Prof. Dr. Xuanmei Fan
Chengdu University of Technology

Prof. Fan obtained her Ph.D. in Geological Hazard and Risk Assessment from the Faculty of Geo-Information Science and Earth Observations (ITC), University of Twente in the Netherlands (2013). After her PhD she was employed for one year by the United Nations Institute for Training and Research (UNITAR) in Geneva as a disaster risk reduction training expert. In 2015, she started to work at the State Key Laboratory of Geohazard Prevention and Geoenvironment Protection, Chengdu University of Technology, China. She was promoted to a Full Professor position in 2016. Prof.

Fan's research focuses on the earthquake induced chains of geological hazards, coupling effect of tectonic and climatic forces on geohazards (especially in the Tibetan Plateau), long-term landscape evaluation and paleo-landslides. After the 2008 Wenchuan earthquake, she has carried out in-depth research to understand the causes and effects of earthquake-induced landslides and landslide dams. She is the co-PI of a UK-China collaboration project, REACH, through this project, her team obtained interesting results in revealing the spatio-temporal evolution of geohazards after the 2008 Wenchuan earthquake and the controlling factors. She also developed early warning system for post-earthquake debris flows, which been applied by the local government and has successfully predicted more than 10 debris flows, saving lives of 1300 people.

Due to her important scientific achievements, she has been awarded many national and provincial prizes. In 2016. Dr. Fan was awarded the Richard Wolters Prize by the International Association for Engineering Geology and the Environment (IAEG). This prize has been awarded biannually since 1986 to outstanding young scientists of the engineering geology and environment profession, in order to commemorate the life and work of Dr Richard Wolters. Dr. Xuanmei Fan is the only female scientist who obtained this award in China. She was selected as one of the best ten female geologists in China in 2017. She was awarded by the "The First Prize for National Science and Technology Achievements" in 2014; Gudezhen Outstanding Young Engineering Geologist Technology Award by China Geological Society IAEG China National Group; Sichuan Province Youth Science and Technology Award; and the Recruitment Program of Global Experts. She received a large amount of research grants with a total fund of more than 6 million RMB. In 2016, Dr. Fan successfully applied the National Science Fund for Outstanding Young Scholars of China, which is the highest level grant in China for young researchers.

Academic duties

- Associate editor of Earth Surface Dynamics journal
- Associate editor of Genvironmental Disasters journal
- Editorial board member of Landsides journal
- Editorial board member of Bulletin of Engineering Geology and Environment journal

Key Publications

Fan X., Gianvito Scaringi, Oliver Korup, A. Joshua West, Qiang Xu*, Runqiu Huang* et al.（2019）, Earthquake-induced chains of geologic hazards: patterns, mechanisms and impacts”, Reviews of Geophysics, 2019. (影响因子：16.725)

Fan X., Gianvito Scaringi, Guillem Domènech et al.（2019）, Two multi-temporal datasets to track the enhanced landsliding after the 2008 Wenchuan earthquake，Earth System Science Data, 11(1):1-29.

Fan, X.*, Domènech, G., Scaringi, G., Huang, R., Xu, Q., Hales, T. C., Dai, L., Yang, Q., Francis, O. Spatio-temporal evolution of mass wasting after the 2008 Mw 7.9 Wenchuan Earthquake revealed by a detailed multi-temporal inventory. Landslides, 2018.

Fan, X.*, Juang, C. H., Wasowski, J., Huang, R., Xu, Q., Scaringi, G., van Westen, C. J., Havenith, H. B. What we have learned from the 2008 Wenchuan Earthquake and its aftermath: A decade of research and challenges. Engineering Geology, 241, 25-32, 2018.

Fan, X.*, Scaringi, G., Xu, Q., Zhan, W., Dai, L., Li, Y., Pei, X., Yang, Q., Huang, R. Coseismic landslides triggered by the 8th August 2017 Ms 7.0 Jiuzhaigou earthquake, Sichuan, China: implications for the seismogenic fault identification. Landslides, 15 (5), 967-983, 2018.

Scaringi, G., Fan, X.*, Xu, Q., Liu, C., Ouyang, C., Domènech, G., Yang, F., Dai, L. Some considerations on numerical methods to simulate past landslides and possible new failures: the case of the recent Xinmo landslide (Sichuan, China). Landslides, 15 (7), 1359-1375, 2018.

Xu, Q., Fan, X.*, Scaringi, G. Brief communication: Post seismic landslides, the tough lesson of a catastrophe. Natural Hazard and Earth Systems Sciences, 18 (1): 397-403, 2018.

Tang, R., Fan, X.*, Scaringi, G., Xu, Q., van Westen, C. J., Ren, J., Havenith, H. B. Distinctive controls on the distribution of river-damming and non-damming landslides induced by the 2008 Wenchuan earthquake. Bulletin of Engineering Geology and the Environment, 2018.

