Hazard, Risk and Prediction Figures

Stefan Hergarten
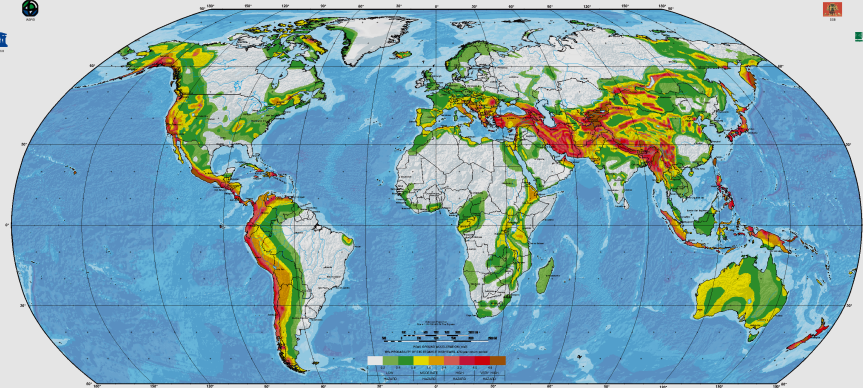
Institut für Geo- und Umweltnaturwissenschaften
Albert-Ludwigs-Universität Freiburg

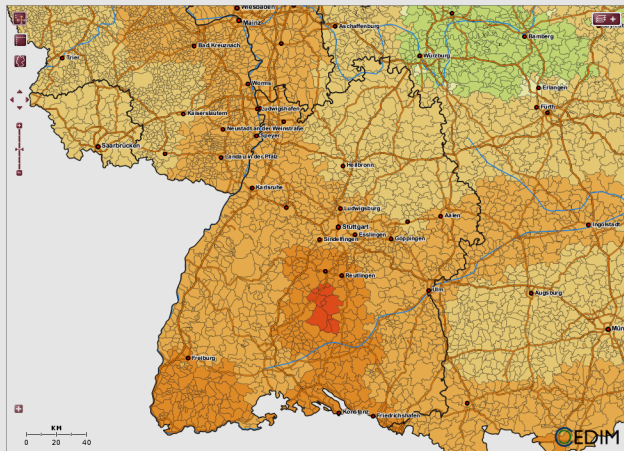## Worldwide Earthquake Hazard

Source: Global Seismic Hazard Assessment Program

Regional Earthquake Hazard

Source: CEDIM Risk Explorer (KIT / GFZ Potsdam)

