007

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## GRANTS

**Total Equivalent Funds Awarded to Date > US\$5.0M** (grant proposals in preparation not listed)

*DOWN2EARTH: Translation of climate information into land-based climate services for social adaptation, policy development, and overall resilience to water scarcity in East African drylands.*

**European Union's Horizon 2020 (Research and Innovation Actions) Program**

- Requested: €7,000,000; M. Singer (PI) leading interdisciplinary team from Cardiff, Bristol, VU Amsterdam, East Anglia, Ghent, Hohenheim, ICPAC, SWALIM, Action Aid, Climate Analytics, BBC Media Action, Transparency Solutions, UCSB (FEWS NET), Univ. Nairobi, Addis Ababa Univ.

**Successful at Stage 1.**

In Review

*Mobile phone App Development for Drought Adaptation in Drylands (MADDAD).*

**UKRI Global Challenges Research Fund (GCRF)**

- Funded: £300,000; K. Michaelides, M. Singer (co-PI), M. Cuthbert, D. Mitchell, R. Rosolem.

2019

*Assessing riparian forest water sources in the Santa Clara River basin (Part 2).*

**The Nature Conservancy**

- Funded at \$37,300; M. Singer (PI), J. Stella

2019

*Cardiff University-Somaliland Research Collaboration – Network and Scoping Project*

**Global Challenges Research Fund (GCRF)-Institutional Grant**

- Funded: £10,000; R. Gale, J. Pickett, M. Singer (co-PI).

2019

*Drought Resilience In East African dryland Regions (DRIER).*

**The Royal Society**

- Funded: £497,500; K. Michaelides, M. Singer (co-PI), M. Cuthbert, D. Mitchell, R. Rosolem.

2019

*Impacts of Climate Change on the Water Balance in East African Drylands.*

**Global Challenges Research Fund (GCRF)-Institutional Grant**

- Funded: £43,610; K. Michaelides, M. Singer (co-PI), M. Cuthbert, D. Mitchell, R. Rosolem, D. Hobley.

2018

*Water availability to riparian forests under a changing climate.*

**Cardiff Undergraduate Research Opportunities Programme (CUROP)**

- Funded: £2,100; M. Singer (PI).

2018

*Groundwater sustainability in Namibia.*

**Global Challenges Research Fellowship**

- Funded: £19,460; M. Cuthbert, M. Singer (co-PI).

2018

*Drought Risk in East African Drylands (DREAD).*

**Global Challenges Research Fund (GCRF)-Institutional Grant**

- Funded: £35,000; D. Mitchell, K. Michaelides, M. Singer (co-PI).

2018

*Understanding and assessing riparian habitat vulnerability to drought-prone climate regimes on Department of Defense bases in the Southwestern USA.*

**Strategic Environmental Research and Development Program, US Department of Defense**

- Funded at \$1,704,236; M. Singer (PI), D. Roberts, K. Caylor, J. Stella.

2018-2022

*Assessing riparian forest water sources in the Santa Clara River basin (Part 1).*

**The Nature Conservancy**

- Funded at \$31,871; M. Singer (PI), J. Stella

2018

*Impacts of dynamic, climate-driven water availability on tree water use and health in Mediterranean riparian forests.*

**National Science Foundation (Hydrologic Sciences)**

- Funded at \$450,366; M. Singer (PI), J. Stella, K. Caylor.

2017-2020

*Linking basin-scale, stand-level, and individual tree water stress indicators for groundwater-dependent riparian*

- forests in multiple-use river basins.*  
**National Science Foundation (Geography and Spatial Sciences)**  
 • Funded at \$449,982 (\$302,235 to UCSB); J. Stella, M. Singer (UCSB PI), D. Roberts. 2017-2020
- Seasonal variations in water availability to riparian trees.*  
**Observatoire Hommes/Milieux, Vallée du Rhône (France)**  
 • Funded at €5,000; M. Singer. 2016
- Revealing the impacts of climate on riparian forest water availability and water use through tree-ring  $\delta^{18}\text{O}$  and  $\delta^{13}\text{C}$ .*  
**Natural Environment Research Council Facilities Grant (Stable Isotope Facility, NIGL)**  
 • Funded at £72,000 (in-kind support for data generation); M. Singer. 2015
- Detecting subannual climatic fluctuations in water availability through tree ring isotopes.*  
**Observatoire Hommes/Milieux, Vallée du Rhône (France)**  
 • Funded at €5,000; M. Singer. 2015
- Early Career Research Exchange Scheme-Tree Ring Isotope Research in France.*  
**Scottish Alliance for the Geosciences, Environment, and Society (SAGES)**  
 • Funded at £3,300; M. Singer. 2014
- How do climatic fluctuations affect water availability to and water use by riparian trees?*  
**The Carnegie Trust for the Universities of Scotland**  
 • Funded at £2,480; M. Singer. 2014
- Mercury and sediment research within river corridors.*  
**REG Trust**  
 • Funded at \$15,000; M. Singer. 2014
- Modeling climate, topography, and substrate controls on water partitioning in river floodplains.*  
**Natural Environment Research Council Doctoral Training Grant**  
 • Funded at £70,327 (over 3.5 years); PhD Student: C. Evans; Principal Supervisor: M. Singer. 2013-2017
- Isotopes in floodplain forests along the Rhône corridor.*  
**Region du Rhône-Alps (France)**  
 • Funded at €5,700; M. Singer. 2013
- Impacts of climatic variability and anthropogenic impacts on riparian hydrology and forest dynamics.*  
**Observatoire Hommes/Milieux, Vallée du Rhône (France)**  
 • Funded at €8,200; M. Singer. 2013
- Which water sources are used by trees in riparian corridors?*  
**The Carnegie Trust for the Universities of Scotland**  
 • Funded at £2,500; M. Singer. 2013
- Impacts of climatic variability and anthropogenic impacts on riparian hydrology and forest dynamics: Evidence from isotopes in floodplain vadose and phreatic zones in the Rhône corridor.*  
**Observatoire Hommes/Milieux, Vallée du Rhône (France)**  
 • Funded at €6,000; M. Singer. 2013
- Establishing process links between streamflow, sediment transport/ storage, and biogeochemical processing of mercury.*  
**US National Science Foundation (EAR-Geomorphology and Land Use Dynamics).**  
 • Funded at \$189,162; M. Singer (PI), J.D. Blum, M. Marvin-DiPasquale. 2013-2016
- The signature of drought in river corridors.*  
**Natural Environment Research Council Doctoral Training Grant**  
 • Funded at £70,327 (over 3.5 years); PhD Student: C. Sargeant; Principal Supervisor: M. Singer. 2012-2016
- Impacts of climatic variability and anthropogenic impacts on riparian hydrology and forest dynamics: Evidence from isotopes and tree rings in the Rhône corridor.*