Fan, X.*, Xu, Q., Scaringi, G., Dai, L., Li, W., Dong, X., Zhu, X., Pei, X., Dai, K., Havenith, H.-B. Failure mechanism and kinematics of the deadly June 24th 2017 Xinmo landslide, Maoxian, Sichuan, China. Landslides, 14 (6): 2129-2146, 2017.

Fan, X., Xu, Q.*, Scaringi, G., Li, S., Peng, DL., A chemo-mechanical insight into the failure mechanism of frequently occurred landslides in the Loess Plateau, Gansu Province, China. Engineering Geology, 228: 337-345, 2017.

Fan X.*, Xu, Q., van Westen, C., Huang, R., Tang, R., Characteristics and classification of landslide dams associated with the 2008 Wenchuan earthquake, Geoenvironmental Disasters, 4:12, 2017.

Fan, X.*, Rossiter, D.G., van Westen, C.J., Xu, Q., Gorum, T., Empirical prediction of coseismic landslide dam formation, Earth Surface Processes and Landforms, 2014, 39(14): 1913-1926. (* corresponding author)

Fan, X.*, van Westen, C.J., Korup, O., Gorum, T., Xu, Q., Dai, F.C., Huang, R., Wang, G., Transient Water and Sediment Storage Following the 2008 Wenchuan Earthquake, China, Geomorphology, 171-172, 58-68, 2012.

Fan, X.*, van Westen, C.J., Xu, Q., Gorum, T., Dai, F., Analysis of landslide dams induced by the 2008 Wenchuan earthquake, Journal of Asian Earth Sciences, 57, 25-37, 2012.

Fan, X.*, Tang, CX, van Westen, C.J., Alkema D., Simulating dam-breach scenarios of the Tangjiashan landslide dam induced by the Wenchuan earthquake, Natural Hazards and Earth System Sciences, 12, 3031-3044, 2012.

Fan, X.*, Xu, Q., Zhang, Z., Dong, S., Tang, R., The genetic mechanism of a translation landslide, Bulletin of Engineering Geology and Environment, 68, 231-244, 2009.

Fan, X.*, Dell'Oro, L., Bjorgo, E., Dave, R, Using multi-temporal satellite imagery to better understanding the history of the Ab Barak landslide and predict future landslide in the region. UNISDR Scientific and Technical Advisory Group Case Studies-2014.

Huang, R*. and Fan, X.*, The landslide story. Nature Geosciences 6, 325-326, 2013.

Zhen W., Fan, X.*, Huang, R., Pei XJ., Xu Q., Li W. 2017. Empirical prediction for travel distance of channelized rock avalanches in the Wenchuan earthquake area. Nat. Nazards Earth Syst. Sci., 17, 833-844, 2017.

Huang, R., Pei, X., Fan, X.*, Zhang, W., Li, S., Li, B., The characteristics and failure mechanism of the largest landslide triggered by the Wenchuan earthquake, May 12, 2008, China, Landslides, 9, 1, 131-142, 2011. (*corresponding author)

Gorum, T., Fan, X., van Westen, C.J., Huang, R.Q., Xu, Q., Tang, C., Wang, G.H., Distribution pattern of earthquake-induced landslides triggered by the 12 May 2008 Wenchuan earthquake, Geomorphology, 133, 152-167, 2011.

Xu, Q., Fan, X.*, Huang, R.Q., van Westen, C.J., Landslide dams triggered by the Wenchuan earthquake, Sichuan Province, south west China, Bulletin of Engineering Geology and Environment, 68, 373-386, 2009.

Xu, Q., Fan, X.*, Dong, X., Characteristics and formation mechanism of a catastrophic rainfall-induced rock avalanche-mud flow in Sichuan, China, 2010, Landslides, 9, 143-154, 2011.

Xu, Q., Fan, X.*, Huang, R., Yin, Y., Hou, S., Dong, X., Tang, M., A catastrophic rockslide-debris flow in Wulong, Chongqing, China in 2009: background, characterization, and causes, Landslides, 7, 75-87, 2010.

Gorum, T., van Westen, C.J., Korup, O., van der Meijde, M., Fan, X.*, van der Meer, D., Complex rupture mechanism and topography control symmetry of mass-wasting pattern, 2010 Haiti earthquake, Geomorphology,184,127-138 , 2012.

Liu, HX., Xu, Q., Li, Y.R., Fan, X.*, Response of high-strength rock slope to seismic waves in a shaking table test, 2013, Bulletin of the Seismological Society of America, 103 (6): 3012-3025.

Fan, X., Domènech, G., Scaringi, G., et al. Two multi-temporal dataset to track the enhanced landsliding after the 2008 Wenchuan earthquake. Manuscript in preparation for Earth System Science Data

(invited submission)
Impact Factor: 8.792

Fan, X., Hales, T. C., Scaringi, G., et al. Do strong continental earthquakes build topography? Manuscript in preparation for Proceedings of the National Academy of Sciences of the United States of America (invited submission)
Impact Factor: 9.504; Nature Index;

Fan, X., Scaringi, G., et al. How earthquakes shape mountain landscapes. Manuscript in preparation for Reviews of Geophysics (invited submission)
Impact Factor: 13.529