Publications

Papers in international journals

1. Zanchi B., ***Radice A.*** Celerity and height of aggradation fronts in a gravel-bed laboratory channel. Journal of Hydraulic Engineering, accepted.
2. ***Radice A.*** An experimental investigation of sediment kinematics and multi-scale propagation for laboratory bed-load dunes. Sedimentology, accepted.
3. Rrokaj S., Corti B., Giovannini A., Cancelliere G., Biotto D., ***Radice A.*** Flood mitigation measure and water storage in East Africa: an analysis for the Rio Muaguide, Mozambique. Hydrology, accepted.
4. Molinari D., Dazzi S., Gattai E., Minucci G., Pesaro G., ***Radice A.***, Vacondio R. (2021). Cost-benefit analysis of flood mitigation measures: a case-study employing high-performance hydraulic and damage modelling. Natural Hazards, online first.
5. ***Radice A.***, Ballio F., Longoni L., Menoni S., Molinari D., Papini M. (2021). Discussion of "Recommendations for teaching a successful design-based course: hydraulic structure design" by B.P. Tullis and S.L. Barfuss. Journal of Hydraulic Engineering, 147.
6. Ivanov V., ***Radice A.***, Papini M., Longoni L. (2020). Event-scale pebble mobility observed by RFID tracking in a pre-Alpine stream: a field laboratory. Earth Surface Processes and Landforms, 45, 535-547.
7. Esmaeili Varaki M., ***Radice A.***, Hossini S.S., Fazl Ola R. (2019). Local scour at a complex pier with inclined columns footed on capped piles: effect of the pile arrangement and of the cap thickness and elevation. ISH Journal of Hydraulic Engineering, 10.1080/09715010.2019.1702109.
8. Hosseini Sadabadi S.A., ***Radice A.***, Ballio F. (2019). On reasons of the scatter of literature data for bed-load particle hops. Water Resources Research, 10.1029/2018WR023350.
9. Ballio F., ***Radice A.***, Fathel S.L., Furbish D.J. (2019). Experimental censorship of bed load particle motions, and bias correction of the associated frequency distributions. Journal of Gephysical Research: Earth Surface, 10.1029/2018JF004710.
10. Zanchi B., Zucchi M., ***Radice A.*** (2019). On the relationship between experimental and numerical modelling of gravel-bed channel aggradation. Hydrology, 6, 9, 10.3390/hydrology6010009.
11. Scorzini A.R., ***Radice A.***, Molinari D. (2018). A new tool to estimate inundation depths by spatial interpolation (RAPIDE): design, application and impact on quantitative assessment of flood damages. Water, 10, 1805, 10.3390/w10121805.
12. ***Radice A.***, Zanchi B. (2018). Multicamera, multimethod measurements for hydromorphologic laboratory experiments. Geosciences, 8, 172, 10.3390/geosciences8050172.
13. Ballio F., Pokrajac D., ***Radice A.***, Hosseini Sadabadi S.A. (2018). Lagrangian and Eulerian description of bed-load transport. Journal of Geophysical Research: Earth Surface, 123, 384-408, 10.1002/2016JF004087.
14. ***Radice A.***, Bettiga A., Figueiredo R., Molinari D. (2017). On urban inundation and damage modelling. European Water, 57, 11-17.
15. ***Radice A.***, Lauva O. (2017). Live-bed pier scour in a covered flow. Journal of Hydraulic Engineering, 143, 06017016.
16. ***Radice A.***, Sarkar S., Ballio F. (2017). Image-based Lagrangian particle tracking in bed-load experiments. Journal of Visualized Experiments, 125, e55874, doi:10.3791/55874.
17. ***Radice A.***, Longoni L., Papini M., Brambilla D., Ivanov V.I. (2016). Generation of a design flood-event scenario for a mountain river with intense sediment transport. Water, 8(12), 597.

18. Ballio F., ***Radice A.*** (2015). Fluctuations and time scales for bed-load sediment motion over a smooth bed. International Journal of Sediment Research, 30, 321-327.

19. Campagnol J., ***Radice A.***, Ballio F., Nikora V. (2015). Particle motion and diffusion at weak bed load: accounting for unsteadiness effects of entrainment and disentrainment. Journal of Hydraulic Research, 53, 633-648.

20. Franzetti S., ***Radice A.*** (2015). Discussion of "Semi-analytical model for temporal clear-water scour at prototype piers", by J. Guo. Journal of Hydraulic Research, 53, 408-411.

