International Society for Geomorphometry Coffee Talk

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8:00 MDT (UTC -6), 10:00 EDT (UTC -4), 11:00 BRT (UTC - 3), 15:00 BST (UTC +1),
16:00 CEST (UTC +2), 17:00 EEST (UTC +3), 22:00 CST (UTC +8)

"Recent Research Progress in Geomorphometry in China"

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Dr. Li-Yang Xiong is a professor at the School of Geographical Science, Nanjing Normal University (NNU), China. He is currently responsible for managing NNU's research in Digital Terrain Model and Digital Terrain Analysis. His main research interests include AI based terrain modelling, loess terrain feature characterization, landform evolution modeling, paleotopography reconstruction and geomorphological process mining. His recent work involves deep learning-based DEM reconstruction, geomorphology-oriented digital terrain analysis, and value-added digital terrain applications for geoscience. He also serves as Associate Editor for the journal Earth Surface Processes and Landforms and as an Editorial Board Member for International Journal of Geographical Information Science.

Abstract: In this talk, I will present some recent research achievements related to terrain modelling theory, terrain analysis method and terrain application in China. This terrain modeling theory focused on how we understand terrain knowledge and integrate it into AI methods for terrain reconstruction. In term of the terrain analysis method, the mathematical vector operation we believe should be highlighted in the research of Geomorphometry, which is suitable for multi-source data structure by considering the directional property of terrain parameters. Actually, this directional property should be made a full consideration for process-oriented geographical modeling and simulation. Lastly, I will show some terrain applications towards different typical geographical areas in China as well as global scale application.

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