

CHRISTOPHER PAOLA

Personal

Age: 60

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St. Anthony Falls Laboratory
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Education

B.S.	1976	Lehigh University, Bethlehem, Pennsylvania (Summa Cum Laude)
M.Sc.	1977	University of Reading, Reading UK (With Distinction)
Sc.D.	1983	Massachusetts Institute of Technology and Woods Hole Oceanographic Institution, Cambridge and Woods Hole, Massachusetts

Employment

1983-1988	Assistant Professor, Department of Geology & Geophysics, University of Minnesota, Minneapolis, Minnesota
1988-1990	Hydraulic Engineer, US Geological Survey Cascades Volcano Observatory, Vancouver, Washington and Assistant Professor, University of Minnesota, Minneapolis, Minnesota (leave of absence)
1990-1997	Associate Professor, Department of Geology & Geophysics, University of Minnesota, Minneapolis, Minnesota
1997-present	Professor, Department of Geology & Geophysics, University of Minnesota, Minneapolis, Minnesota
1995-2003	Associate Director for Basic Research, St Anthony Falls Laboratory
2003-2008, 2012-present	Director, National Center for Earth-surface Dynamics
2015-present	Interim Director, St Anthony Falls Laboratory

Temporary positions

1991	Visiting lecturer (<i>Professore à contratto</i>), Institute of Hydraulics, University of Genoa, Italy
1998	Visiting researcher, Lamont Doherty Earth Observatory, Columbia University, New York, NY
2008	Leverhulme Fellow, Imperial College London

2008,11-12 Visiting Professor, University of Paris 7

Research areas

Physical processes of sedimentation, in particular: basin filling and controls on physical stratigraphy; dynamics of braided streams including vegetation interaction; particle fractionation in depositional systems; bedform dynamics; autogenic processes and self-organization in landscape evolution.

Academic honors

Morse-Alumni Award for Contributions to Undergraduate Education, 1994
Tate Award for Outstanding Academic Advising, 1994
Institute of Technology Outstanding Instructor Award, 1992/93, 1995/96
Fellow of the Geological Society of America, 1995
University of Minnesota Academy of Distinguished Teachers, 2005
Fellow of the American Geophysical Union, 2007
University of Minnesota Institute on the Environment Founding Fellow, 2007
University of Minnesota College of Science & Engineering Distinguished Professor, 2008
Outstanding Paper Award, *Journal of Sedimentary Research*, 2008
Leverhulme Visiting Professor, Imperial College London, 2009-2010
Charles Lyell Medal, Geological Society of London, 2011
Outstanding Paper Award, *Journal of Sedimentary Research*, 2010
Outstanding Paper Award, *Journal of Sedimentary Research*, 2011
AAPG Distinguished Lecturer, 2012-2013
Outstanding Reviewer Award, *Journal of Geophysical Research*, 2013
Outstanding Paper Award, *Journal of Sedimentary Research*, 2012
Laurence L. Sloss Award, Geological Society of America, 2014

Professional Society Memberships

American Geophysical Union
Geological Society of America
International Association of Sedimentologists
SEPM Society for Sedimentary Geology

Professional Service

GSA Sedimentary Geology Division leadership group, 2004-2006 (Chair, 2006)
WATERS scientific design group, 2007
National Science Foundation Geovision Committee, 2007-2008
National Research Council Committee on Future of Geomorphology, 2007-2008
America's Wetland Advisory Board, 2012-2014
CSDMS steering committee, 2011-2015
Science Museum of Minnesota Future Earth Initiative Advisory Board, 2010-present
External examiner, Luce Malverti, Ph.D. Institute de Physique du Globe, Paris (2010)
External examiner, Dimitri Lague, H.D.R. University of Rennes (2010)
External examiner, Wietse van de Lageweg, Ph.D. University of Utrecht (2013)

Courses taught

Oceanography (4 cr, general interest science course)
Introduction to field mapping (4 cr, required core course)
Earth Resources (3 cr, nonmajors course)

