

# Scott R. David

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## APPOINTMENTS

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<b>Postdoctoral Scholar</b> , University of Massachusetts, Amherst, MA Advisor: Dr. Isaac Larsen	<b>2018-Present</b>
<b>Research Assistant</b> , Indiana University, Bloomington, IN	<b>2013-2018</b>

## EDUCATION

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<b>Ph.D. Indiana University</b> , Department of Earth and Atmospheric Sciences Dissertation: <i>Floodplain Morphodynamics: The Origin and Function of Floodplain Channels</i> . Advisor: Dr. Douglas Edmonds	<b>2018</b>
<b>M.S. Indiana University</b> , Department of Geosciences	<b>2015</b>
<b>B.S. University of Illinois</b> , Department of Geology	<b>2011</b>

## PUBLICATIONS

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### Manuscripts in Revision/Preparation

**David, S.R.**, Czuba, J.A., Edmonds, D.A. and Ward, A.S., In Prep. Structural configuration of geomorphic features on low-gradient floodplains and its influence on flood hydrodynamics.

**David, S.R.**, Larsen, I.J., and Lamb M.P., In Prep. Using artificial neural networks to quantify erosion by mega-floods and the implications for paleoflood discharge reconstruction

**David, S.R.**, Larsen, I.J., Lamb, M.P. and Venditti J.G., In Prep. A plunging flow origin for rock basins in the Channeled Scablands.

### Peer Reviewed Publications

Czuba, J.A., **David, S.R.**, Edmonds, D.A. and Ward, A.S., 2019. Dynamics of Surface-Water Connectivity in a Low-Gradient Meandering River Floodplain. *Water Resources Research*, 55(3), pp.1849-1870.

Johnston, G.H., **David, S.R.** and Edmonds, D.A., 2019. Connecting fluvial levee deposition to flood-basin hydrology. *Journal of Geophysical Research: Earth Surface*, 124(7), pp.1996-2012.

**David, S.R.**, Czuba, J.A. and Edmonds, D.A., 2018. Channelization of meandering river floodplains by headcutting. *Geology*, 47(1), pp.15-18.

**David, S.R.**, Edmonds, D.A. and Letsinger, S.L., 2017. Controls on the occurrence and prevalence of floodplain channels in meandering rivers. *Earth Surface Processes and Landforms*, 42(3), pp.460-472.

## AWARDS AND FELLOWSHIPS

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**Outstanding Academic Achievement Award**, Department of Earth and Atmospheric Sciences, Indiana University, 2018

**Indiana University Dissertation Year Fellowship**, Indiana University, 2017

**John T. and Carol G. McGill Research Award**, Research Grant, Geological Society of America, 2017

**Department Citizenship Award**, Department of Geological Sciences, Indiana University, 2016

**Patton Award**, Research Grant, Indiana Geological Survey, 2014

**Chevron Fellowship**, Department of Geological Sciences, Indiana University, 2012

## TEACHING EXPERIENCE

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### **Associate Instructor**, Indiana University

COLL-C 105: Billion Dollar Weather Disasters

Spring 2015

GEOL-G 334: Principles of Sedimentology and Stratigraphy

Fall 2013

### **Guest Lecturer**

GEO-SCI 697G: Advanced Geomorphology; University of Massachusetts

Spring 2019

Topic: Depositional Sedimentary Systems

COLL-C 105: Billion Dollar Weather Disasters, Indiana University

Fall 2013

Topic: Flooding Processes

### **Other**

Eureka!, University of Massachusetts/Girls Inc., Co-Workshop Leader,

Summer 2019

Topic: Earth from the Inside Out!

Sigma Gamma Epsilon, Indiana University, ArcGIS Workshop Instructor

Spring 2014

Topic: Introduction to ArcMap; Python Scripting for ArcGIS

## LEADERSHIP AND OUTREACH

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**Eureka!**, Workshop Instructor, University of Massachusetts/Girls Inc., 2019

**Outstanding Student Presentation Award Judge (OSPA)**, AGU, 2019

**Sigma Gamma Epsilon**, Crossroads Geology Conference Co-Chair, Indiana University, 2014-2016

**IU Geophysical Society**, Treasurer, Indiana University, 2012-2015

**IU Geophysical Society**, Science Fest, Indiana University, 2013-2014

## CONFERENCE PRESENTATIONS

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**David, S.R.**, Larsen, I.J. and Lamb, M.P., (2019, December). Using artificial neural networks to quantify erosion by mega-floods and the implications for paleoflood discharge reconstruction. In *AGU Fall Meeting 2019*. AGU.

Edmonds, D.A., **David, S.R.** and Czuba, J.A., (2019, December). Frequent flooding caused by floodplain geomorphology. In *AGU Fall Meeting 2019*. AGU.

Lehnigk, K.E., Larsen, I.J., Lamb, M.P. and **David, S.R.**, (2019, December). Quantifying erosion caused by catastrophic outburst floods: Channeled Scablands, eastern Washington, USA. In *AGU Fall Meeting 2019*. AGU.