21. ***Radice A.***, Davari V. (2014). Roughening elements as abutment scour countermeasures. Journal of Hydraulic Engineering, 140, 06014014, doi: 10.1061/(ASCE)HY.1943-7900.0000892.

22. Campagnol J., ***Radice A.***, Nokes R., Bulankina V., Lescova A., Ballio F. (2013). Lagrangian analysis of bed-load sediment motion: database contribution. Journal of Hydraulic Research, 51, 589-596.

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24. ***Radice A.***, Nikora V., Campagnol J., Ballio F. (2013). Active interactions between turbulence and bed load: Conceptual picture and experimental evidence. Water Resources Research, 49, 90-99, doi: 10.1029/2012WR012255.

25. ***Radice A.***, Lauva O. (2012). On flow-altering countermeasures for scour at vertical-wall abutment. Archives of Hydro-Engineering and Environmental Mechanics, 59, 137-153.

26. Campagnol J., ***Radice A.***, Ballio F. (2012). Scale-based statistical analysis of sediment fluxes. Acta Geophysica, 60, 1744-1777, doi: 10.2478/s11600-012-0028-6.

27. ***Radice A.***, Tran C.K. (2012). Study of sediment motion in scour hole of a circular pier. Journal of Hydraulic Research, 50, 44-51.

28. ***Radice A.***, Giorgetti E., Brambilla D., Longoni L., Papini M. (2012). On integrated sediment transport modelling for flash events in mountain environments. Acta Geophysica, 60, 191-213, doi: 10.2478/s11600-011-0063-8.

29. Brambilla D., Longoni L., Papini M., Giorgetti E., ***Radice A.*** (2011). On analysis of sediment sources toward proper characterization of hydro-geological hazard for mountain environments. International Journal of Safety and Security Engineering, 1, 423-437.

30. Franzetti S., ***Radice A.***, Rabitti M., Rossi G. (2011). Hydraulic design and preliminary performance evaluation of countermeasure against debris accumulation and resulting local pier scour on river Po in Italy. Journal of Hydraulic Engineering, 137, 615-620.

31. ***Radice A.*** (2010). Discussion of "Protecting vertical-wall abutments with riprap mattresses", by A.H. Cardoso and C.M.S. Fael. Journal of Hydraulic Engineering, 136, 848-849.

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35. ***Radice A.***, Ballio F., Nikora V. (2009). On statistical properties of bed load sediment concentration. Water Resources Research, 45, W06501, doi:10.1029/2008WR007192.

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38. ***Radice A.***, Porta G., Franzetti S. (2009). Analysis of the time-averaged properties of sediment motion in a local scour process. Water Resources Research, 45, W03401, doi: 10.1029/2007WR006754.

39. Ballio F., Teruzzi A., ***Radice A.*** (2009). Constriction effects in clear-water scour at abutments. Journal of Hydraulic Engineering, 135, 140-145.

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41. ***Radice A.***, Malavasi S., Ballio F. (2008). Sediment kinematics in abutment scour. Journal of Hydraulic Engineering, 134, 146-156.

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43. ***Radice A.***, Malavasi S., Ballio F. (2006). Solid transport measurements through image processing. Experiments in Fluids, 41, 721-734, doi: 10.1007/s00348-006-0195-9.

44. Ballio F., ***Radice A.*** (2003). A non-touch sensor for local scour measurements. Journal of Hydraulic Research, 41, 105-108.

Papers in Italian journals

45. Longoni L., Ivanov V.I., Brambilla D., ***Radice A.***, Papini M. (2016). Analysis of the temporal and spatial scales of soil erosion and transport in a mountain basin. Italian Journal of Engineering Geology and Environment, 16(2), 17-30.

46. Mandelli M., Longoni L., Papini M., Roncoroni F., ***Radice A.*** (2009). Modellazione del trasporto di sedimenti sul bacino del Tartano (Valtellina). GEAM, Anno XLVI, n. 2, 53-63.

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47. ***Radice A.***, Bonacini M., Galli A. Esperimenti di erosione localizzata in live bed: misura dei franamenti del sedimento lungo il paramento di monte della fossa di erosione. XXXVII Convegno di Idraulica e Costruzioni Idrauliche, Reggio Calabria, accepted.