Geodynamics II: the fluid Earth (4 cr, required core course)
Field workshop (2 cr, required core course)
Sedimentology (4 cr, required core course)
Modelling workshop (2 cr, required core course)
Sedimentary Petrology (4 cr, elective course for majors)
Stratigraphy and basin analysis (4 cr, elective course for majors)
Depositional Mechanics (3-4 cr, graduate course)
Seminars in: mathematical applications, river mechanics, quantitative basin analysis, stream restoration, IGERT nonequilibrium dynamics in the environment
Sediment transport (Geol/Civil Eng; 3 cr, graduate)
Stream restoration: introduction (Geol/Civil Eng/Ecology; 3 cr, graduate)
Stream restoration: practice (Geol/Civil Eng/Ecology; 1 cr, graduate)

Post-doctoral researchers

Dr. Philip Ashworth (1986; now at Brighton University, UK)
Dr. David C. Mohrig (1994–1996; now at Univ. Texas Austin)
Dr. Kelin X. Whipple (1994–1995, now at Arizona State Univ.)
Dr. A. Brad Murray (1995–1996; now at Duke Univ.)
Dr. Thomas Hickson (1999–2000; now at Univ. St. Thomas, St. Paul)
Dr. Juan Jose Fedele (2002–2006; now at ExxonMobil Upstream Res.)
Dr Matt Wolinsky (2005–2008; now at Shell Research)
Dr Douglas Jerolmack (2006–2007; now at Univ. Pennsylvania)
Dr Kyle Straub (2007–2008; now at Tulane Univ.)
Dr Liz Hajek (2009–2010; now at Pennsylvania State Univ.)
Dr Doug Edmonds (2009–2010; now at Indiana University)
Dr Andrew Petter (2010–2013)
Dr Nathanael Geleynse (2012)
Dr Brady Foreman (2012–2014; now at Western Washington University)
Dr Jean-Louis Grimaud (2014–present)
Dr Colin Phillips (2014–present)
Dr Ajay Limaye (2014–present)

Theses Completed

Stephen Wiele, 1992, *A computational investigation of bank erosion and mid-channel bar formation in gravel-bed rivers*. (Ph. D.)
Rebecca Seal (Soileau), 1994, *Mechanisms of downstream fining in gravel-bed rivers*. (Ph. D.)
A. Brad Murray, 1995, *Braided-stream modeling and evaluation of models; dynamical-systems approaches*. (Ph. D.)
Ginny Catania, 1999, *Stream braiding under pressurized flow*. (M.S.)
Bianca Federici, 2000, *Experimental observations on bifurcations in braided channels* (in Italian) (Tesi di laurea, University of Genoa, Italy)
Alessandro Cantelli, 2000, *Evolution of the erosive front produced by dam removal* (in Italian) (Tesi di laurea, University of Genoa, Italy)
Karen Gran, 2000, *Effects of riparian vegetation on braided stream dynamics: experimental results*. (M.S.)
John Swenson, 2000, *Fluid flow and sediment transport in evolving sedimentary basins* (Ph. D.)
Les Hasbargen, 2003, *Erosion in steady state drainage basins* (Ph. D.)
Ben Sheets, 2005, *Assembling the alluvial stratigraphic record* (Ph. D.)

Nikki Strong, 2006, *Mass balance effects in clastic fluvial stratigraphy* (Ph. D.)
Wonsuck Kim, 2007, *Interaction of autogenic and allogenic processes in sedimentary basins* (Ph. D.)
Michal Tal, 2007 *Vegetation effects on stream channels* (Ph. D.)
John Martin, 2007 *Quantitative sequence stratigraphy* (Ph. D.)
Jorge Lorenzo Trueba, 2012 *Organic sedimentation in deltas* (Ph.D. C.E.)
Man Liang, 2013 *Reduced complexity models of deltas* (Ph.D. C.E.)
Rachel Bain, 2014 *Comparison of tidal and meandering channels in Bangladesh* (M.S.)
Antoinette Abeyta, 2015 (Ph. D.)

