Topics for the PhD Admission Examination

PhD Supervisor: Iulian-Horia HOLOBÂCĂ

Topic 1: Impact of Climate Change on Mountain Glaciers

1. Adler, C., P. Wester, I. Bhatt, C. Huggel, G.E. Insarov, M.D. Morecroft, V. Muccione, and A. Prakash, 2022: Cross-Chapter Paper 5: Mountains. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2273–2318. doi:10.1017/9781009325844.022.
2. Holobâcă, I.H. (2013). Glacier Mapper – a new method designed to assess change in mountain glaciers. *International Journal of Remote Sensing*, 34(23), 8475–8490.
3. Holobâcă, I.H. (2016). Recent retreat of the Elbrus glacier system. *Journal of Glaciology*, 62(231), 94–102. doi:10.1017/jog.2016.15.
4. Holobâcă, I.H., Tielidze, L., Ivan, K., Elizbarashvili, M., Alexe, M., Germain, D., … Gaprindashvili, G. (2021). Multi-sensor remote sensing to map glacier debris cover in the Greater Caucasus, Georgia. *Journal of Glaciology*, 1–12. doi:10.1017/jog.2021.47.

Topic 2: Climate Risk Phenomena in the Context of Climate Change

1. O'Neill, B., M. van Aalst, Z. Zaiton Ibrahim, L. Berrang Ford, S. Bhadwal, H. Buhaug, D. Diaz, K. Frieler, M. Garschagen, A. Magnan, G. Midgley, A. Mirzabaev, A. Thomas, and R. Warren, 2022: Key Risks Across Sectors and Regions. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 2411–2538. doi:10.1017/9781009325844.025.
2. Vicedo-Cabrera, A.M., Scovronick, N., Sera, F., Royé, D., Schneider, R., Tobias, A., Aström, C., Guo, Y., Honda, Y., Hondula, D.M., Abrutzky, R., Tong, S., de Sousa Zanotti Stagliorio Coelho, M., Saldiva, P.H.N., Lavigne, E., Correa, P.M., Ortega, N.V., Kan, H., Osorio, S., Kyselý, J., Urban, A., Orru, H., Indermitte, E., Jaakkola, J.J.K., Ryti, N., Pascal, M., Schneider, A., Katsouyanni, K., Samoli, E., Mayvaneh, F., Entezari, A., Goodman, P., Zeka, A., Michelozzi, P., de'Donato, F., Hashizume, M., Alahmad, B., Diaz, M.H., De La Cruz Valencia, C., Overcenco, A., Houthuijs, D., Ameling, C., Rao, S., Ruscio, F.D., Carrasco-Escobar, G., Seposo, X., Silva, S., Madureira, J., Holobaca, I.H., Fratianni, S., Acquaotta, F., Kim, H., Lee, W., Iniguez, C., Forsberg, B., Ragettli, M.S., Guo, Y.L.L., Chen, B.Y., Li, S., Armstrong, B., Aleman, A., Zanobetti, A., Schwartz, J., Dang, T.N., Dung, D.V., Gillett, N., Haines, A., Mengel, M., Huber, V., Gasparrini, A. (2021). The burden of

heat-related mortality attributable to recent human-induced climate change. *Nature Climate Change*, 11(6), 492–500. doi:10.1038/s41558-021-01058-x.
3. Croitoru, A.E., Holobâcă, I.H., Lazar, C., Moldovan, F.D., Imbroane, A. (2012). Air temperature trend and the impact on winter wheat phenology in Romania. *Climatic Change*, 111(2), 393–410. doi:10.1007/s10584-011-0133-6.

Topic 3: Spatio-Temporal Variability of the Urban Heat Island

1. Oke, T., Mills, G., Christen, A., & Voogt, J. (2017). *Urban Climates*. Cambridge: Cambridge University Press. doi:10.1017/9781139016476
2. Holobâcă, I.H., Alexe, M., & Temerdek-Ivan, K. (2022). First results of monitoring the Urban Heat Island in Cluj-Napoca using the MICCRO automatic network (Monitoring the Urban Heat Island in Cluj – Romania). *35th Annual Colloquium of the International Association of Climatology – AIC 2022*, Météo France, Toulouse, pp. 50–55.