

LIST OF NEWEST PUBLICATION – Journal Articles (ISI listed)

The following material for the C19 webpages has been collected by PhD students and Prof. Biljana Abolmasov from University of Belgrade, Faculty of Mining and Geology (Serbia) as a Chair of the C19.

1. Abellán A., Oppikofer T., Jaboyedoff M., Rosser N., Lim M., Lato M., Terrestrial laser scanning of rock slope instabilities, *Earth surface processes and landforms* (2014) Volume 39, Issue 1 p. 80–97, DOI: 10.1002/esp.3493
2. Abellan A., Vilaplana J. M., Calvet J., Garcia-Selles D., Asensio E., Rockfall monitoring by Terrestrial Laser Scanning – case study of the basaltic rock face at Castellfollit de la Roca (Catalonia, Spain), *Nat. Hazards Earth Syst. Sci.*, 11 (2011) 829–841, doi:10.5194/nhess-11-829-2011
3. Abellán A., Calvet J., Vilaplana H. M., Blanchard J., Detection and spatial prediction of rockfalls by means of terrestrial laser scanner monitoring, *Geomorphology* 119 (2010) 162–171, doi:10.1016/j.geomorph.2010.03.016
4. Abellan A., Jaboyedoff M., Oppikofer T., Vilaplana J. M., Detection of millimetric deformation using a terrestrial laserscanner: experiment and application to a rockfall event, *Nat. Hazards Earth Syst. Sci.*, 9, 365–372, 2009, www.nat-hazards-earth-syst-sci.net/9/365/2009/
5. Abellán A., Vilaplana J.M., Martínez J., Application of a long-range Terrestrial Laser Scanner to a detailed rockfall study at Vall de Núria (Eastern Pyrenees, Spain), *Engineering Geology* 88 (2006) 136–148, doi:10.1016/j.enggeo.2006.09.012
6. Armesto J., Ordóñez C., Alejano L., Arias P., Terrestrial laser scanning used to determine the geometry of a granite boulder for stability analysis purposes, *Geomorphology* 106 (2009) 271–277, doi:10.1016/j.geomorph.2008.11.005
7. Dunning S.A., Massey C.I., Rosser N.J., Structural and geomorphological features of landslides in the Bhutan Himalaya derived from Terrestrial Laser Scanning, *Geomorphology* 103 (2009) 17–29, doi:10.1016/j.geomorph.2008.04.013
8. Fanti R., Gigli G., Lombardi L., Tapete D., Canuti P., Terrestrial laser scanning for rockfall stability analysis in the cultural heritage site of Pitigliano (Italy). *Landslides* 10 (4) (2013) 409–420, DOI 10.1007/s10346-012-0329-5
9. Fekete S., Diederichs M., Integration of three-dimensional laser scanning with discontinuum modelling for stability analysis of tunnels in blocky rockmasses, *International Journal of Rock Mechanics & Mining Sciences* 57 (2013) 11–23, <http://dx.doi.org/10.1016/j.ijrmms.2012.08.003>
10. Fekete S., Diederichs M., Lato M., Geotechnical and operational applications for 3-dimensional laser scanning in drill and blast tunnels, *Tunnelling and Underground Space Technology* 25 (2010) 614–628, doi:10.1016/j.tust.2010.04.008
11. Feng Q., Fardin N., Jing L., Stephansson O., A New Method for In-situ Non-contact Roughness Measurement of Large Rock Fracture Surfaces, *Rock Mech. Rock Engng.* (2003) 36 (1), 3–25, DOI 10.1007/s00603-002-0033-1
12. Garcia-Selle D., Falivene O., Arbue P., Gratacos O., Tavani S., Munoz J.A., Supervised identification and reconstruction of near-planar geological surfaces from terrestrial laser scanning, *Computers & Geosciences* 37 (2011) 1584–1594, doi:10.1016/j.cageo.2011.03.007