University service (2008 – present)

Founding Fellow, Institute on the Environment (2007 – 2008)

Other professional activities (2008 – present)

Ongoing Oil industry short courses in stratigraphic prediction (1-3 per year)
Ongoing Advisory Board, Science Museum of Minnesota Future Earth Initiative

Invited lectures (2009-present)

2009 Jan University of Texas
2009 Apr European Geophysical Union Annual Meeting (2 invited)
2009 Apr Imperial College London
2010 Mar University of Virginia
2010 Mar Duke University
2010 Mar Woods Hole Oceanographic Inst.
2010 Sept World Delta Forum, New Orleans
2011 Jan AGU Source to Sink Chapman Conference
2011 Apr AAPG Source to Sink Research Group
2011 Oct GSA Annual meeting
2011 Nov Stanford University (2)
2011 Nov U of M Institute on the Environment Frontiers series
2011 Dec AGU Annual meeting (2)
2012 Feb Lamont-Doherty Earth Observatory (also classroom guest lecturer)
2012 Mar Ecole Polytechnique Federale de Lausanne
2012 Nov G. D. Klein Lecture, University of Kansas
2013 Feb O. T. Hayward Lecture, Baylor University
2013 Sept Keynote lecture, IAS 30th International Meeting, Manchester UK
2014 Aug Keynote lecture, SEPM Autogenic Dynamics Workshop, Grand Junction CO
2015 Sept Keynote lecture, Binghamton Geomorphology Meeting, Buffalo NY
2015 Oct New Mexico Tech, Socorro NM

Publications by year

1977

Meza, M. P., and C. Paola (1977), Evidence for onshore deposition of Pleistocene continental-shelf clays, *Mar. Geol.*, *23*, M27-M35.

1983

Paola, C., and J. B. Southard (1983), Autosuspension and the energetics of two-phase flows: Reply to comments on "Experimental test of autosuspension" by J. B. Southard and M. E. Mackintosh, *Earth Surf. Proc. Landfms.*, *8*, 273-279.

1985

Paola, C. (1985), A method for spatially averaging small-scale bottom roughness, *Mar. Geol.*, *66*, 291-301.

1986

Paola, C., G. Gust, and J. B. Southard (1986), Skin friction behind isolated hemispheres and the formation of obstacle marks, *Sedimentology*, *33*, 279-293.

1988

Heller, P. L., C. L. Angevine, N. S. Winslow, and C. Paola (1988), Two-phase stratigraphic model of foreland-basin sequences, *Geology*, *16*, 501-504.

Kleinspehn, K. L., and C. Paola (Eds.) (1988), *New Perspectives in Basin Analysis*, 444 pp., Springer-Verlag Inc., New York.

Paola, C. (1988), Subsidence and gravel transport in alluvial basins, in *New Perspectives in Basin Analysis*, edited by K. L. Kleinspehn and C. Paola, pp. 231-243, Springer Verlag, New York.

1989

Heller, P. L., C. L. Angevine, and C. Paola (1989), Comment on "Thrusting and gravel progradation in foreland basins: A test of post-thrusting gravel dispersal", *Geology*, *17*, 959-960.

Heller, P. L., and C. Paola (1989), The paradox of Lower Cretaceous gravels and the initiation of thrusting in the Sevier orogenic belt, United States western interior, *Geological Society of America Bulletin*, *101*, 864-875.

Paola, C., S. M. Wiele, and M. A. Reinhart (1989), Upper-regime parallel lamination as the result of turbulent sediment transport and low-amplitude bed forms, *Sedimentology*, *36*, 47-59.

1990

Angevine, C. L., P. L. Heller, and C. Paola (1990), Quantitative Sedimentary Basin Modeling, in *Continuing Education Course Note Series*, 133 pp, American Association of Petroleum Geologists.

Paola, C. (1990), A simple basin-filling model for coarse-grained alluvial systems, in *Quantitative Dynamic Stratigraphy*, edited by T. A. Cross, pp. 363-374, Prentice-Hall, Englewood Cliffs, New Jersey.

1991

Paola, C., and L. Borgman (1991), Reconstructing random topography from preserved stratification, *Sedimentology*, *38*, 553-565.

1992

Ashmore, P. E., R. I. Ferguson, K. L. Prestegard, P. J. Ashworth, and C. Paola (1992), Secondary flow in anabranch confluences of a braided, gravel-bed stream, *Earth-surf. Proc. Landfms.*, *17*, 299-311.

Ashworth, P. J., R. I. Ferguson, P. E. Ashmore, C. Paola, D. M. Powell, and K. L. Prestegard (1992), Measurements in a braided river chute and lobe 2. Sorting of bedload during entrainment, transport, and deposition, *Water Resources Research*, *28*, 1887-1896.