<b>Observatoire Hommes/Milieux, Vallée du Rhône (France)</b>	
• Funded at €5,000; <u>M. Singer (PI)</u> , R. Wilson.	2012
<i>Collaborative Exchange with Mark Marvin-DiPasquale, USGS, USA.</i>	
<b>Royal Society of Edinburgh International Exchange Programme</b>	
• Funded at £2,910; M. Singer.	2011
<i>A hidden record of local hydrologic change in riparian corridors from tree-ring isotopes.</i>	
<b>The Royal Society</b>	
• Funded at £12,600; M. Singer.	2011
<i>Where do floodplains begin in fluvial networks?</i>	
<b>US National Science Foundation (National Center for Airborne Laser Mapping).</b>	
• Funded at ~\$50,000 (in kind support for LiDAR acquisition and processing); *Slater, L., <u>M. Singer</u>	2011
<i>International Travel Grant, Conference Participation, LAG, Israel.</i>	
<b>The Royal Society</b>	
• Funded at £2,110; M. Singer.	2010
<i>Where do floodplains begin in fluvial networks?</i>	
<b>Natural Environment Research Council Doctoral Training Grant</b>	
• Funded at £67,668 (over 3.5 years); PhD Student: L. Slater; Principal Supervisor: M. Singer.	2010-2014
<i>Collaborative Exchange with Herve Piegay, CNRS, France.</i>	
<b>Royal Society of Edinburgh International Exchange Programme</b>	
• Funded at £2,436; M. Singer.	2010
<i>Partitioning modes and rates of sediment flux derived from terrace-channel coupling.</i>	
<b>Natural Environment Research Council Doctoral Training Grant</b>	
• Funded at £66,540 (over 3.5 years); PhD Student: J. Higson; Principal Supervisor: M. Singer.	2009-2013
<i>Quaternary history of channel change in the Sacramento Valley.</i>	
<b>The Carnegie Trust for the Universities of Scotland</b>	
• Funded at £2,500; M. Singer.	2009
<i>Using mercury as a tracer for tracking erosion/deposition history of hydraulic mining sediments.</i>	
<b>The Carnegie Trust for the Universities of Scotland</b>	
• Funded at £2,450; M. Singer.	2008
<i>Sacramento Valley data documentation to support north of Delta off-channel storage project.</i>	
<b>US Bureau of Reclamation Technical Service Center</b>	
• Funded at \$35,000; <u>M. Singer (PI)</u> , S. Wright	2006
<i>Sedimentation/contaminant history in floodplains-Lower Danube River, Romania.</i>	
<b>North Atlantic Treaty Organization (Science for Peace Planning Grant)</b>	
• Funded at €7,000; <u>M. Singer (PI)</u> , R. Aalto, D. Baltenau, S. Teodor, C. Roman.	2006
<i>Sedimentation and contaminant history in the floodplains of the Lower Danube River in Romania.</i>	
<b>North Atlantic Treaty Organization (Collaborative Linkage Grant Program)</b>	
• Funded at €25,000; <u>M. Singer (PI)</u> , T. Dunne, R. Aalto, D. Baltenau.	2005
<i>Tracking hydraulic mining sediments from the Sierra Piedmont into flood bypasses of the Sacramento Valley, CA.</i>	
<b>US National Science Foundation (BCS-Geography and Regional Science).</b>	
• Funded at \$275,000; <u>M. Singer (PI)</u> , L.A. James, R. Aalto, T. Dunne.	2005
<i>Developing and validating a flow and sediment transport model for large-scale restoration on the Sacramento River.</i>	
<b>CALFED Bay-Delta Program.</b>	
• Funded at \$390,252; T. Dunne, <u>M. Singer</u> .	2002

*Hangdewa Landslide Project*

**Danish Embassy, Nepal.**

- Funded at Rs.97,394; M. Singer.

1995

*Juneli Jute Net Project*

**Danish Embassy, Nepal/UK Overseas Development Agency (ODA)**

- Funded at Rs.2,000,000; M. Singer.

1995

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**MEDIA COVERAGE OF MY RESEARCH**

[http://people.eri.ucsb.edu/~bliss/Media\\_Attention.htm](http://people.eri.ucsb.edu/~bliss/Media_Attention.htm)

My research has received media attention from major news outlets (see below). Several stories were re-reported by media outlets around the world including MSN, Fox News, NBC News, ABC News, Yahoo, Bloomberg Business Week, and global newspapers:

*Science, USA Today* (front page article in print edition), *LA Times, Associated Press, Huffington Post, Der Spiegel, Southern California Public Radio* (special in-depth story), *CBS Television News-Sacramento* (special in-depth TV story), *BBC Radio Scotland* (live interview). *BBC Radio 4-Inside Science* (recorded interview). *KVMR Radio-Nevada City* (recorded interview), *PBS-Nova, Science Daily, Inside Science, LiveScience, Science News, EOS Research Spotlight, AGUniverse, Phys.Org, Circa, Science Codex, Global Post, Environmental News Network, Headlines and Global News, Science World Report, RedOrbit, Nature World News, TheCourier.co.uk, Digital Journal, Smithsonian Magazine, Mining Examiner, GeoBeats, European Virtual Institute for Speciation Analysis, AllGov, Toxicology Student Association, UC Berkeley, Gold Prospectors Association of America, Pacific Sun (Marin, CA), Modern Scientific Issues Blog, Wiki Page for Yuba River, Washington State University News, Strangesounds.org, Environmental Risk Managers, Environmental Monitor, AGUniverse, EoS (AGU), NERC Planet Earth Magazine*

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**AWARDS, HONORS, AND COMMISSIONS**

**David A. Siegel ERI Director's Award, Earth Research Institute**

*This \$5000 award recognizes scientific leadership within the ERI research community and is particularly focused on recognizing a PI's ability to establish interdisciplinary scientific relationships.*

