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Publications

Peer-Reviewed (SCOPUS h-index: **11**; **332** citations by **212** documents)

- **Poggi, V.**, Edwards, B. and Fäh, D., 2018. *Development of hazard- and amplification-consistent elastic design spectra*. Special Issue “*Seismic ground response and site effects: From theoretical and experimental studies to design codes*”, Soil Dyn. and Earth. Eng, doi: 10.1016/j.soildyn.2018.03.011.
- **Poggi, V.**, Durrheim, R., Mavonga Tuluka, G., Weatherill, G., Gee, R., Pagani, M., Nyblade, A., Delvaux, D., 2017. *Assessing Seismic Hazard of the East African Rift: a pilot study from GEM and AfricaArray*. Bull. of Earth. Eng. Volume 15, Issue 11, 4499–4529.
- Foti, S., Hollender, S., Garofalo, F., Albarello, D., Asten, M., Bard, P.-Y., Comina, C., Cornou, C., Cox, B., Di Giulio, G., Forbriger, T., Hayashi, K., Lunedei, E., Martin, A., Mercerat, D., Ohrnberger, M., **Poggi, V.**, Renalier, F., Sicilia, D., Socco, L.V., 2017. *Guidelines for the good practice of surface wave analysis: a product of the InterPACIFIC project*. Bull. of Earth. Eng. doi: 10.1007/s10518-017-0206-7.
- **Poggi, V.**, Burjanek, J., Michel, C., and Fäh, D., 2017. *Seismic site-response characterization of high-velocity sites using advanced geophysical techniques: application to the NAGRA-Net*. Geophys. J. Int. Volume 210, Issue 2, 645-659.
- Adly, A., **Poggi, V.**, Fäh, D., Hassoupa, A., Omranb, A., 2017. *Combining active and passive seismic methods for the characterization of urban sites in Cairo, Egypt*. Geophys. J. Int. Volume 210, Issue 1, 428-442.
- **Poggi, V.**, Edwards, B. and Fäh, D., 2016. *A comparative analysis of site-specific response spectral amplification models*. Physics and Chemistry of the Earth. Special Issue, Volume 98, 16-26.

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- Manea, E.-F., Michel, C., **Poggi, V.**, Fäh, D., Radulian, M. and Balan F., 2016. *Improving the shear wave velocity structure beneath Bucharest (Romania) using ambient vibration*. Geophys. J. Int., Volume 207, Issue 2, 848-861.
- Garofalo, F., Foti, S, Hollender, F., Bard, P.-Y., Cornou, C., Cox, B.R., Ohrnberger, M., Sicilia, D., Asten, M., Di Giulio, G., Forbriger, T., Guillier, B., Hayashi, K., Martin, A., Matsushima, S., Mercerat, D., **Poggi, V.** and Yamanaka, H. 2016. *InterPACIFIC project: Comparison of invasive and non-invasive methods for seismic site characterization. Part I: Intra-comparison of surface wave methods. Soil Dynamics and Earthquake Engineering*. Volume 82, 222-240.
- Dal Moro, G., Keller, L. and **Poggi, V.**. 2015. *A comprehensive seismic characterization via multi-component analysis of active and passive data*. First Break, Volume 33, Issue 9, 45-53.
- **Poggi, V.**, Ermert, L., Burjanek, J., Michel, C. and Fäh, D., 2015. *Modal analysis of 2-D sedimentary basin from frequency domain decomposition of ambient vibration array recordings*. Geophys. J. Int., Volume 200, Issue 3, 615-626.
- Ermert, L., **Poggi, V.**, Burjanek, J. and Fäh, D., 2014. *Fundamental and higher two-dimensional resonance modes of an Alpine valley*. Geophys. J. Int., Volume 198, Issue 2, 795-811.
- Michel C., Edwards B., **Poggi, V.**, Burjanek J., Roten D., Cauzzi C. and Fäh D., 2014, *Assessment of site effects in Alpine regions through systematic site characterization of seismic stations*. Bull. Seism. Soc. Am., Volume 104, Issue 6, 2809-2826.
- **Poggi, V.**, Edwards, B. and Fäh, D., 2013. *Reference S-wave velocity profile and attenuation models for ground-motion prediction equations: application to Japan*. Bull. Seism. Soc. Am., Volume 103, Issue 5, 2645-2656.
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- Edwards, B., **Poggi, V.** and D. Fäh, 2011. *A predictive equation for the vertical to horizontal ratio of ground-motion at rock sites based on shear wave velocity profiles: application to Japan and Switzerland*. Bull. Seim. Soc. Am., Volume 101, Issue 6, 1998-3019.
- **Poggi, V.**, Edwards, B. and Fäh, D. 2011. *Derivation of a reference shear-wave velocity model from empirical site amplification*. Bull. Seim. Soc. Am., Volume 101, Issue 1, 258-274.
- Burjanek, J., Gassner-Stamm, G., **Poggi, V.**, Moore, J. R. and Fäh, D. 2010. *Ambient vibration analysis of an unstable mountain slope*. Geophys. J. Int., Volume 180, Issue 2, 820-828.
- **Poggi, V.** and Fäh, D., 2010. *Estimating Rayleigh wave particle motion from three-component array analysis of ambient vibrations*. Geophys. J. Int., Volume 180, Issue 1, 251-267.