Hazard and Risk

Regional Earthquake Risk
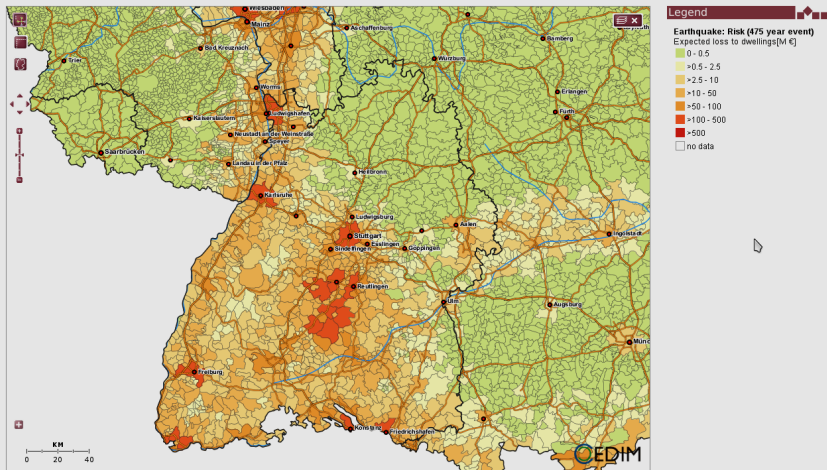
Source: CEDIM Risk Explorer (KIT / GFZ Potsdam)
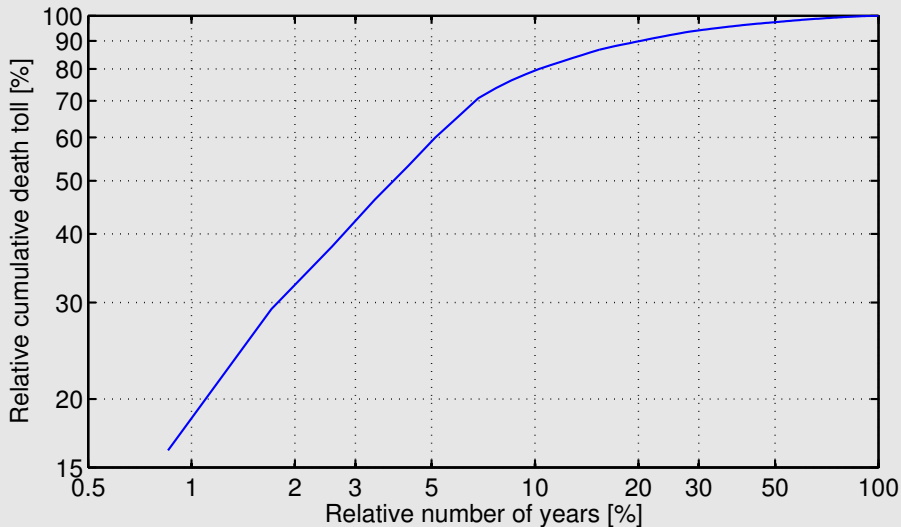
Worldwide Death Toll of all Geohazards since 1900
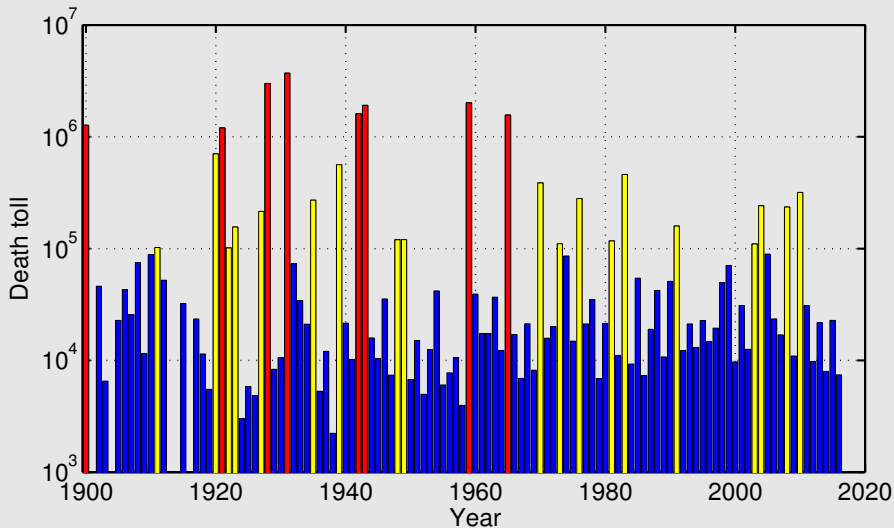
Hazard and Risk