2018

**Certified Professional Hydrologist - Surface Water, American Institute of Hydrology, Cert#: 18-H-9002**

2017

**NSF Hydrologic Sciences Review Panel Member**

*National Science Foundation, Washington, DC*

2017

**Ignacio Rodriguez-Iturbe Publication Award, Best Publication in Ecohydrology for 2016**

*John Wiley & Sons*

2017

**Invited Expert Peer Reviewer, Proposed Rule for Mercury Water Quality Objectives and Implementation**

*Environmental Protection Agency (California)*

2016

**Invited Keynote Speaker, 'Reclaiming the Sierra 2015: The New Gold Rush'**

*The Sierra Fund*

2015

**Invited Speaker, 'Rhône-Sacramento River Management Workshop'**

*ISRivers Conference*

2014

**Consulting Scientist, 'Central Valley Flood Protection Plan 2017'**

*California Department of Water Resources*

2014

**Invited Expert Testimony, 'Public health and environmental impacts caused by abandoned mines and mercury'**

*California State Assembly Natural Resources Committee, Sacramento, CA, USA*

2014

**Peer Review College Member, Natural Environment Research Council**

2010-2013

**Invited Keynote Speaker, '4th International Seminar on Small Catchments Dynamics'**

*International Association of Geomorphologists, Israel*

2010

<b>Expert Panelist on Floodplain Restoration</b> , <i>Floodplain Management Association Annual Conference, San Jose, CA, USA</i>	2009
<b>Expert Instructor</b> , <i>Course on Sediment Transport: Measurement, Modelling, and Management</i> , <i>Forestry and Technology Center of Catalonia, Spain</i>	2009
<b>Invited Delegate</b> , <i>'An International Workshop Defining Hydromorphological Condition and Links to Ecology'</i> , <i>The Macaulay Institute and Aberdeen University, UK</i>	2009
<b>Expert Panelist on Central Valley Flood Hazards</b> , <i>American Association of Geographers Annual Meeting</i>	2007
<b>Guest Editor</b> , <i>San Francisco Estuary and Watershed Science (Online Journal)</i>	2005
<b>Technical Advisory Committee Member</b> , <i>Sacramento River Partners, Chico, CA.</i>	2004-2005
<b>UC Santa Barbara Dissertation Fellowship</b> , <i>Graduate Division, UC Santa Barbara</i>	2001
<b>Space Grant Graduate Fellowship</b> , <i>UC Santa Barbara Cal Space Institute Center of Excellence</i>	2001
<b>Grant for Young Geomorphologists</b> , <i>International Association of Geomorphologists</i>	2001
<b>Science and Engineering Research Grant</b> , <i>Graduate Division, UC Santa Barbara</i>	2000
<b>Scientific Review Panel Member</b> , <i>CALFED Bay-Delta Restoration Program, Sacramento, CA</i>	1999
<b>Dozier Fellowship</b> , <i>Donald Bren School of Environmental Science &amp; Management</i>	1999

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#### GRADUATE STUDENT AND POSTDOC ADVISING/SUPERVISION

<b>Eferhonore Efe-Eyefia, PhD (Committee Member)</b> , <i>Nigerian government Funded, School of Maths, Cardiff</i> Thesis: Simulating spatio-temporal components of rainfall ( <b>In Progress</b> )	2019-
<b>Conor McMahon, PhD (Committee Member)</b> , <i>SERDP (DoD) Funded, Dept Geography, UCSB</i> Thesis: Fractional pixel signature of riparian forest stress in response to water availability ( <b>In Progress</b> )	2019-
<b>Roberto Quaglia, PhD (Committee Member)</b> , <i>Water Informatics, Science &amp; Engineering (WISE) Doctoral Training Programme Funded Project, Geographical Sciences, Bristol.</i> Thesis: Continental trends in sub-daily precipitation ( <b>In Progress</b> )	2019-
<b>Marc Mayes, Postdoc</b> , <i>SERDP (DoD) Funded, UC Santa Barbara</i>	2018-
<b>Kudzai Farai Keseke, Postdoc</b> , <i>SERDP (DoD) Funded, UC Santa Barbara</i>	2018-
<b>Li Kui, Postdoc</b> , <i>NSF and The Nature Conservancy Funded, UC Santa Barbara</i>	2018-
<b>Lissa Pelletier, MS (Committee Member)</b> , <i>SERDP (DoD) Funded, SUNY-ESF</i> Thesis: Plant growth and ecosystem health metrics in drought-prone ecosystems ( <b>In Progress</b> )	2018-
<b>Jared Williams, MS (Committee Member)</b> , <i>NSF Geography Funded, SUNY-ESF</i> Thesis: Water use and plant growth in a multiple-use basin ( <b>In Progress</b> )	2018-
<b>Romy Sabathier, PhD (Primary)</b> , <i>SERDP (DoD) Funded, Earth &amp; Ocean Science, Cardiff</i> Thesis: Development and assessment of indicators of forest health in response to climate change ( <b>In Progress</b> )	2018-
<b>Maria Warter, PhD (Primary)</b> , <i>SERDP (DoD) Funded, Earth &amp; Ocean Science, Cardiff</i> Thesis: Quantifying water availability to plants under climate change ( <b>In Progress</b> )	2018-
<b>Ryan Avery, PhD (Committee Member)</b> , <i>SERDP (DoD) Funded, Bren School, UCSB</i> Thesis: Isoscapes and regional controls on water resources ( <b>In Progress</b> )	2018-
<b>Bryn Morgan, PhD (Committee Member)</b> , <i>NSF and ERDP (DoD) Funded, Dept Geog, UCSB</i> Thesis: Modeling and measuring climate-controlled water availability in riparian forests ( <b>In Progress</b> )	2018-
<b>Melissa Rohde, PhD (Committee Member)</b> , <i>NSF Geography Funded, SUNY-ESF</i>	2018-

Thesis: Development of ecological forest health indices in groundwater dependent ecosystems ( <i>In Progress</i> )	
<b>Isaac Kipkemoi, PhD (Committee Member)</b> , <i>Kenyan Government Scholarship, Geographical Sciences, Bristol</i>	2018-
Thesis: Detecting signatures of drought in vegetation of East Africa ( <i>In Progress</i> )	
<b>Nooshin Mehrnegar, PhD (Committee Member)</b> , <i>University Funded, Earth &amp; Ocean Science, Cardiff</i>	2017-
Thesis: Modelling of global hydrologic fluxes via remote sensing and data assimilation ( <i>In Progress</i> )	
<b>Andrés Quichimbo, PhD (Committee Member)</b> , <i>University Funded, Earth &amp; Ocean Science, Cardiff</i>	2017-
Thesis: Groundwater modelling of climatic controls on recharge ( <i>In Progress</i> )	
<b>Chris Kibler, PhD (Committee Member)</b> , <i>NSF Geography Funded, Department of Geography, UCSB</i>	2017-
Thesis: Remote sensing of forest health in response to water stress ( <i>In Progress</i> )	
<b>Shiuan-An Chen, PhD (Committee Member)</b> , <i>School of Geographical Sciences, University of Bristol</i>	2016-
Thesis: Climatic controls on river topography ( <i>In Progress</i> )	
<b>Thomas Myktyyn, MS (Committee Member)</b> , <i>Dept. Geology, San Jose State University</i>	2016-
Thesis: History of deep mercury storage in Yolo Bypass ( <i>In Progress</i> )	
<b>Rory Hollings, MRes (Committee Member)</b> , <i>NERC Studentship, School of Geographical Sciences, Univ of Bristol</i>	2014-2017
Thesis: How do rainstorms shape dryland river basins? ( <i>Completed</i> )	
<b>Tyler Nakamura, MS (Committee Member)</b> , <i>Dept. Geology, San Jose State University</i>	2015-2017
Thesis: Deep storage of hydraulic mining sediment along the Lower Yuba River, CA ( <i>Completed</i> )	
<b>Cristina Evans, PhD (Primary)</b> , <i>NERC Studentship, Dept. EES, University of St Andrews</i>	2013-2017
Thesis: Modeling climate, topography, and substrate controls on water partitioning in river floodplains ( <i>Completed</i> )	
<b>Christopher Sargeant, PhD (Primary)</b> , <i>NERC Studentship, Dept. of EES, University of St Andrews</i>	2012-2017
Thesis: The ecohydrologic signature of drought in river corridors ( <i>Completed</i> )	
<b>Louise Slater, PhD (Primary)</b> , <i>NERC Studentship, Dept. EES, University of St Andrews</i>	2010-2014
Thesis: Trends in alluvial channel geometry and streamflow: an investigation of patterns and controls ( <i>Completed</i> )	
<b>John Higson, MPhil (Primary)</b> , <i>Dept. EES, University of St Andrews</i>	2009-2014
Thesis: The impact of the streamflow hydrograph on sediment supply from terrace erosion ( <i>Completed</i> )	
<b>Nina Kilham (Committee Member), PhD</b> , <i>Department of Geography, UCSB</i>	2005-2009
Thesis: Floodplain Sedimentation on the Feather River, California: Combined Use of Remote Sensing and Numerical Modeling to Analyze Contemporary Deposition Patterns in a Historically Mined Basin ( <i>Completed</i> )	
<b>Michael Springborn (Primary), PhD</b> , <i>Bren School, UCSB</i>	2006
Project: Sediment-adsorbed total mercury flux through Yolo Bypass, the primary floodway and wetland in the Sacramento Valley, California ( <i>Completed</i> )	