Book Chapters / Volume Contributions

- Bard, P.-Y., Cadet, H., Endrun, B., Hobiger, M., Renalier, F., Theodulidis, N., Ohrnberger, M., Fäh, D., Sabetta, F., Teves-Costa, P., Duval, A.-M., Cornou, C., Guillier, B., Wathelet, M., Savvaidis, A., Khler, A., Burjanek, J., **Poggi, V.**, Gassner-Stamm, G., Havenith, H. B., Hailemichael, S., Almeida, J., Rodrigues, I., Veludo, I., Lacave, C., Thomassin, S. and Kristekova, M. 2010. *From non-invasive site characterization to site amplification: recent advances in the use of ambient vibration measurements*. In: M. Garevski, A. Ansal (eds.), Earthquake Engineering in Europe. Geotechnical, Geological, and Earthquake Engineering, Springer, Volume 17, Part 2, 105-123.

Scientific Reports, Project Deliverables (Selected)

- **Poggi, V.**, Durrheim, R., Mavonga Tuluka, G., Pagani, M., Weatherill, G., Garcia, J. and Nyblade, A., 2016. *A Seismic Hazard Model for Sub-Saharan Africa*. GEM Technical Report, Version 1.0
- **Poggi, V.** and D. Fäh, 2015. *A proposal for horizontal and vertical elastic design spectra. Input for the new Swiss code for dams*. Project report SED/BFE/R/01/06072015.
- **Poggi, V.** and D. Fäh, 2015. *Guidelines and strategies for implementation of seismic site response in risk tools, Part I: Current state-of-the-art and microzonation best practice*. Scientific report SED/BAFU/R/01/20150630.
- **Poggi, V.** and D. Fäh, 2015. *Guidelines and strategies for implementation of seismic site response in risk tools, Part II: SED dataset overview and proposals for implementation*. Scientific report SED/BAFU/R/02/20150630.
- **Poggi, V.** and D. Fäh, 2014. *NAGRA-Net Site Characterization*. Project report SED/NAGRA/R/20141226.
- **Poggi, V.**, Michel, C. and D. Fäh, 2014. *Mont Terri Laboratory - Report on Site Characterization (MTI01/02/03)*. Technical report SED/ROCKLAB/R/20141211.
- **Poggi, V.**, J. Burjanek, B. Edwards and D. Fäh, 2013. *SED Extended Velocity Profiles at Rock Sites*. Technical report SED/PRP/R/039/20130822.
- **Poggi, V.** and D. Fäh, 2013. *Calibration of a reference profile for host-to-target correction of ground motion models*. Technical report SED/PRP/R/40/20131007.
- **Poggi, V.**, Edwards, B. and D. Fäh, 2012. *Verification of response spectral amplification functions from the SHARE project*. Scientific report SED/SHARE/R/001/20121114.
- **Poggi, V.**, B. Edwards and D. Fäh, 2012. *Empirical estimation of kappa from rock velocity profiles at the Swiss NPP sites*. Technical report SED/PRP/R/036/20121217.

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- Fähr D., **Poggi, V.**, Marano S., Michel C., Burjanek J., Bard P-Y., Cornou C., Wathélet M., Renalier F., Hobiger M., Cadet H., Ohrnberger M., Endrun B., Savvaidis A., Theodulidis N., Kristekova M., Hailemikael S. and Sabetta F., 2010. *Guidelines for the implementation of ambient vibration array techniques: measurement, processing and interpretation*. NERIES deliverable JRA4 Task D9.
- Edwards, B., D. Fähr, B. Allmann and **Poggi, V.**, 2010. *Stochastic ground motion model for Switzerland*. Project report SED/PRP/R/006/20100526.
- Fähr, D., Fritsche, S., **Poggi, V.**, Gassner-Stamm, G., Kästli, P., Burjanek, J., Zweifel, P., Barman, S., Clinton, J., Keller, L., Renault, P., and Heuberger, S., 2009, *Determination of Site Information for Seismic Stations in Switzerland*, Swiss Seismological Service. Technical report SED/PRP/R/004/20090831.
- Fähr, D., Wathélet, M., Kristekova, M., Havenith, H.-B., Endrun, B., Stamm, G., **Poggi, V.**, Burjanek, J., and Cornou, C., 2009, *Using ellipticity information for site characterization*. NERIES deliberable JRA4 Task B2., 54 pp.
- Stamm, G., Fähr, D., **Poggi, V.** and Löw, I., 2009. *H/V measurements in the area of Visp and St. Niklaus*. Technical report, COGEAR Module 3, Task 3.2, Technical report SED/COGEAR/R/001/20090301.

