

Current scientific interests, P. Carl

Dynamic 'architecture' of complex, nonlinear phenomena in the climate system, geometric interpretation of monsoon dynamics.

Role of the atmospheric water cycle in shaping climate regimes.

Methods of signal analysis in time series of complex systems, time–frequency analysis, frequency modulation and synchronous motions in the climate system.

'Blind' *component separation* in hydrologic time series, climate signals in terrestrial runoff.

Fractal and multifractal properties of hydrologic time series, extreme events.

(State of December 20, 2013)