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## EXTERNAL ACADEMIC SERVICE

<b>Board Member, Water Security Alliance</b> , <i>Great Western 4 (GW4) Universities of Southwest UK</i>	2019-
<b>Session Convener</b> , 'Indicators of plant water availability and stress in drought-prone forests at a range of spatial and temporal scales', H076 <i>American Geophysical Union Fall Meeting, Washington, DC, M. Singer, K. Caylor, D. Roberts, J. Stella</i>	2018
<b>External Examiner for Ph.D.</b> , <i>Universitat de Barcelona</i>	2018
<b>NSF Hydrologic Sciences Review Panel Member</b> , <i>National Science Foundation, Washington, DC</i>	2017
<b>External Examiner for Ph.D.</b> , <i>École Normale Supérieure de Lyon, University of Lyon</i>	2015
<b>Session Convener</b> , 'Water quality & toxicity', <i>ISRivers Conference, Lyon, France</i>	2015
<b>External Examiner for Ph.D.</b> , <i>Department of Geography, University of Exeter</i>	2013

<b>External Examiner for Masters Thesis</b> , <i>Department of Geography, Simon Fraser University</i>	2011
<b>Scientific Committee Member, '4th International Seminar on Small Catchments Dynamics'</b> , <i>International Association of Geomorphologists, Israel</i>	2010
<b>NERC Peer Review College Member</b> , <i>Natural Environment Research Council (NERC), UK</i>	2010-2013
<b>Workshop co-Organizer</b> , 'Applied Sediment Dynamics-Scaling Issues' <i>Telford-SAGES Workshop, University of Glasgow, T. Hoey, M. Singer, M. Attal</i>	2010
<b>Session Convener</b> , 'Sediment supply, storage, and delivery as controlled by hillslope-channel coupling', EP51B, EP53E, EP54A <i>American Geophysical Union Fall Meeting, San Francisco, M. Singer, S. Mudd, E. Gabet</i>	2009
<b>Session Co-Convener</b> , 'The influence of dams on sediment regimes and implications for management', <i>European Geophysical Union Annual Meeting, HS11.4, Vienna, R.J. Batalla, M. Singer,</i> D. Vericat	2009
<b>British Society for Geomorphology Campus Representative</b> , <i>University of St Andrews</i>	2008-2012
<b>Field Trip Co-Leader</b> , 'Tracking Hydraulic Mining Sediment in the Sierra Foothills and Sacramento Valley', <i>American Association of Geographers Annual Meeting Field Trip</i>	2007
<b>Geomorphology Session Convener</b> , <i>Sacramento River Restoration Science Conference, Chico, CA</i>	2007
<b>Ph.D. Committee Member/Examiner</b> , <i>University of California Santa Barbara.</i>	2005-2009
<b>Ph.D. Student Project Co-Advisor</b> , Michael Springborn, <i>University of California Santa Barbara.</i> • Co-advised on secondary research project.	2004
<b>Peer Reviewer</b> 110 journal articles, 29 proposals, 5 agency reports, 1 book chapter, 1 book	2003-

### **Relevant Journals and Organizations**

*American Geophysical Union Monographs, Basin Research, Bay-Delta Ecosystem Restoration Program, CALFED Ecosystem Restoration Program, Carnegie Trust for Scottish Universities, Earth Surface Processes and Landforms, Earth's Future, Ecological Applications, Ecological Engineering, Environmental Management, Environmental Modelling and Software, Environmental Pollution, Fondazione Cassa di Risparmio di Padova e Rovigo (Italy), Forest Ecology and Management, French National Research Agency (ANR), Geografiska Annaler-Physical Geography, Geological Magazine, Geological Society of America Bulletin, Geology, Geomorphology, Geophysical Research Letters, GeoResJ, Hydrological Processes, Hydrology and Earth System Sciences (HESS), International Association of Hydrological Sciences (IAHS) Red Books, International Journal of Climatology, International Journal of Sediment Research, Journal of the American Water Resources Association, Journal of Environmental Management, Journal of Geophysical Research-Earth Surface, Journal of Hydro-environment Research, Journal of Radioanalytical and Nuclear Chemistry, Journal of River Basin Management, Journal of Soils and Sediments, Journal of Water Resources Management, Limnologica, National Science Foundation (USA) - CAREER Program, National Science Foundation - Environmental Engineering and Sustainability Program (CBET), National Science Foundation - Geomorphology & Landuse Dynamics Program (EAR), National Science Foundation - Geography & Spatial Sciences Program (BCS), National Science Foundation - Paleo Perspectives on Climate Change Program (P2C2), National Science Foundation - Hydrologic Sciences Program (EAR), Natural Environment Research Council (UK-NERC), Natural Sciences and Engineering Research Council of Canada (NSERC), Nature Geoscience, Netherlands Organisation for Scientific Research, Physical Geography, PLOS One, Sacramento Municipal Utilities District, Sacramento River Partners, San Francisco Estuary and Watershed Science, Sea Grant, Sedimentology, Southeastern Geography, Swiss National Science Foundation, The Nature Conservancy, The Royal Society (UK), The Science of the Total Environment, Trees - Structure and Function, Trinity River Restoration Program, US Geological Survey, Water Resources Management, Water Resources Research*

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### **UNIVERSITY ADMINISTRATION**

<b>Deputy Director, Water Research Institute, Cardiff</b>	2019-
<b>Internal Board Member, Water Research Institute, Cardiff</b>	2017-
<b>MSc Programme Director, Water in a Changing World, Cardiff</b>	2017-