Conference Papers / Proceedings

- Garcia, J., Pagani, M., Weatherill, G., **Poggi, V.** and Rodriguez L. 2017. *Building a open seismic hazard model for South America: the SARA-PSHA model*. 16th WCEE, Santiago, Chile.
- Pagani, M., Garcia, J., **Poggi, V.** and Weatherill, G., 2016. *Probabilistic seismic hazard analysis: issues and challenges from the GEM perspective*. Proceedings of the 5th IASPEI/IAEE International Symposium: Effects of Surface Geology on Seismic Motion (ESG), Taipei, Taiwan
- Fähr, D., Burjanek, J., Hobiger, M., Michel, C., Maranò, S., **Poggi, V.**, Pilz, M., Kleinbrod, U., Edwards, B., Imperatori W. and Roten, D., 2016. *Assessment of the complex seismic response of geological structures*, Proceedings of the 5th IASPEI/IAEE International Symposium: Effects of Surface Geology on Seismic Motion (ESG), Taipei, Taiwan

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- Michel, C., Edwards, B., **Poggi, V.**, Burjanek, J., Cauzzi, C., and Fäh, D., 2014. *Site Effects in Alpine Regions from Systematic Site Characterization at Strong Motion Stations*. 2ECEES, Istanbul, Turkey.
- Wiemer, S., Hiemer, S., Woessner, J., Danciu, L., Fäh, D., Edwards, B., Cauzzi, C., Michel, C., **Poggi, V.**, Kissling, E., Kaestli, P. and Giardini, D. 2014. *The 2014 update of the Swiss national seismic hazard model - key science issues*. 2ECEES, Istanbul, Turkey.
- Michel, C., Edwards, B., **Poggi, V.**, and Fäh, D., 2013. *Ground motion amplification in alpine regions: new insights from the Swiss Strong Motion Network*. VEESD 2013, Vienna, Austria.
- **Poggi, V.**, Edwards, B. and Fäh, D., 2012. *The quarter-wavelength average velocity: a review of some past and recent application developments*. 15th WCEE. Lisbon, Portugal.
- Burjanek, J., Fäh, D., Michel, C., Dalguer, L., Baumann, C., Gassner-Stamm, G., **Poggi, V.**, Roten, D., Laue, J., Marin, A., Lestuzzi, P. and Karbassi, A., 2012, *Earthquake Damage Scenario in Visp (Switzerland): From Active Fault to Building Damage*. 15th WCEE. Lisbon, Portugal.
- **Poggi, V.** and Fäh, D., 2011. *T-F-K Analysis of Surface Waves Using the Continuous Wavelet Transform*. ESG 2011. Santa Barbara, California.
- **Poggi, V.**, Edwards, B., and Fäh, D., 2011. *Characterizing the Vertical to Horizontal Ratio of Ground-Motion in Soft Sediment Sites*. ESG 2011. Santa Barbara, California.
- Edwards, B., **Poggi, V.**, and Fäh, D., 2011. *A Predictive Equation for the Vertical to Horizontal Ratio of Ground-Motion at Rock Sites Based on Shear Wave Velocity Profiles*. ESG 2011. Santa Barbara, California.
- Burjanek, J., **Poggi, V.** and Fäh, D., 2011. *Estimation of Local Site Effects in the Upper Valais (Switzerland)*. ESG 2011. Santa Barbara, California.
- Cauzzi, C., Faccioli, E., **Poggi, V.**, Fäh, D. and Edwards, B., 2011. *Prediction of Displacement Response Spectra for Low-to-Moderate Seismicity Regions and $F < 1\text{Hz}$. Merging the Swiss Earthquake Waveform Archive with a Global Fully Digital Strong Motion Dataset*. ESG 2011. Santa Barbara, California.
- Michel, C., Fäh, D., **Poggi, V.**, Burjanek, J., and Cauzzi, C., 2011. *Site Characterization Strategy for the Swiss Strong Motion Network*. ESG 2011. Santa Barbara, California.