- Ferguson, R. I., P. E. Ashmore, P. J. Ashworth, C. Paola, and K. L. Prestegard (1992), Measurements in a braided river chute and lobe 1. Flow pattern, sediment transport, and channel change, *Water Resources Research*, 28, 1877-1886.
- Heller, P. L., and C. Paola (1992), The large-scale dynamics of grain-size variation in alluvial basins, 2: Application to syntectonic conglomerate, *Basin Research*, 4, 91-102.
- Paola, C., P. L. Heller, and C. L. Angevine (1992), The large-scale dynamics of grain-size variation in alluvial basins, 1: Theory, *Basin Research*, 4, 73-90.
- Paola, C., G. Parker, R. Seal, S. K. Sinha, J. B. Southard, and P. R. Wilcock (1992), Downstream fining by selective deposition in a laboratory flume, *Science*, 258, 1757-1760.
- Paola, C., G. Parker, R. Seal, S. K. Sinha, J. B. Southard, and P. R. Wilcock (1992), Laboratory experiments on downstream fining of gravel, paper presented at Int. Assoc. Hydr. Res. Grain Sorting Seminar, ETH Zurich, Mitteilungen der Versuchsanstalt für Wasserbau, Hydrologie, und Glaziologie, Ascona, Italy, October 21-25, 1991.

1993

- Paola, C., and L. Borgman (1993), REPLY: Reconstructing random topography from preserved stratification, *Sedimentology*, 40, 148-149.
- Seal, R., G. Parker, and C. Paola (1993), The effect of local patchiness in gravel grain size distribution on bedload transport in braided rivers, *Advances in Hydro-Sciences and -Engineering*, 1B, 1331-1338.

1994

- Murray, A. B., and C. Paola (1994), A cellular model of braided rivers, *Nature*, 371, 54-57.

1995

- Bryant, M., P. Falk, and C. Paola (1995), Experimental study of avulsion frequency and rate of deposition, *Geology*, 23, 365-368.
- Paola, C., E. C. Alexander, R. L. Edwards, P. J. Hudleston, E. Ito, S.-I. Karato, K. R. Kelts, K. L. Kleinspehn, B. M. Moskowitz, M. Person, W. E. Seyfried Jr., R. E. Sloan, J. Stout, C. Teyssier, and B. Tikoff (1995), Geodynamics as the center of a new Earth sciences curriculum and theme of a new undergraduate laboratory, *J. Geol. Educ.*, 43, 485-491.
- Paola, C., and R. Seal (1995), Grain-size patchiness as a cause of selective deposition and downstream fining, *Water Resources Research*, 31, 1395-1407.
- Seal, R., and C. Paola (1995), Observations of downstream fining on the North Fork Toutle River, Mt. St. Helens, Washington, *Water Res. Res.*, 31, 1409-1419.
- Seal, R., G. Parker, C. Paola, and B. Mullenbach (1995), Laboratory Experiments on Downstream Fining of Gravel, Narrow Channel Runs 1 Through 3: Supplemental Methods and Data, 477 pp, St. Anthony Falls Hydraulic Laboratory.
- Whipple, K. X., G. Parker, and C. Paola (1995), Experimental study of alluvial fans, paper presented at International Joint Seminar on Reduction of Natural and Environmental Disasters in Water Environment, Seoul National University, Seoul, Korea.

1996

- Cui, Y., G. Parker, and C. Paola (1996), Numerical simulation of aggradation and downstream fining, *Journal of Hydraulic Research*, 34, 185-204.
- Heller, P. L., and C. Paola (1996), Downstream changes in alluvial architecture: An exploration of controls on channel-stacking patterns, *Journal of Sedimentary Research*, 66, 297-306.
- Murray, A. B., and C. Paola (1996), A new quantitative test of geomorphic models, applied to a model of braided streams, *Water Resources Research*, 32, 2579-2587.
- Paola, C. (1996), Incoherent structure: turbulence as a metaphor for stream braiding, in *Coherent Flow Structures in Open Channels*, edited by P. J. Ashworth, et al., pp. 705-723, John Wiley & Sons, Chichester.
- Paola, C., and D. Mohrig (1996), Paleohydraulics revisited: Paleoslope estimation in coarse-grained braided rivers, *Basin Research*, 8, 243-254.