'Hydrological Cycle' EA2219 Module Coordinator (~50 undergrad students), <i>Cardiff</i>	2017-
'Water in the Environment' EAT109 Module Coordinator (~30 MSc students), <i>Cardiff</i>	2017-
Internal PhD Thesis Examiner, <i>Cardiff</i>	2017
Merit Review Committee Chair, <i>ERI, UCSB</i>	2017
Merit Review Committee Chair, <i>ERI, UCSB</i>	2016
Honours (upper division) Advisor of Studies (~65 students), <i>EES, UStA</i>	2015-2017
'Water in the Environment' Course Coordinator, <i>EES, UStA</i>	2016-2017
Director of Postgraduate Studies (Graduate School), <i>EES, UStA</i>	2012-2017
IAPETUS Doctoral Training Programme Director for St Andrews, <i>EES, UStA</i>	2013-2017
Internal PhD Thesis Examiner, <i>EES, UStA</i>	2015
Merit Review Committee Chair, <i>ERI, UCSB</i>	2015
Merit Review Committee Chair, <i>ERI, UCSB</i>	2014
Merit Review Committee Chair, <i>ERI, UCSB</i>	2012
Academic Interview Panel Member, <i>GG, UStA</i>	2012
Postgraduate (Graduate School) Convenor, <i>GG, UStA</i>	2012
Library Representative, <i>GG, UStA</i>	2010-2012
Honours Physical Geography Field Course Coordinator, <i>GG, UStA</i>	2009-2011
Postgraduate Committee Member, <i>GG, UStA</i>	2009-2012
Honours Science Dissertation Module Coordinator, <i>GG, UStA</i>	2009-2012
1 <sup>st</sup> and 2 <sup>nd</sup> Year Undergraduate Science Advisor, <i>GG, UStA</i>	2008-2012
Merit Review Committee Chair, <i>ICESS, UCSB</i>	2009
Merit Review Committee Member, <i>ICESS, UCSB</i>	2007
Deans Advisory Committee Representative, <i>Donald Bren School of ES&amp;M</i> .	1999-2000

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#### CONFERENCE PRESENTATIONS (last 5 years out of 93 total)

*Supervised student and postdoc work denoted by \*.*

Singer, M., Michaelides, K., Hopley, D. Jones, O.; *Down to Earth: Simulation of climate change at the land surface*

**Workshop on Extremal Trends in Weather (WET)**

Gregynog, Wales

2019

\*Mehrnagar, N., Jones, O., Singer, M., Schumacher, M., Bates, P, Forootan, E.; *Comparing global hydrological models and combining them with GRACE data by dynamic Bayesian averaging (DBA)*  
**Geosciences Research Abstracts.** EGU2019-xxxx, EGU General Assembly 2019

**European Geosciences Union Annual Meeting**

Vienna, Austria

2019

\*Sargeant, C., Singer, M.; *Local and regional climatic controls on the seasonal hydroclimatic partitioning within riparian forests*

**Geosciences Research Abstracts.** EGU2019-4254, EGU General Assembly 2019

**European Geosciences Union Annual Meeting**

Vienna, Austria

2019

Singer, MB, Grieve, SWD, \*Chen, S-A, Michaelides, K; *Climatic signatures within the world's rivers*

**Eos Trans.** AGU, 99(52), Fall Meet. Suppl., Abstract EP52B-04.

**American Geophysical Union Fall Meeting**

San Francisco, CA

2018

\*Chen, S-A, Michaelides, K, Grieve, SWD, Singer, MB; *Climatic controls on river longitudinal profiles globally*

**Eos Trans.** AGU, 99(52), Fall Meet. Suppl., Abstract EP53F-1968.

**American Geophysical Union Fall Meeting**

San Francisco, CA

2018

Quichimbo, EA, Singer, MB, Cuthbert, MO; *Quantifying the factors controlling stream-aquifer interactions of ephemeral stream systems and implications for dryland water resource estimation*

**Eos Trans.** AGU, 99(52), Fall Meet. Suppl., Abstract H32E-08.

**American Geophysical Union Fall Meeting**

San Francisco, CA

2018

Singer, MB, \*Sargeant, CI, \*Evans, CM, Dritschel, D; *Climate-controlled water availability to riparian forest trees*

**Integrative Sciences and Sustainable Development of Rivers Conference (ISRivers)** Lyon, France

2018

\*Mehrnagar, N., Forootan, E., Jones, O., Singer, M., Bates, P; *A comprehensive assessment*

*of a Bayesian-based and a statistical decomposition-based framework for separating GRACE signals*  
**Geosciences Research Abstracts.** EGU2018-6913, EGU General Assembly 2018  
**European Geosciences Union Annual Meeting** Vienna, Austria 2018

\*Chen, S-A, Michaelides, K, Singer, MB; *A global analysis of river longitudinal profiles*  
**British Society for Geomorphology Annual Meeting** Hull, UK 2017

Singer, MB, Michaelides, K; *Stochastic simulation of convective rainfall to decipher the expression of climate change in drainage basins*  
**British Society for Geomorphology Annual Meeting** Hull, UK 2017

Singer, MB, \*Sargeant, CS, Vallet-Coulomb, C; *Source Water Isotope Identification Toolkit (SWIIT) for detecting historical water use by forest trees*  
**Stable Isotope Mass Spectrometry User Group Meeting** Keyworth, UK 2017

Singer, MB, \*Sargeant, CS; *Historical variability of water use by riparian forests*  
**Séminaire scientifique de l'OHM Vallée du Rhône** Lyon, France 2017

\*Hollings, R, Michaelides, K, Singer, MB, Nichols, M, Nearing, M; *Grain size indicators of sedimentary coupling between hillslopes and channels in a dryland basin*  
**Geosciences Research Abstracts.** EGU2017-16651, EGU General Assembly 2017  
**European Geosciences Union Annual Meeting** Vienna, Austria 2017

Singer, MB, Michaelides, K, Nichols, M, Nearing, M; *A simple stochastic rainstorm generator for simulating spatially and temporally varying rainfall*  
**Eos Trans.** AGU, 97(52), Fall Meet. Suppl., Abstract GC13E-1247.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2016

\*Sargeant, CI, \*Evans, C, Vallet-Coulomb, C, Singer, MB; *A toolkit for determining historical eco-hydrological interactions*  
**Eos Trans.** AGU, 97(52), Fall Meet. Suppl., Abstract H23H-1676.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2016

\*Evans, C, Singer, MB, Dritschel, D; *A subsurface hydrology model that traces oxygen isotopes*  
**Eos Trans.** AGU, 97(52), Fall Meet. Suppl., Abstract H23D-1571.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2016

Phillips, C, Singer, MB, Paola, C, Hill, K; *Exploring the effects of hydrograph shape on unimodal and bimodal sediment mixtures*  
**Eos Trans.** AGU, 97(52), Fall Meet. Suppl., Abstract EP21C-0893.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2016

Michaelides, K, Singer, MB, Mudd, SM; *The role of stochastic storms on hillslope runoff generation and connectivity in a dryland basin*  
**Eos Trans.** AGU, 97(52), Fall Meet. Suppl., Abstract H53F-1774.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2016

Singer, MB, \*Sargeant, CS; *Sub-annual variability in historical water source use by Mediterranean riparian trees*  
**Séminaire scientifique de l'OHM Vallée du Rhône** Lyon, France 2016

Singer, MB, Harrison, LR, Donovan, PM, Blum, JD, Marvin-DiPasquale, M; *Hydrologic indicators of hot spots and hot moments of mercury methylation along river corridors*  
**Geosciences Research Abstracts.** EGU2016- 5369, EGU General Assembly 2016  
**European Geosciences Union Annual Meeting** Vienna, Austria 2016

\*Evans, CM, Dritschel, D, Singer, MB; *Modelling subsurface hydrology in Mediterranean regions to investigate spatial and temporal trends*  
**Geosciences Research Abstracts.** EGU2016-1005, EGU General Assembly 2016  
**European Geosciences Union Annual Meeting** Vienna, Austria 2016