48. Ballio F., Claut D., Hosseini Sadabadi S.A., Marion A., ***Radice A.***, Tait S.J., Sarkar S., Simeone G., Zarrati A.R. (2020). Lagrangian statistics of bed-load particle transport from experiments with a long measurement domain. River Flow 2020, X International Conference on Fluvial Hydraulics, Delft, The Netherlands.

49. Ivanov V.I, Zanchi B., Papini M., ***Radice A.***, Barazzetti L., Zanzi L., Longoni L. (2020). Integration of low-cost technological solutions for flow rate and bedload transport monitoring in the Caldone river, Italy. River Flow 2020, X International Conference on Fluvial Hydraulics, Delft, The Netherlands.

50. Biotto D., Cancelliere G., Corti B., Giovannini A., ***Radice A.***, Rrokaj S. (2020). Inundation hazard analysis using open data from the web: application to the Rio Muaguide in Mozambique. River Flow 2020, X International Conference on Fluvial Hydraulics, Delft, The Netherlands.

51. Hosseini Sadabadi S.A., ***Radice A.***, Ballio F., Zarrati A.R. (2020). Computation of bed-load sediment flux based on Lagrangian and Eulerian quantities. 18th Iranian Hydraulic Conference, Tehran, Iran.

52. ***Radice A.*** (2019). Experimental characterization of bed-load dunes in a closed conduit: size, period, and migration celerity. XXXVIII Congress of IAHR, Panama City, Panama.

53. Crotti G., Serio G., ***Radice A.***, Franzetti S. (2019). Treatment of echo-sounder data for real-time bridge scour monitoring: an application on the Po river, Italy. HydroSenSoft 2019, II International Symposium and Exhibition on Hydro-Environment Sensors and Software, Madrid, Spain.

54. Molinari D., ***Radice A.***, Agosti A., Crippa J., Scorzini A.R., Dazzi S., Bertuzzi F., Vacondio R. (2018). Modellazione dell'evento alluvionale che ha interessato la città di Lodi nel novembre 2002. XXXVI Convegno di Idraulica e Costruzioni Idrauliche, Ancona.

55. ***Radice A.***, Unigarro Villota S. (2018). Propagation of aggrading sediment fronts in a laboratory flume. River Flow 2018, IX International Conference on Fluvial Hydraulics, Lyon, France.

56. Ballio F., Fathel S.L., Furbish D.J., ***Radice A.*** (2018). On experimental censorship of particle hops in bed-load transport. River Flow 2018, IX International Conference on Fluvial Hydraulics, Lyon, France.

57. ***Radice A.***, Albergante A., Ballio F., Franzetti S., Monofy A. (2018). Bridge pier scour in live-bed: from a case-study prototype to an investigation of the process mechanisms. Invited keynote paper, ISHMMT 2018, 2nd Int. Symposium on Hydraulic Modeling and Measuring Technology, Nanjing, China.

58. ***Radice A.***, Bettiga A., Figueiredo R., Molinari D. (2017). On urban inundation and damage modelling. EWRA 2017, X World Congress on Water Resources and Environment, Athens, Greece.

59. ***Radice A.***, Aleixo R., Hosseini Sadabadi S.A., Sarkar S. (2017). On image grabbing and processing for measurement of geophysical flows. HydroSenSoft 2017, International Symposium and Exhibition on Hydro-Environment Sensors and Software, Madrid, Spain.

60. Longoni L., Ivanov V., Brambilla D., Papini M., Brebbia C., Teanini E., ***Radice A.*** (2017). Application of multiple surveying techniques at a to-be-gauged river section. HydroSenSoft 2017, International Symposium and Exhibition on Hydro-Environment Sensors and Software, Madrid, Spain.

61. Lauva O., ***Radice A.*** (2016). An experimental study of live-bed scour at circular pier in covered flow. ICSE 2016, VIII International Conference on Scour and Erosion, Oxford, UK.

62. Hosseini Sadabadi S.A., ***Radice A.***, Ballio F. (2016). Post-processing of particle tracking data for phenomenological depiction of weak bed-load sediment transport. River Flow 2016, VIII International Conference on Fluvial Hydraulics, St. Louis, US.

63. Hosseini Sadabadi S.A., ***Radice A.***, Ballio F. (2016). An analysis of entrainment and deposition rate fluctuations in weak bed load transport. P.M. Rowiński and A. Marion (eds.), Hydrodynamic and mass transport at freshwater aquatic interfaces, GeoPlanet: Earth and Planetary Sciences, ISBN: 978-3-319-27749-3, Springer, 333-342.