- Toro-Escobar, C. M., G. Parker, and C. Paola (1996), Transfer function for the deposition of poorly sorted gravel in response to streambed aggradation, *J. Hydraul. Res.*, 34, 35-53.
- Whipple, K. X., G. Parker, C. Paola, and D. Mohrig (1996), Dynamic Tailings Basin Study: Final Report, 43 pp, St. Anthony Falls Laboratory, Minneapolis, Minn.

1997

- Burns, B. A., P. L. Heller, M. Marzo, and C. Paola (1997), Fluvial response in a sequence-stratigraphic framework: example from the Montserrat fan-delta, Spain, *J. Sedim. Res.*, 67, 311-321.
- Ferguson, R. I., and C. Paola (1997), Bias and precision of percentiles of bulk grain size distributions, *Earth Surface Processes and Landforms*, 22, 1061-1077.
- Murray, A. B., and C. Paola (1997), Properties of a cellular braided stream model, *Earth Surface Processes and Landforms*, 22, 1001-1025.
- Paola, C. (1997), When streams collide, *Nature*, 387, 232-233.
- Seal, R., C. Paola, G. Parker, J. B. Southard, and P. R. Wilcock (1997), Experiments on downstream fining of gravel: 1. Narrow-channel runs, *Journal of Hydraulic Engineering*, 123, 874-884.

1998

- Paola, C., and J. B. Swenson (1998), Geometric constraints on composition of sediment derived from erosional landscapes, *Basin Research*, 10, 37-47.
- Parker, G., C. Paola, K. X. Whipple, and D. C. Mohrig (1998), Alluvial fans formed by channelized fluvial and sheet flow. I: theory, *Journal of Hydraulic Engineering*, 124, 985-995.
- Parker, G., C. Paola, K. X. Whipple, D. C. Mohrig, C. M. Toro-Escobar, M. Halverson, and T. W. Skoglund (1998), Alluvial fans formed by channelized fluvial and sheet flow. II: application, *Journal of Hydraulic Engineering*, 124, 996-1004.
- Sapozhnikov, V. B., A. B. Murray, C. Paola, and E. Foufoula-Georgiou (1998), Validation of braided-stream models: spatial state-space plots, self-affine scaling, and island shapes, *Water Resources Research*, 34, 2353-2364.
- Whipple, K. X., G. Parker, C. Paola, and D. C. Mohrig (1998), Channel dynamics, sediment transport, and the slope of alluvial fans: experimental study, *Journal of Geology*, 106, 677-693.

1999

- Paola, C., G. Parker, D. C. Mohrig, and K. X. Whipple (1999), The influence of transport fluctuations on spatially averaged topography on a sandy, braided fluvial fan, in *Numerical Experiments in Stratigraphy: Recent Advances in Stratigraphic and Sedimentologic Computer Simulations*, edited by J. Harbaugh, et al., pp. 211-218, Special Publication, SEPM.

2000

- Hasbargen, L. E., and C. Paola (2000), Landscape instability in an experimental drainage basin, *Geology*, 28, 1067-1070.
- Marr, J., J. Swenson, C. Paola, and V. Voller (2000), A two-diffusion model of fluvial stratigraphy in closed depositional basins, *Basin Research*, 12, 381-398.
- Mohrig, D. C., P. L. Heller, C. Paola, and W. J. Lyons (2000), Interpreting avulsion process from ancient alluvial sequences: Guadalope-Matarranya system (northern Spain) and Wasatch Formation, (western Colorado), *Geological Society of America Bulletin*, 112, 1787-1803.
- Paola, C. (2000), Quantitative models of sedimentary basin filling, *Sedimentology*, 47 (suppl. 1), 121-178.
- Paola, C. (2000), A sermon on the mounts, *Nature*, 405, 123.
- Parker, G., C. Paola, and S. F. Leclair (2000), Probabilistic form of Exner equation of sediment continuity for mixtures with no active layer, *Journal of Hydraulic Engineering*, 126, 818-826.
- Swenson, J. B., V. R. Voller, C. Paola, G. Parker, and J. G. Marr (2000), Fluvio-deltaic sedimentation: A generalized Stefan problem, *European Journal of Applied Mathematics*, 11, 433-452.
- Toro-Escobar, C. M., C. Paola, G. Parker, P. R. Wilcock, and J. B. Southard (2000), Experiments on downstream fining of gravel: II. Wide and sandy runs, *Journal of Hydraulic Engineering*, 126, 198-208.