\*Sargeant, CS, Singer, MB; *Sub-annual variability in historical water source use by Mediterranean riparian trees*  
**Geosciences Research Abstracts.** EGU2016-152, EGU General Assembly 2016

<b>European Geosciences Union Annual Meeting</b>	Vienna, Austria	2016
*Slater, LJ, <u>Singer, MB</u> , Kirchner, JW; <i>Hydrologic versus geomorphic drivers of trends in flood hazard</i> (POSTER)		
<b>Geosciences Research Abstracts. EGU2016-3284, EGU General Assembly 2016</b>		
<b>European Geosciences Union Annual Meeting</b>	Vienna, Austria	2016
<u>Singer, MB</u> , Harrison, I, Blum, JD, Donovan, PM, Marvin-DiPasquale, MC; <i>Geomorphology, hydrology, and the bioavailability of mercury to riverine food webs</i>		
<b>Integrative Sciences and Sustainable Development of Rivers Conference (ISRivers)</b>	Lyon, France	2015
Simon, A., <u>Singer, MB</u> ;		
<i>Flow Energy and Bedload-Transport Efficiency: The Froude Number as a Metric for Bedload Transport Rates</i>		
<b>SEDHYD 2015</b>	Reno, NV	2015
<u>Singer, MB</u> , *Sargeant, CI, Vallet-Coulomb, C, *Evans, C, Bates, CR; <i>Precipitation v. river discharge controls on water availability to riparian trees in the Rhône River Delta</i> (INVITED)		
<b>Eos Trans. AGU, 95(52), Fall Meet. Suppl., Abstract EP52B-03.</b>		
<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2014
<u>Singer, MB</u> , Michaelides, K; <i>How is topographic simplicity maintained in ephemeral, dryland channels?</i>		
<b>Eos Trans. AGU, 95(52), Fall Meet. Suppl., Abstract EP53E-06.</b>		
<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2014
Michaelides, K, <u>Singer, MB</u> ; <i>Linking rainstorm-driven sediment dynamics to the decadal evolution of grain sizes in dryland basins</i> (INVITED)		
<b>Eos Trans. AGU, 95(52), Fall Meet. Suppl., Abstract EP53F-07.</b>		
<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2014
*Slater, LJ, <u>Singer, MB</u> , Kirchner, JW; <i>Hydrologic and geomorphic drivers of changing flood hazard</i> (POSTER)		
<b>Eos Trans. AGU, 95(52), Fall Meet. Suppl., Abstract EP51L-0773.</b>		
<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2014
*Sargeant, CI, <u>Singer, MB</u> ; <i>Sub-annual fluctuations in water sources utilised by Mediterranean riparian trees determined through highly resolved oxygen isotope analysis of tree-ring cellulose</i>		
<b>Eos Trans. AGU, 95(52), Fall Meet. Suppl., Abstract EP53K-07.</b>		
<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2014
*Donovan, PM, Blum, JD, <u>Singer, MB</u> , Marvin-DiPasquale, M, Tsui, MTK;		
<i>Mercury isotopes in California rivers impacted by historic gold and mercury mining</i>		
<b>Goldschmidt Conference</b>	Sacramento, CA	2014
*Sargeant, CS, <u>Singer, MB</u> ; <i>Isotopic ecohydrology: Insights into water partitioning and availability to riparian forests along the Rhône River, France</i>		
<b>Tree Rings in Archaeology, Climatology and Ecology (TRACE)</b>	Aviemore, UK	2014
Michaelides, K, <u>Singer, MB</u> ; <i>The impact of rainstorm stochasticity on hillslope sediment supply to river channels in dryland basins</i>		
<b>Eos Trans. AGU, 94(52), Fall Meet. Suppl., Abstract EP51C-03.</b>		
<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2013
Singer, MB et al.; <i>Bioavailability of mercury to riverine food webs as a function of flood-event inundation of channel boundary sediments</i>		
<b>Eos Trans. AGU, 94(52), Fall Meet. Suppl., Abstract EP31C-07.</b>		
<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2013
*Slater, LJ, <u>Singer, MB</u> ; <i>Trends in alluvial channel geometry: an indicator of decadal fluctuations in regional sediment supply and local flood risk</i>		
<b>International Association of Geomorphology</b>	Paris, France	2013
<u>Singer, MB</u> et al.; <i>Floodplain ecohydrology: Discerning climatic v. anthropogenic controls from tree-ring <math>\delta^{18}O</math>, dendrochronology, and instrumental climate records</i>		
<b>Séminaire scientifique de l'OHM Vallée du Rhône</b>	Lyon, France	2013
Singer, MB et al.; <i>Hg availability in river corridors as a function of geomorphic processes of</i>		

- anthropogenic fan evolution*  
**International Conference on Mercury as a Global Pollutant** Edinburgh, UK 2013
- \*Slater, IJ, Singer, MB; *Evolution of channel capacity and its impact on flood frequency*  
**International Conference on Fluvial Sedimentology** Leeds, UK 2013
- \*Higson, JL, Singer, MB; *The impact of stream hydrology on sediment supply from terrace erosion*  
**International Conference on Fluvial Sedimentology** Leeds, UK 2013
- Trigg, MA, Schuman, GJP, Singer, MB, Bates, PD, Hall, AC; *Observations of Amazon floodplain channel dynamics using Landsat images and ICESat elevations*  
**AGU Meeting of the Americas** Cancun, Mexico 2013
- Aalto, R, Marquard, J, Singer, MB; *Fingerprinting legacy sediment with novel geochemical tracers: case studies from mill ponds and anthropogenic fans*  
**American Association of Geographers Annual Meeting** Los Angeles, CA 2013
- Singer, MB, Piégay, H, Stella, JC, Wilson, R; *Floodplain ecohydrology: Discerning climatic v. anthropogenic controls from tree-ring  $\delta^{18}\text{O}$ , dendrochronology, and instrumental climate records*  
**Eos Trans.** AGU, 93(52), Fall Meet. Suppl., Abstract EP41H-04.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2012
- \*Higson, JL, Singer, MB; *Partitioning modes and rates of sediment flux derived from terrace-channel coupling* (POSTER)  
**Eos Trans.** AGU, 93(52), Fall Meet. Suppl., Abstract EP31A-0798.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2012
- \*Slater, IJ, Singer, MB; *Contrasting responses of alluvial channels to climate change (conterminous United States, 1950-2011)*  
**Integrative Sciences and Sustainable Development of Rivers Conference (ISRivers)** Lyon, France 2012
- Singer, MB, Dufour, S, Stella, JC, Piégay, H, Johnstone, L\*, Wilson, R; *Contrasts in growth and water sources in co-occurring Mediterranean riparian tree species: Evidence from tree ring isotopes and dendrochronology* (POSTER)  
**Eos Trans.** AGU, 92(52), Fall Meet. Suppl., Abstract H11E-1097.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2011
- \*Slater, IJ, Singer, MB; *Impact of climate change on river beds: Continental USA, 1950-2005*  
**Eos Trans.** AGU, 92(52), Fall Meet. Suppl., Abstract EP31A-0733.  
**American Geophysical Union Fall Meeting** San Francisco, CA 2011
- Singer, MB, James, LA, Ghoshal, S\*, Kilham, N\*, Higson, J\*, Aalto, R; *Eroding toxic fan: Legacy of 19th century gold mining in California* (POSTER)  
**International Conference on Mercury as a Global Pollutant** Halifax, Canada 2011
- \*McKelvey, H, Singer, MB, Piégay, H; *Histories of local v. regional hydrology as recorded by tree ring isotopes and dendrochronology*  
**HydroEco2011** Vienna, Austria 2011
- \*Higson, J, Singer, MB, James, LA, Ghoshal, S\*; *Evolution of a toxic fan: lessons from the Yuba River, California* (POSTER)  
**Geosciences Research Abstracts.** EGU2011-3126, EGU General Assembly 2011  
**European Geosciences Union Annual Meeting** Vienna, Austria 2011
- \*Slater, IJ, Singer, MB; *Impacts of dams on river bed elevation in the continental USA, 1950-2010* (POSTER)  
**Advances in River Science 2011** Swansea, UK 2011
- Singer, MB; *Transient response in longitudinal grain size to reduced gravel supply in a large river*  
**Eos Trans.** AGU, 91(52), Fall Meet. Suppl., Abstract EP52A-08.

