Workshop Universal diversity patterns across the sciences Center for Theoretical Study, Prague, 7-9 May 2010

Participants

David Štorch, Arnošt Šizling, Cyril Říha, students (Czech Republic) Jeff Nekola, Brian McGill, John Harte, Marcus Hamilton, Jordan Okie (USA) Fangliang He (Canada) Dean Korošak (Slovenia)

Preliminary program

The general idea is that the first day will be devoted to the summarizing of current knowledge and recent achievements of the group members, organized as separate talks (each about 30-45 minutes). The first half of the second day will be spent by the discussion on common grounds of various diversity patterns, with the aim to provide general classification of them as well as classification of the general processes which are responsible for these patterns. The afternoon will be devoted to empirical data sets gathered by the group of Jeff Nekola, and the possibilities of their utilization for further study. The third day will be devoted to an attempt to synthetize current knowledge and a general discussion, including practical issued (publication strategies etc.).

Friday 7 May

9.00-12.00 What has been done so far I

David Storch: Overview of the topics: statistical distributions and scaling of different macroscopic variables characterizing complex systems
Jeff Nekola: Data on universal diversity patterns across disciplines
John Harte: New developments of the maximum entropy approach to complex systems
Arnošt Šizling: Species-area relationship, taxonomic invariance and spatial turnover

12.00-14.00 Lunch

14.00-17.00 What has been done so far II

Brian McGill & Jeff Nekola: A theory of the spatial decay of similarity Marcus Hamilton: Scaling in human societies Dean Korošak: Scaling in urban systems Fangliang He, Jordan Okie: to be specified

Saturday 8 May

9.00-12.00 Looking for the universal rules: what do they mean and where to go now **14.00-17.00** Dealing with the newly gathered data

Sunday 9 May

9.00-12.00 Reconciling different views on the origin of universal diversity patterns **14.00-17.00** General discussion, concluding remarks