64. Ballio F., Brambilla D., Longoni L., Melillo V., Papini M., ***Radice A.*** (2014). Can potentialities of hydro-geologic modelling be useful to environmental technologists? I2SM 2014, IV International Symposium on Sediment Management, Ferrara, Italy.

65. ***Radice A.***, Elsayed S.M. (2014). Hydro-morphologic modelling for different calamitous scenarios in a mountain stream. River Flow 2014, VII International Conference on Fluvial Hydraulics, Lausanne, Switzerland.

66. Ballio F., Campagnol J., Nikora V., ***Radice A.*** (2013). Diffusive properties of bed load moving sediments at short time scales. XXXV Congress of IAHR, Chengdu, China.

67. ***Radice A.***, Rosatti G. (2012). Sulla modellazione idraulico-morfologica dei corsi d'acqua: il torrente Mallero e la propagazione dell'incertezza legata all'alimentazione solida. XXXIII Convegno di Idraulica e Costruzioni Idrauliche, Brescia.

68. Campagnol J., ***Radice A.***, Ballio F. (2012). Insight on how bed configuration affects properties of bed load motion. ICSE 2012, VI International Conference on Scour and Erosion, Paris, France.

69. ***Radice A.***, Nokes R., Ballio F. (2010). Preliminary results from an application of PTV to bed-load grains. River Flow 2010, V International Conference on Fluvial Hydraulics, Braunschweig, Germany.

70. Ballio F., Brambilla D., Giorgetti E., Longoni L., Papini M., ***Radice A.*** (2010). Evaluation of sediment yield from valley slopes: a case study. Debris Flow 2010, Milan, Italy.

71. ***Radice A.***, Ballio F. (2010). Coherent particle motion in bed load. I Congress of the European Section of IAHR, Edinburgh, UK.

72. ***Radice A.***, Ballio F., Malavasi S. (2009). Applying image analysis to measure the kinematics of the solid phase in different phenomena. Invited paper, XXXIII Congress of IAHR, Vancouver, Canada.

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74. Ballio F., Carravetta A., Cozzolino L., Della Morte R., ***Radice A.*** (2008). Sediment erosion under non-uniform flow conditions. River Flow 2008, IV International Conference on Fluvial Hydraulics, Cesme-Izmir, Turkey.

75. Ballio F., Franzetti S., ***Radice A.*** (2007). Experimental observations on sediment motion under weak one-dimensional bed load. XXXII Congress of IAHR, Venice, Italy.

76. ***Radice A.***, Ballio F., Armenio V., Franzetti S. (2006). Scour development and sediment motion at rectangular and trapezoidal abutments. ICSE 2006, III International Conference on Scour and Erosion, Amsterdam, The Netherlands.

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78. ***Radice A.***, Malavasi S., Ballio F. (2006). Time evolution of erosion depth and sediment motion for abutment scour in a pressure duct. River Flow 2006, III International Conference on Fluvial Hydraulics, Lisbon, Portugal.

79. Berzi D., La Rosa L., Malavasi S., ***Radice A.*** (2006). Fluctuations in surface granular flow via a PIV - edge detection technique. River Flow 2006, III International Conference on Fluvial Hydraulics, Lisbon, Portugal.

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81. Ballio F., ***Radice A.***, Franzetti S. (2004). An experimental study of live-bed scour at bridge abutments. ICSE 2004, II International Conference on Scour and Erosion, Singapore.

82. ***Radice A.***, Teruzzi A., Ballio F. (2004). Misure di erosione localizzata in live bed tramite un sensore ottico. XXIX Convegno di Idraulica e Costruzioni Idrauliche, Trento.

83. Malavasi S., ***Radice A.***, Ballio F. (2004). Study of sediment motion in a local scour hole through an image processing technique. River Flow 2004, II International Conference on Fluvial Hydraulics, Naples, Italy.

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Other

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88. ***Radice A.*** (2005). Cinematica dei sedimenti in un fenomeno erosivo localizzato. Ph.D. thesis, Politecnico di Milano.

89. ***Radice A.*** (2000). Fenomeni erosivi in corrispondenza delle spalle dei ponti. M.Sc. thesis, Politecnico di Milano.