<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2010
Michaelides, K, <u>Singer, MB</u> ; <i>What controls sediment flux in dryland channels?</i> (POSTER) <b>Eos Trans.</b> AGU, 91(52), Fall Meet. Suppl., Abstract EP31A-0733.		
<b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2010
Singer, MB; <i>Transient response in longitudinal grain size to reduced sediment supply in a large river</i> (POSTER) <b>Geosciences Research Abstracts.</b> Vol. 12, EGU2010-6674-1, EGU General Assembly 2010		
<b>European Geosciences Union Annual Meeting</b>	Vienna, Austria	2010
Michaelides, K, <u>Singer, M</u> , G. Martin; <i>Controls of hillslope-channel coupling on bed material grain size in a semi-arid catchment</i> (POSTER) <b>Geosciences Research Abstracts.</b> Vol. 12, EGU2010-15612, EGU General Assembly 2010, <b>European Geosciences Union Annual Meeting</b>	Vienna, Austria	2010
*Tena, A, <u>Singer, MB</u> , Batalla, RJ; <i>Sediment routing modelling: The use of FLUVIAL-12 to evaluate and re-design flushing flows in the lower Ebro</i> (POSTER) <b>Geosciences Research Abstracts.</b> Vol. 12, EGU2010-11767, EGU General Assembly 2010, <b>European Geosciences Union Annual Meeting</b>	Vienna, Austria	2010
James, LA, Ghoshal, S*, <u>Singer, MB</u> , Aalto, R; <i>Channel and floodplain metamorphosis following an aggradation-degradation episode</i> <b>American Association of Geographers Annual Meeting</b>	Washington, DC	2010
Singer, MB; <i>Hydraulic controls on bed material grain size</i> (POSTER) <b>Eos Trans.</b> AGU, 90(52), Fall Meet. Suppl., Abstract EP21B-0587. <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2009
Will, M, Aalto, RE, <u>Singer, MB</u> , Fuchs, M; <i>Evolution and flooding history of the Sacramento River over the late Quaternary illustrated on pristine floodplains near Chico, California</i> (POSTER) <b>Eos Trans.</b> AGU, 90(52), Fall Meet. Suppl., Abstract EP41C-0628. <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2009
*Kilham, N, <u>Singer, MB</u> ; <i>Controls of hydrograph shape on floodplain sedimentation during major floods</i> (POSTER) <b>Geological Society of America Abstracts with Programs</b> , Vol. 41(7): 132 <b>GSA Annual Meeting</b>	Portland, OR	2009
Singer, MB; <i>Downstream patterns of bed material grain size in a large, lowland alluvial river subject to low sediment supply</i> (POSTER) <b>Geophysical Research Abstracts.</b> Vol. 11, EGU2009-3947, 2009, EGU General Assembly 2009, <b>European Geosciences Union Annual Meeting</b>	Vienna, Austria	2009
Singer, MB, James, LA, Aalto, R; <i>Episodic fan dissection: Insights from total mercury concentrations on transport and storage of legacy gold mining sediments in California</i> <b>Eos Trans.</b> AGU, 89(53), Fall Meet. Suppl., Abstract H51J-05 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2008
Aalto, R, <u>Singer, MB</u> ; <i>Floodplain development in engineered and natural settings determined with novel, high resolution 210-Pb geochronology: Insights from sedimentation studies along the lower Sacramento River, California</i> <b>Eos Trans.</b> AGU, 89(53), Fall Meet. Suppl., Abstract H51J-03 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2008
James, LA, <u>Singer, MB</u> , Aalto, R; <i>Legacy morphologies: Channel avulsions and historical engineering structures drive form and process in the Lower Yuba and Feather Rivers, California</i> <b>Eos Trans.</b> AGU, 89(53), Fall Meet. Suppl., Abstract H52C-01 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2008
Singer, MB, James, LA, Aalto, R; <i>Insights from total mercury concentrations on transport and storage of legacy gold mining sediments in California.</i>		