2001

- Catania, G., and C. Paola (2001), Braiding under glass, *Geology*, 29, 259-262.
- Gran, K., and C. Paola (2001), Riparian vegetation controls on braided stream dynamics, *Water Resources Research*, 37, 3275-3283.
- Heller, P. L., C. Paola, I.-G. Hwang, B. John, and R. Steel (2001), Geomorphology and sequence stratigraphy due to slow and rapid base-level changes in an experimental subsiding basin (XES 96-1), *AAPG Bulletin*, 85, 817-838.
- Paola, C. (2001), Modelling stream braiding over a range of scales, in *Gravel-Bed Rivers V*, edited by M. P. Mosley, pp. 11-38, New Zealand Hydrological Society, Wellington, NZ.
- Paola, C., and E. Fofoula-Georgiou (2001), Statistical geometry and dynamics of braided rivers, in *Gravel-Bed Rivers V*, edited by M. P. Mosley, pp. 47-71, New Zealand Hydrological Society, Wellington, NZ.
- Paola, C., J. Mullin, C. Ellis, D. C. Mohrig, J. B. Swenson, G. Parker, T. Hickson, P. L. Heller, L. Pratson, J. Syvitski, B. Sheets, and N. Strong (2001), Experimental stratigraphy, *GSA Today*, 11, 4-9.
- Pittaluga, M. B., B. Federici, R. Repetto, C. Paola, G. Seminara, and M. Tubino (2001), The morphodynamics of braiding rivers: experimental and theoretical results on unit processes, in *Gravel-Bed Rivers V*, edited by M. P. Mosley, pp. 143-180, New Zealand Hydrological Society, Wellington, NZ.

2002

- Cazanacli, D., C. Paola, and G. Parker (2002), Experimental steep, braided flow: Application to flooding risk on fans, *Journal of Hydraulic Engineering*, 128, 322-330.
- Chandler, J., P. Ashmore, C. Paola, M. Gooch, and F. Varkaris (2002), Monitoring River-Channel Change Using Terrestrial Oblique Digital Imagery and Automated Digital Photogrammetry, *Annals of the Association of American Geographers*, 92, 631 - 644.
- Repetto, R., M. Tubino, and C. Paola (2002), Planimetric instability of channels with variable width, *Journal of Fluid Mechanics*, 457, 79-109.
- Sheets, B. A., T. A. Hickson, and C. Paola (2002), Assembling the stratigraphic record: depositional patterns and time-scales in an experimental alluvial basin, *Basin Research*, 14, 287-301.
- Slingerland, R., J. P. M. Syvitski, and C. Paola (2002), Sediment Modeling System enhances education and research, *EOS*, 83, 578-579.
- Sun, T., C. Paola, G. Parker, and P. Meakin (2002), Fluvial fan deltas: linking channel processes with large-scale morphodynamics, *Water Resources Research*, 38, 1151, doi:1110.1029/2001WR000284.

2003

- Federici, B., and C. Paola (2003), Dynamics of channel bifurcation in non-cohesive sediments, *Water Resources Research*, 39, 3-1 -- 3-15.
- Hasbargen, L. E., and C. Paola (2003), How predictable is local erosion rate in erosional landscapes?, in *Prediction in Geomorphology*, edited by P. R. Wilcock and R. M. Iverson, pp. 231-240, American Geophysical Union, Washington, D.C.
- Murray, A. B., and C. Paola (2003), Modelling the effect of vegetation on channel pattern in bedload rivers, *Earth Surface Processes and Landforms*, 28, 131-143.
- Paola, C. (2003), From human to planetary time scales: effects on river systems, paper presented at UNESCO-ICCORES Workshop 2003 From watershed slopes to coastal areas: sedimentation processes at different scales, Venice, Italy, 3-5 December.
- Paola, C. (2003), Sedimentology: Floods of record, *Nature*, 425, 459.
- Syvitski, J., C. Paola, R. Slingerland, D. Furbish, P. Wiberg, and G. Tucker (2003), Building a Community Surface Dynamics Modeling System: Rationale and Strategy, University of Colorado, Boulder, CO.
- Silberman, E., R. Arndt, G. Parker, E. Fofoula-Georgiou, and C. Paola (2003), The St. Anthony Falls Laboratory in history, in *Henry P. G. Darcy and Other Pioneers in Hydraulics*, edited by G. O. Brown, et al., pp. 289-308, American Society of Civil Engineers, Reston, VA.