13. Gigli G., Morelli S., Fornera S., Casagli N., Terrestrial laser scanner and geomechanical surveys for the rapid evaluation of rock fall susceptibility scenarios, *Landslides* 11 (2014) 1–14, DOI 10.1007/s10346-012-0374-0
14. Gigli G, Casagli N., Semi-automatic extraction of rock mass structural data from high resolution LIDAR point clouds, *International Journal of Rock Mechanics & Mining Sciences* 48 (2011) 187–198, doi:10.1016/j.ijrmms.2010.11.009
15. Haneberg W.C., Using close range terrestrial digital photogrammetry for 3-D rock slope modeling and discontinuity mapping in the United States, *Bull Eng Geol Environ* (2008) 67:457–469, DOI 10.1007/s10064-008-0157-y
16. Heckmann T., Bimböse M., Krautblatter M., Haas F., Becht M., Morche D., From geotechnical analysis to quantification and modelling using LiDAR data: a study on rockfall in the Reintal catchment, Bavarian Alps, Germany, *Earth surface processes and landforms* 37 (2012) 119–133, DOI: 10.1002/esp.2250
17. Jaboyedoff M., Oppikofer T., Abellan A., Derron M., Loye A., Metzger R., Pedrazzini A., Use of LIDAR in landslide investigations: a review, *Nat Hazards* (2012) 61:5–28, DOI 10.1007/s11069-010-9634-2
18. Khoshelham K., Altundag D., Ngan-Tillard D., Menenti M., Influence of range measurement noise on roughness characterization of rock surfaces using terrestrial laser scanning, *International Journal of Rock Mechanics & Mining Sciences* 48 (2011) 1215–1223, doi:10.1016/j.ijrmms.2011.09.007
19. Khoshelham K., Altundag D., wavelet de-noising of terrestrial laser scanner data for the characterization of rock surface roughness, *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Vol. 38, Part II, (2010) 373-378
20. Lan H., C. Derek Martin, Zhou C, Lim C.H., Rockfall hazard analysis using LiDAR and spatial modeling, *Geomorphology* 118 (2010) 213–223, doi:10.1016/j.geomorph.2010.01.002
21. Lato M., J.Kemeny, Harrap R.M., Bevan G., Rock bench: Establishing a common repository and standards for assessing rockmass characteristics using LiDAR and photogrammetry, *Computers & Geosciences* (2013) 106-114, <http://dx.doi.org/10.1016/j.cageo.2012.06.014>
22. Lato M, Vogé M., Automated mapping of rock discontinuities in 3D lidar and photogrammetry models, *International Journal of Rock Mechanics & Mining Sciences* 54 (2012) 150–158, <http://dx.doi.org/10.1016/j.ijrmms.2012.06.003>
23. Lato M., et al., Rock bench: Establishing a common repository and standards for assessing rockmass characteristics using LiDAR and photogrammetry. *Computers & Geosciences* (2012), <http://dx.doi.org/10.1016/j.cageo.2012.06.014>
24. Lato M., Diederichs M., Hutchinson J., Harrap R., Optimization of LiDAR scanning and processing for automated structural evaluation of discontinuities in rockmasses, *International Journal of Rock Mechanics & Mining Sciences* 46 (2009) 194– 199, doi:10.1016/j.ijrmms.2008.04.007
25. Lato M., Hutchinson J., Diederichs M., Ball D., Harrap R., Engineering monitoring of rockfall hazards along transportation corridors: using mobile terrestrial LiDAR, *Nat. Hazards Earth Syst. Sci.*, 9 (2009) 935–946, www.nat-hazards-earth-syst-sci.net/9/935/2009/
26. Mah J., Samson C., McKinnon S., Thibodeau D., 3D laser imaging for surface roughness analysis, *International Journal of Rock Mechanics & Mining Sciences* 58 (2013) 111-117, <http://dx.doi.org/10.1016/j.ijrmms.2012.08.001>

27. Mah J., Samson C, McKinnon S., 3D laser imaging for joint orientation analysis, *International Journal of Rock Mechanics & Mining Sciences* 48 (2011) 932–941, doi:10.1016/j.ijrmms.2011.04.010
28. Oppikofer T., Jaboyedoff M., Blikra L., Derron M.-H., Metzger R., Characterization and monitoring of the A° knes rockslide using terrestrial laser scanning, *Nat. Hazards Earth Syst. Sci.*, 9 (2009) 1003–1019, doi:10.5194/nhess-9-1003-2009
29. Pejić M., Božić B., Abolmasov B., Gospavić Z. Design and optimisation of laser scanning for tunnels geometry inspection. *Tunnelling and Underground Space Technology* 37 (2013): 199-206. DOI10.1016/j.tust.2013.04.004. Corrigendum to „Design and optimisation of laser scanning for tunnels geometry inspection“, *Tunnelling and Underground Space Technology* 38 (2013): 287. DOI10.1016/j.tust.2013.07.001. ISSN 0886-7798
30. Salvini R., Francioni M., Riccucci S., Bonciani F., Callegari I., Photogrammetry and laser scanning for analyzing slope stability and rock fall runout along the Domodossola–Iselle railway, the Italian Alps, *Geomorphology* 185 (2013) 110-122, <http://dx.doi.org/10.1016/j.geomorph.2012.12.020>
31. Santana D., Corominas J., Mavrouli O., Garcia-Sellés D., Magnitude–frequency relation for rockfall scars using a Terrestrial Laser Scanner, *Engineering Geology* 145–146 (2012) 50–64, doi:10.1016/j.enggeo.2012.07.001
32. Sturzenegger M., Stead D., Elmo D., Terrestrial remote sensing-based estimation of mean trace length, trace intensity and block size/shape, *Engineering Geology* 119 (2011) 96–111, doi:10.1016/j.enggeo.2011.02.005
33. Sturzenegger M., Stead D., Close-range terrestrial digital photogrammetry and terrestrial laser scanning for discontinuity characterization on rock cuts, *Engineering Geology* 106 (2009) 163–182, doi:10.1016/j.enggeo.2009.03.004
34. Teza G., Pesci A., Genevois R., Galgaro A., Characterization of landslide ground surface kinematics from terrestrial laser scanning and strain field computation, *Geomorphology* 97 (2008) 424–437, <http://dx.doi.org/10.1016/j.geomorph.2007.09.003>
35. Umili G. , Ferrero A., Einstein H.H., A new method for automatic discontinuity traces sampling on rock mass 3D model, *Computers & Geosciences* (2012), <http://dx.doi.org/10.1016/j.cageo.2012.07.026>
36. Viero A., Teza G., Massironi M., Jaboyedoff M., Galgaro A., Laser scanning-based recognition of rotational movements on a deep seated gravitational instability: The Cinque Torri case (North-Eastern Italian Alps), *Geomorphology* 122 (2010) 191–204, doi:10.1016/j.geomorph.2010.06.014