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Oral Presentations and Posters (Not as proceedings)

- **Poggi, V.**, Pagani, M., Weatherill, G., Garcia, J., Durrheim, R., Mavonga, G. and Nyblade, A. *A new PSHA model for Sub-Saharan Africa using OpenQuake and the GEM Modeling Toolkits*. 35th General assembly of the European Seismological Commission (ESC), Trieste (Italy), 4-10 September 2016.
- **Poggi, V.**, Pagani, M., Weatherill, G., Garcia, J., Durrheim, R., Mavonga, G. and Nyblade, A. *Assessing Earthquake Hazard in Sub-Saharan Africa*. GEM-USAID SSAHARA Workshop, Addis Ababa, Ethiopia, 27-30 June 2016.
- **Poggi, V.**, Pagani, M., Weatherill, G. and Garcia, J. *Hazard models, datasets and tools developed within the Global Earthquake Model initiative*. AfricaArray Workshop, Johannesburg, South Africa. 17-23 January 2016.
- **Poggi, V.**, Edwards, B., Dal Moro, G. Keller, L. and Fähr, D. *Seismic response analysis of NAGRA-Net stations using advanced geophysical techniques*. European Geosciences Union General Assembly (EGU), Vienna (Austria), 12-17 April 2015.
- **Poggi, V.**, Edwards, B., Fähr, D. *A comparative analysis of SHARE and SED response spectral amplification models*. 2nd European Conference on Earthquake Engineering and Seismology (2ECEES), Istanbul (Turkey), 24-29 August 2014.
- **Poggi, V.**, Ermert, L., Michel, C., Fähr, D. *Modal analysis of 2-D sedimentary basin from frequency domain decomposition of ambient vibration array recordings*. European Geosciences Union General Assembly (EGU), Vienna (Austria), 27 April - 2 May 2014.
- **Poggi, V.**, Edwards, B., Fähr, D. *A Kappa Model to Predict the Attenuation Characteristics of Gradient-Like Velocity Profiles*. Annual meeting of the Seismological Society of America (SSA), Salt Lake City (Utah), 17-19 April 2013.
- **Poggi, V.**, Edwards, B., Fähr, D. *Combined estimation of kappa and shear-wave velocity profile of the Japanese rock reference*. European Geosciences Union General Assembly (EGU), Vienna (Austria), 7-12 April 2013.

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- Fähr, D., **Poggi, V.**, Michel, C., Edwards, B., Roten, D., Burjanek, J., Marano, S., Cauzzi, C. *Developments in local hazard assessment in alpine environments*. IAHS-IAPSO-IASPEI Joint Assembly, Gothenburg, Sweden, 22-26 July 2013.
- **Poggi, V.**, Edwards, B., Fähr, D., *Effect of surface average s-wave velocity on the V/H ratio of the ground motion: comparing rock and soft sediment sites*, 33th General assembly of the European Seismological Commission (ESC), Moscow (Russia), 6-10 September 2012.
- **Poggi, V.**, Edwards, B., Fähr, D., *Derivation of a Reference Bedrock Model for Switzerland from Empirical Site Amplification and Direct Measurements*, 32th General assembly of the European Seismological Commission (ESC), Montpellier (France), 6-10 September 2010.
- **Poggi, V.**, Fähr, D., Burjanek, J., Giardini, D., *The use of Rayleigh wave ellipticity for site specific hazard assessment and microzonation with application to the city of Luzern, Switzerland*, 32th General assembly of the European Seismological Commission (ESC), Montpellier (France), 6-10 September 2010.
- **Poggi, V.**, Fähr, D., *Estimating Rayleigh wave particle motion from three-component array analysis of ambient vibrations and its application to seismic local response analysis*. Annual meeting of the Seismological Society of America (SSA), Monterey (California), 8-10 April 2009.
- **Poggi, V.**, Burjanek, J., Fähr, D., *A comparison study between site amplification estimation methods in Visp*. COGEAR 3rd annual meeting, Visp (Switzerland), January 2011.
- **Poggi, V.**, Burjanek, J., Fähr, D., *The use of Rayleigh wave ellipticity for seismic response modeling of sedimentary basins: application to the town of Visp*. COGEAR 2nd annual meeting, Visp (Switzerland), January 2010.
- **Poggi, V.**, Fähr, D., *Assessing the 1d velocity structure of Visp using three components hv-fk analysis of ambient vibration*. COGEAR 1st annual meeting, Visp (Switzerland), January 2009.

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- **Poggi, V.**, Fäh, D., *Rayleigh wave particle motion estimation through three-component array analysis of ambient vibrations*, 31th General assembly of the European Seismological Commission (ESC), Crete (Greece), 7-12 September 2008.