<b>British Society for Geomorphology Meeting</b>	Exeter, UK	2008
*Kilham, N, <u>Singer, MB</u> , Aalto, R; <i>Floodplain sedimentation on the Feather River, California.</i> (POSTER) <b>British Society for Geomorphology Meeting</b>	Exeter, UK	2008
Singer, MB; <i>Downstream patterns of bed-material grain size in a large, lowland alluvial river subject to low sediment supply.</i> <b>Eos Trans.</b> AGU, 88(52), Fall Meet. Suppl., Abstract H53L-05 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2007
Silveira, J, Schlorff, R, Henderson, A, Ross, B, <u>Singer, M</u> ; <i>Bank swallow population and habitat trends along the Sacramento River, Red Bluff to Colusa.</i> <b>Riparian Habitat Joint Venture Conference: Integrating Riparian Habitat Conservation &amp; Flood Management in California</b>	Sacramento, CA	2007
James, LA, Ghoshal, S*, Megison, ME, <u>Singer, MB</u> , Aalto, R; <i>Legacy sediments and channel morphology in the Feather and Yuba Rivers.</i> <b>Eos Trans.</b> AGU, 88(52), Fall Meet. Suppl., Abstract H51E-0281 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2007
*Ghoshal, S, James, A, <u>Singer, M</u> , Aalto, R; <i>Channel morphological changes in the Yuba River, California, in the post-hydraulic mining period.</i> <b>Eos Trans.</b> AGU, 88(52), Fall Meet. Suppl., Abstract H51E-0280 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2007
James, LA, <u>Singer, MB</u> , Aalto, R, Ghoshal, S*; <i>Floodplain and channel evolution following catastrophic sedimentation: Early and on-going river-basin management in the west.</i> <b>Geological Society of America Annual Meeting</b>	Denver, CO	2007
Singer, MB; <i>Flood risk in the Sacramento Valley: The status of a creaky, yet functional, flood control system.</i> <b>American Association of Geographers Annual Meeting</b>	San Francisco, CA	2007
Singer, MB; <i>Downstream patterns of bed-material grain size in the Sacramento River and implications for habitat.</i> <b>Sacramento River Restoration Science Conference</b>	Chico, CA	2007
Singer, MB, Aalto, R; <i>Floodplains and sedimentation patterns and processes in a changing basin: Case study Sacramento Valley.</i> <b>Eos Trans.</b> AGU, 87(52), Fall Meet. Suppl., Abstract H13I-06 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2006
Singer, MB, Aalto, R; <i>Event-based washload transport and sedimentation in and around flood bypasses: Case study from the Sacramento Valley, California.</i> <b>CALFED Science Conference</b>	Sacramento, CA	2006
Singer, MB, Cepello, S, Henderson, A; <i>An apparatus for bed material sediment extraction from coarse river beds in large alluvial rivers.</i> <b>Federal Interagency Sedimentation Conference</b>	Reno, NV	2006
Ghoshal, ., James, LA, <u>Singer, MB</u> , Aalto, R; <i>Erosion of hydraulic mining sediment and channel change: Sacramento Valley, California.</i> (POSTER) <b>Binghamton Geomorphology Symposium</b>	Columbia, SC	2006
Singer, MB, Henderson, A, Cooper, J, Cepello, S; <i>An apparatus for bed material sediment extraction from coarse river beds in large alluvial rivers.</i> (POSTER) <b>Eos Trans.</b> AGU, 86(52), Fall Meet. Suppl., Abstract H53B-0460 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2005
Singer, MB, Aalto, R; <i>Event-based washload transport and sedimentation in and around flood bypasses: Case study from the Sacramento Valley, California.</i> (POSTER) <b>Eos Trans.</b> AGU, 86(18), Jt. Assem. Suppl., Abstract H33A-09 <b>Joint Assembly (American Geophysical Union Spring Meeting)</b>	New Orleans, LA	2005
*Springborn, M, <u>Singer, MB</u> , Dunne, T; <i>A mass balance of total mercury flux through a large, managed floodplain.</i> (POSTER) <b>Eos Trans.</b> AGU, 86(18), Jt. Assem. Suppl., Abstract H13A-08		

<b>Joint Assembly (American Geophysical Union Spring Meeting)</b>	New Orleans, LA	2005
Singer, MB; <i>Influence of major dams on hydrographs through a river network: Examples from the Sacramento Valley, California.</i> (POSTER) <b>CALFED Science Conference</b>	Sacramento, CA	2004
Singer, MB; <i>Influence of major dams on hydrographs through a river network: Examples from the Sacramento Valley, California.</i> (POSTER) <b>Assessing and Re-naturalizing Streams Impacted By Dams and Dam Removal</b> , U. Montana Center for Riverine Science and Stream Re-naturalization	Missoula, MT	2004
Singer, MB; <i>Influence of major dams on hydrographs through a river network: Examples from the Sacramento Valley, California.</i> (POSTER) <b>International Geological Congress</b>	Florence, Italy	2004
Singer, MB; <i>Downstream patterns of bed-material grain size in a large, lowland alluvial river.</i> (POSTER), <b>British Geomorphological Research Group Annual Conference</b>	Glasgow, UK	2004
Singer, MB, Dunne, T, Aalto, R, Nittrouer, CA, Nittrouer, J; <i>Event-based sedimentation in a flood bypass: examples from the Sacramento Valley, California.</i> (POSTER) <b>Eos Trans.</b> AGU, 84(46), Fall Meet. Suppl., Abstract H52A-1177 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2003
Singer, MB, Dunne, T; <i>Stochastic assessment of decadal patterns in Sacramento River bed material transport.</i> <b>Association of American Geographers Annual Meeting</b>	New Orleans, LA	2003
Singer, MB, Dunne, T; <i>Long-term stochastic assessment of gravel augmentation strategies in the Sacramento River.</i> <b>CALFED Science Conference</b>	Sacramento, CA	2003
Singer, MB, Dunne, T; <i>Stochastic analysis of sediment flux in the context of river management.</i> <b>Eos Trans.</b> AGU, 83(47), Fall Meet. Suppl., Abstract H71F-06, 2002 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2002
Singer, MB, Dunne, T; <i>An empirical-stochastic, event-based model for simulating synchronous inflow from a tributary network: Application to the Sacramento River basin, California.</i> (POSTER) <b>Paleofloods, Historical Data &amp; Climatic Variability</b>	Barcelona, Spain	2002
Singer, MB, Dunne, T; <i>Developing a stochastic streamflow generation model based on an extensive historical record in an altered fluvial system.</i> (POSTER) <b>Eos Trans.</b> AGU, 82(47), Fall Meet. Suppl., Abstract H21C-0311 <b>American Geophysical Union Fall Meeting</b>	San Francisco, CA	2001
Singer, MB, Dunne, T; <i>Development of an empirical-stochastic, event-based model for simulating synchronous basinwide streamflow.</i> <b>International Assoc. of Geomorphology</b>	Tokyo, Japan	2001
Singer, MB, Dunne, T; <i>Identifying erosional and depositional reaches in the Sacramento River, California by analysis of suspended-sediment transport.</i> <b>Association of American Geographers Annual Meeting</b>	New York, NY	2001
Singer, MB, Dunne, T; <i>Sediment transport in the Sacramento River, California: Considerations for channel morphology and ecological restoration.</i> <b>International Conference on Large Rivers &amp; Remote Sensing</b>	Singapore	2000
Singer, MB, Dunne, T; <i>Suspended mass balance for the Sacramento River, California: A times series approach.</i> <b>Int'l Conf. on Drainage Basin Dynamics and Morphology</b>	Jerusalem, Israel	1999

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## VOLUNTEER SERVICE

<b>Sound Producer</b> , KALX College Radio Station, Berkeley, California	2004-2007
<b>Tutor/Mentor</b> , Lafayette School Mentoring Project, Oakland, California.	2000-2002
<b>Soil Conservationist</b> , U.S. Peace Corps & Ministry of Forests and Soil Conservation, Nepal.	1994-1996
<b>Laboratory Assistant</b> , Berkeley Geochronology Laboratory, Berkeley, California.	1994
<b>Wildlife Care Assistant</b> , PAWS Olympic Wildlife Center, Olympia, Washington.	1992

**Assistant Zookeeper**, *Audobon Zoological Gardens*, New Orleans, Louisiana. 1990-1991  
**Tutor**, *Tulane University Community Action Prison Project*, New Orleans, Louisiana. 1990

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#### **OTHER SKILLS AND QUALIFICATIONS**

**Participant in ‘Teaching Geomorphology in the 21<sup>st</sup> Century’ Workshop**,  
*United States National Science Foundation* 2008  
Fluency in Spanish and Nepali languages.  
Technical Software and Languages: MATLAB, HEC-RAS, HEC-HMS, FLUVIAL-12, ArcGIS, UNIX, ProTools.

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#### **PROFESSIONAL MEMBERSHIPS**

American Geophysical Union  
American Institute of Hydrology (**Certified Professional Hydrologist - Surface Water, Cert#: 18-H-9002**)  
American Association of Geographers  
International Association of Hydrological Sciences  
British Society for Geomorphology  
British Hydrological Society