Worldwide Death Toll of all Geohazards Since 1900

Hazard and Risk

Pareto Diagram of all Geohazards Since 1900

Hazard and Risk

Pareto Diagram of all Geohazards Since 1900

Frequency-Magnitude Relations

Binning

Frequency-Magnitude Relations

Cumulative Distribution

Frequency-Magnitude Relations
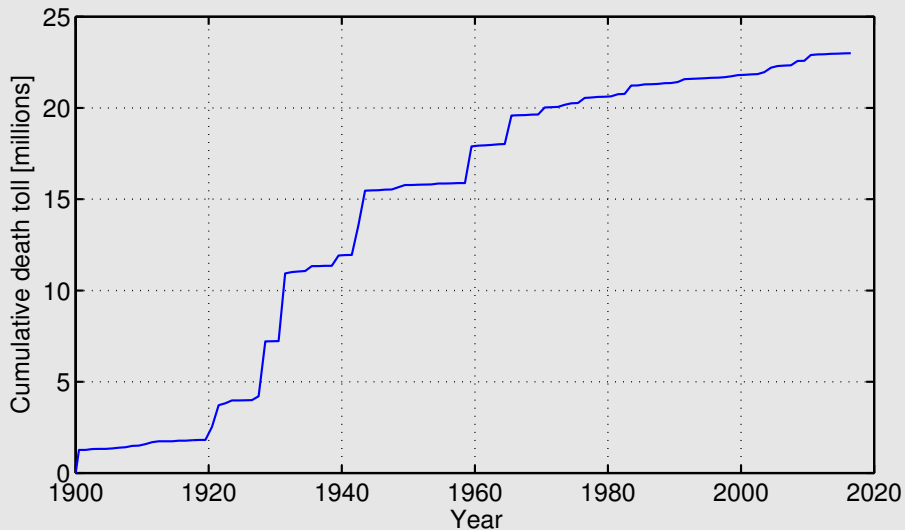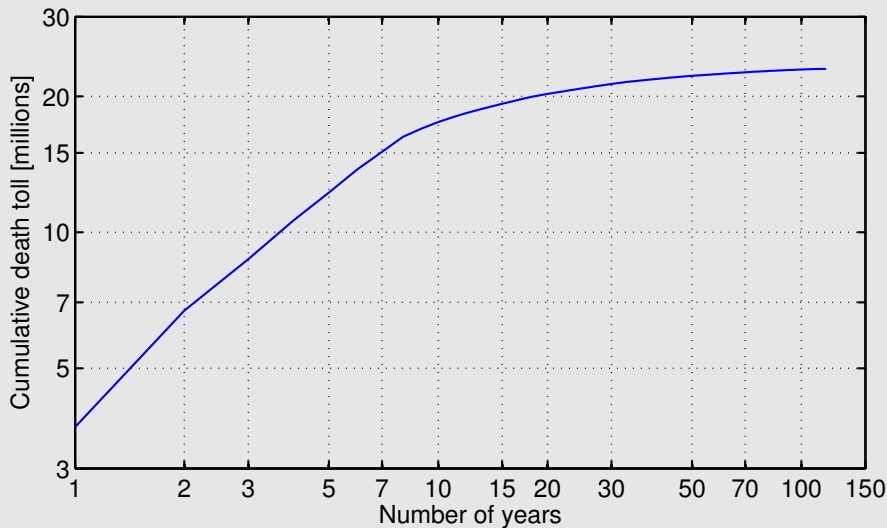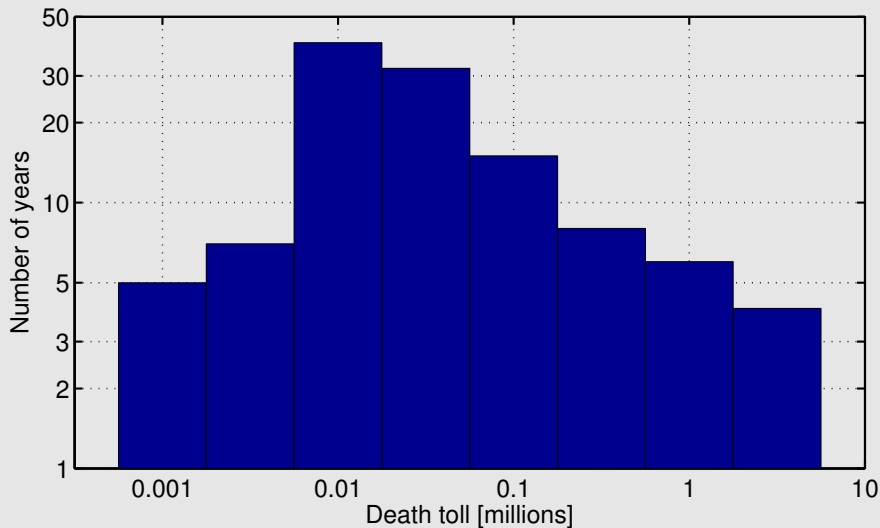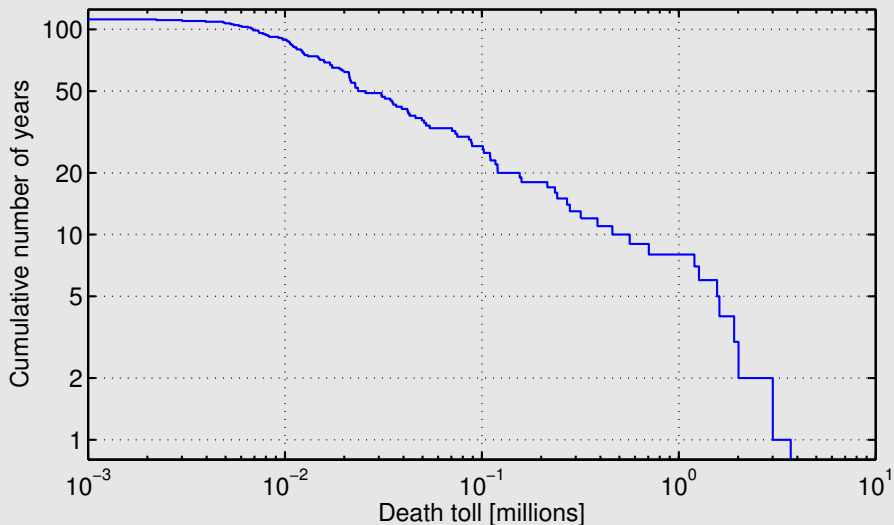
Cumulative Distribution