Voller, V. R., and C. Paola (2003), Moving Boundary Problems in Earth-surface Dynamics, paper presented at Moving Boundaries VII: Computational Modeling of Free and Moving Boundary Problems, WIT Press.

2004

Cantelli, A., C. Paola, and G. Parker (2004), Experiments on upstream-migrating erosional narrowing and widening of an incisional channel caused by dam removal, *Water Resources Research*, 40, W03304, doi:03310.01029/02003WR002940.

Lamb, M. P., T. A. Hickson, J. G. Marr, B. A. Sheets, C. Paola, and G. Parker (2004), Surging vs. continuous turbidity currents: flow dynamics and deposits in an experimental intraslope minibasin, *Journal of Sedimentary Research*, 74, 148-155.

Paola, C. (2004), Improving public understanding of scientific research: a view from the research side, in *Creating Connections: Museums and the Public Understanding of Current Research*, edited by D. Chittenden, et al., pp. 145-152, Altamira Press, Walnut Creek, California.

Tal, M., K. Gran, A. B. Murray, C. Paola, and D. M. Hicks (2004), Riparian vegetation as a primary control on channel characteristics in multi-thread rivers, in *Riparian Vegetation and Fluvial Geomorphology*, edited by S. J. Bennett and A. Simon, pp. 43-58, American Geophysical Union.

Voller, V. R., J. B. Swenson, W. Kim, and C. Paola (2004), A fixed grid method for moving boundary problems on the Earth's surface, paper presented at European Congress on Computational Methods in Applied Sciences and Engineering, ECCOMAS.

Voller, V. R., J. B. Swenson, and C. Paola (2004), An analytical solution for a Stefan problem with variable latent heat, *International Journal of Heat and Mass Transfer*, 47, 5387-5390.

2005

Hickson, T. A., B. A. Sheets, C. Paola, and M. Kelberer (2005), Experimental test of tectonic controls on three dimensional alluvial facies architecture, *Journal of Sedimentary Research*, 75, 710-722.

Holbrook, J., and C. Paola (2005), Addressing future directions in sedimentary geology: a word about ForSed, *The Sedimentary Record*, December, 2005, 10.

Kubo, Y., J. P. M. Syvitski, E. W. H. Hutton, and C. Paola (2005), Advance and application of the stratigraphic simulation model 2D-SedFlux: From tank experiment to geological scale simulation, *Sedim. Geol.*, 178, 187-195.

Paola, C., and V. R. Voller (2005), A generalized Exner equation for sediment mass balance, *Journal of Geophysical Research Earth Surface*, 110, F04014, doi:04010.01029/02004JF000274.

Strong, N., B. A. Sheets, T. A. Hickson, and C. Paola (2005), A mass-balance framework for quantifying downstream changes in fluvial architecture, in *Fluvial Sedimentology VII*, edited by M. Blum, et al., pp. 243-253, International Association of Sedimentologists.

Swenson, J. B., C. Paola, L. Pratson, V. R. Voller, and A. B. Murray (2005), Fluvial and marine controls on combined subaerial and subaqueous delta progradation: Morphodynamic modeling of compound-clinoform development, *Journal of Geophysical Research*, 110, F02013, doi:02010.01029/02004JF000265.

Violet, J. A., B. A. Sheets, L. Pratson, C. Paola, R. T. Beaubouef, and G. Parker (2005), Experiment on turbidity currents and their deposits in a model 3D subsiding minibasin, *Journal of Sedimentary Research*, 75, 820-843.

Zhang, Y., M. Person, C. Paola, C. W. Gable, X.-H. Wen, and J. M. Davis (2005), Geostatistical analysis of an experimental stratigraphy, *Water Resour. Res.*, 41, W11416, doi:11410.11029/12004WR003756.

2006

Bigi, A., L. E. Hasbargen, A. Montanari, and C. Paola (2006), Knickpoints and hillslope failures: Interactions in a steady-state experimental landscape, in *Tectonics, Climate and Landscape Evolution*, GSA Special Paper 398, edited by S. D. Willett, N. Hovius, M. T. Brandon, D. M. Fisher, pp. 295-308.

Kim, W., C. Paola, J. Swenson, and V. Voller (2006), Shoreline response to autogenic processes of

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