Sumaiya, F., Schubert, J.T., Ahammad, M., Czuba, J.A., **David, S.R.**, Johnston, G.H. and Edmonds, D.A., (2019, December). Sediment Transport Dynamics on a Channelized Floodplain at Various Flows. In *AGU Fall Meeting 2019*. AGU.

**David, S.R.**, Czuba, J.A., Edmonds, D.A. and Ward, A.S., (2018, December). How does topography and river-floodplain connectivity influence flooding processes?. In *AGU Fall Meeting Abstracts*.

Schubert, J.T., Schrading, C., Kennedy, J., Czuba, J.A., **David, S.**, Edmonds, D.A. and Ward, A.S., (2018, December). The Role of Topographic Variability on River-Floodplain Connectivity across Several Floodplains. In *AGU Fall Meeting Abstracts*.

Sumaiya, S., Schubert, J.T., Czuba, J.A., **David, S.R.**, Johnston, G.H. and Edmonds, D.A., (2018, December). Deposition and Erosion Potential of Sediment in a Channelized Floodplain. In *AGU Fall Meeting Abstracts*.

- Wanker, M.D., Edmonds, D.A., Caldwell, R.L., Valenza, J.M. and **David, S.R.**, (2018, December). Dynamics of Sediment Transport Through a River Bifurcation (462708). In *AGU Fall Meeting Abstracts*.
- Czuba, J.A., **David, S. R.**, Edmonds, D. A., and Johnston, G.H., (2017, December). Hydrodynamics and Connectivity of Channelized Floodplains: Insights from the Meandering East Fork White River, Indiana, USA. In *AGU Fall Meeting Abstracts*.
- Constantine, J.A., Edmonds, D. A., and **David, S. R.**, (2017, December). Unravelling the Drivers of Chute Cutoff and the Commonality of Oxbow Production. In *AGU Fall Meeting Abstracts*.
- David, S. R.**, Czuba, J.A., and Edmonds, D. A., (2017, December). Mechanics and rate of headcut growth on shallow sloped floodplains: Implications for floodplain channel network development. In *AGU Fall Meeting Abstracts*.
- Johnston, G.H., Edmonds, D. A., **David, S. R.**, and Czuba, J.A., (2017, December). Hydrodynamic and sedimentological controls governing formation of fluvial levees. In *AGU Fall Meeting Abstracts*.
- Gunn, A., Jerolmack, D.J., Edmonds, D.A., Ewing, R.C., Wanker, M., and **David, S.R.**, (2017, December). Connecting meteorology to surface transport in aeolian landscapes: Peering into the boundary layer with Doppler lidar. In *AGU Fall Meeting Abstracts*.
- David, S.R.**, Edmonds, D.A., and Letsinger, S.L., (2017, October). Controls on the occurrence and prevalence of floodplain channels in meandering rivers. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 6.
- Czuba, J.A., **David, S. R.**, Edmonds, D. A., and Johnston, G.H., (2017, October). Hydrodynamics and Connectivity of Channelized Floodplains: Insights from the Meandering East Fork White River, Indiana, USA. *Geological Society of America Abstracts with Programs*. Vol. 49, No. 6.
- David, S. R.**, Czuba, J.A. and Edmonds, D. A., (2017, July). Mechanics and rate of headcut growth on low gradient floodplains: Implications for channel network development. 11<sup>th</sup> International Conference of Fluvial Sedimentology.
- Czuba, J.A., **David, S. R.**, and Edmonds, D. A., (2017, July). Hydrodynamics and Connectivity of Channelized Floodplains: Insights from the Meandering East Fork White River, Indiana, USA. 11<sup>th</sup> International Conference of Fluvial Sedimentology.
- David, S. R.**, and Edmonds, D. A., (2016, December). The mechanics and rate of headcut growth on floodplains: Implications for the formation of channel networks. In *AGU Fall Meeting Abstracts*.
- David, S. R.**, and Edmonds, D. A., (2016, May). Geomorphic mapping of floodplain accessory channels with implications for floodplain morphodynamics. Community Surface Dynamics Modeling System Annual Meeting. Boulder, Colorado
- David, S. R.**, and Edmonds, D. A., (2015, December). Morphodynamics of Floodplain Chute Channels. In *AGU Fall Meeting Abstracts*.
- David, S. R.**, Edmonds, D. A., Letsinger, S. L., and Hajek, E. A. (2013, December). Geomorphic mapping of floodplain accessory channels with implications for floodplain morphodynamics. In *AGU Fall Meeting Abstracts*. Vol. 1, p. 0867.
- Perillo, M. M., **David, S.**, Best, J. L., and Garcia, M. H. (2012, December). Combined Flow Bedforms: Descriptions and Implications for Understanding Ancient Storms Deposits. In *AGU Fall Meeting Abstracts*. Vol. 1, p. 01.