

Selected recent VAW publications on hydropower-related issues, as of May 2, 2017

- Auel, C.; Boes, R. (2017). Sedimentumleitstollen – eine nachhaltige Massnahme gegen Staauraumverlandung ('Sediment bypass tunnels – a sustainable strategy to counter reservoir sedimentation'). *WasserWirtschaft* 107(4): 42-47.
- Albayrak, I.; Kriewitz, R.C.; Hager, W.H.; Boes, R.M. (2017). An experimental investigation on louvers and angled bar racks. *Jl. of Hydr. Research*, 17 pages, <http://dx.doi.org/10.1080/00221686.2017.1289265>.
- Auel, C, Albayrak, I., Sumi, T., Boes, R.M. (2017a). Sediment transport in high-speed flows over a fixed bed: 1. Particle dynamics. *Earth Surface Processes and Landforms*, <https://doi.org/10.1002/esp.4128>.
- Auel, C, Albayrak, I., Sumi, T., Boes, R.M. (2017b). Sediment transport in high-speed flows over a fixed bed: 2. Particle impacts and abrasion prediction. *Earth Surface Processes and Landforms*, <https://doi.org/10.1002/esp.4132>.
- Paschmann, C.; Fernandes, J.N.; Vetsch, D.F.; Boes, R.M. (2017). Assessment of flow field and sediment flux at alpine desanding facilities. *Intl. Jl. of River Basin Management*, 9 pages, <http://dx.doi.org/10.1080/15715124.2017.1280814>.
- Volz, C., Pierre-J., F., Vetsch, D.F., Hager, W.H., Boes, R.M. (2017). Numerical embankment breach modelling including seepage flow effects. *Jl. of Hydr. Research*, 12 pages, <http://dx.doi.org/10.1080/00221686.2016.1276104>.
- Auel, C, Boes, R.M., Sumi, T. (2016). Invert abrasion prediction at Asahi sediment bypass tunnel, Japan. *Journal of Applied Water Engineering and Research*, 14 pages, <http://dx.doi.org/10.1080/23249676.2016.1265470>.
- Fuchs, H., Evers, F.M., Boes, R.M. (2016). Impulse waves in reservoirs: recent research at VAW. *Proc. Hydro 2016 Conference*, Montreux, Switzerland: Paper 05.07.
- Lüke, E., Vetsch, D.F., Boes, R.M. (2016). Weir control for optimal peak discharge capping of floods. *Proc. Hydro 2016 Conference*, Montreux, Switzerland: Paper 07.03.
- Beck, C., Lutz, N., Lais, A., Vetsch, D., Boes, R.B. (2016). Patrind Hydropower Project, Pakistan Physical model investigations on the optimization of the sediment management concept. *Proc. Hydro 2016 Conference*, Montreux, Switzerland: Paper 26.08.
- Fernandes, J.N., Boes, R.M., Titzschkau, M., Hammer, A., Haun, S. & Schletterer, M. (2016). Suspended sediment concentrations and turbine wear during the drawdown of two Alpine reservoirs. *Proc. Hydro 2016 Conference*, Montreux, Switzerland: Paper 235.

- Vetsch, D.F.; Boes, R.M. (2016). Vereinfachte Modellierung des progressiven Bruchs bei kleinen Erdschüttdämmen ('Simplified modelling of progressive dam breaching at small embankment dams'). *WasserWirtschaft* 106(6): 140-143.
- Schalko, I.; Arnold, F.; Demarchi, L.; Hiller, P.; Boes, R. (2016). Einfluss der Wasserführung auf das Erscheinungsbild und die Akustik von Wasserfällen ('Effect of flow rate on appearance and acoustics of waterfalls'). *Wasser, Energie, Luft* 108(3): 207-219.
- Felix, D.; Abgottspon, A.; Albayrak, I.; Boes, R.M. (2016). Hydro-abrasive erosion on coated Pelton runners: Partial calibration of the IEC model based on measurements in HPP Fieschertal. *IOP Conf. Series: Earth Environ. Sci.* 49, [122009](#).
- Felix D., Albayrak I., Abgottspon A., Boes R.M. (2016). Hydro-abrasive erosion of hydraulic turbines caused by sediment – a century of research and development. *IOP Conf. Series: Earth Environ. Sci.* 49, [122001](#).
- Felix, D.; Albayrak, I.; Abgottspon, A.; Boes, R.M. (2016). Optimization of hydropower plants with respect to fine sediment focusing on turbine switch-offs during floods. *IOP Conf. Series: Earth Environ. Sci.* 49, [122011](#).
- Felix, D.; Albayrak, I.; Abgottspon, A.; Boes, R.M. (2016). Real-time measurements of suspended sediment concentration and particle size using five techniques. *IOP Conf. Series: Earth Environ. Sci.* 49, [122006](#)
- Felix, D.; Albayrak, I.; Abgottspon, A.; Boes, R.M. (2016). Suspended sediment measurements and calculation of the particle load at HPP Fieschertal. *IOP Conf. Series: Earth Environ. Sci.* 49, [122007](#).
- Felix, D.; Albayrak, I.; Abgottspon, A.; Boes, R.M. (2016). Hydro-abrasive erosion of hydraulic turbines caused by sediment – a century of research and development. *IOP Conf. Series: Earth Environ. Sci.* 49, [122001](#).
- Gruber P., Felix D., Storti G., Lattuada M., Fleckenstein P., Deschwanden F. (2016). Acoustic measuring techniques for suspended sediment. *IOP Conf. Series: Earth Environ. Sci.* 49, [122003](#).
- Abgottspon A., Staubli T., Felix D. (2016). Erosion of Pelton buckets and changes in turbine efficiency measured in the HPP Fieschertal. *IOP Conf. Series: Earth Environ. Sci.* 49, [122008](#).
- Boes, R.; Albayrak, I.; Kriewitz, C.R.; Peter, A. (2016). Fischschutz und Fischabstieg mittels vertikaler Leiteichen-Bypass-Systeme: Rechenverluste und Leiteffizienz ('Fish protection and downstream fish migration by means of guidance systems with vertical bars: head loss and bypass efficiency'). *WasserWirtschaft* 106(7/8): 29-35.

Felix, D., Albayrak, I., Boes, R.M. (2016). Continuous measurement of suspended sediment concentration: discussion of four techniques. *Measurement* 89: 44-47.