Kolmogorov-Smirnov Test

Frequency-Magnitude Relations

Kolmogorov-Smirnov Test

Frequency-Magnitude Relations
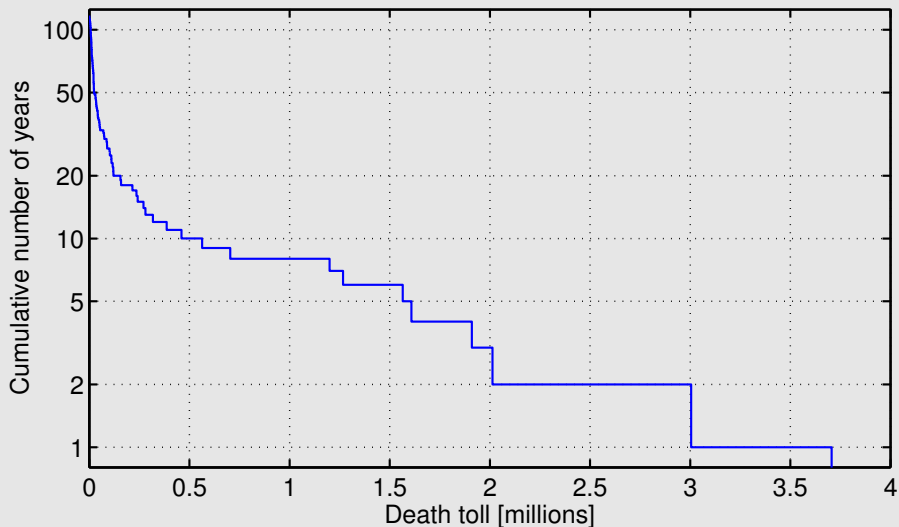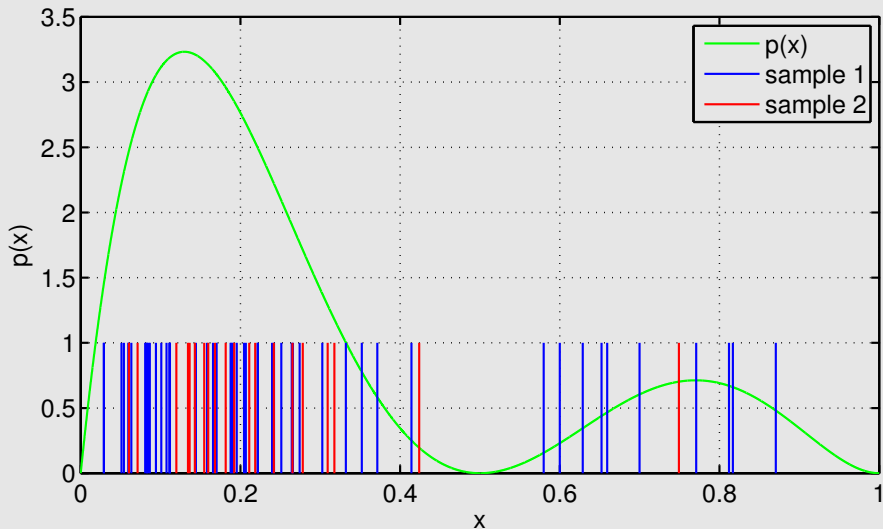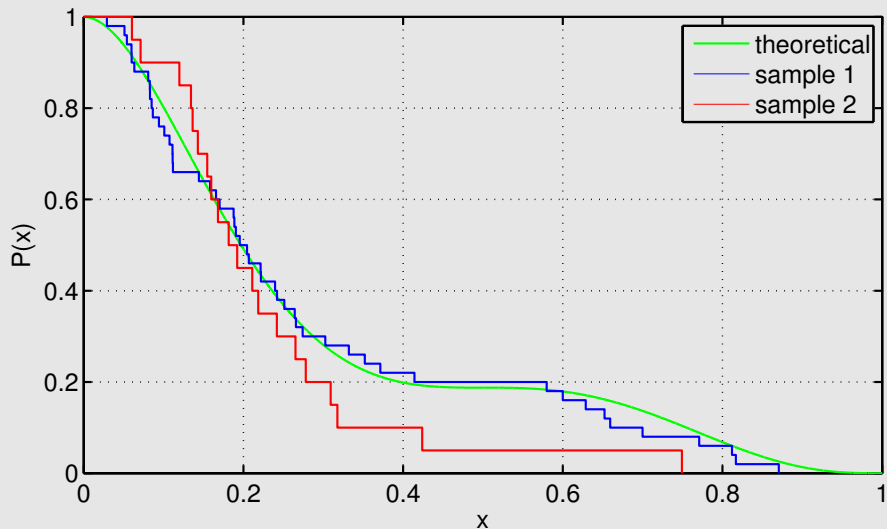
Frequency Density of Rockfalls

Frequency-Magnitude Relations
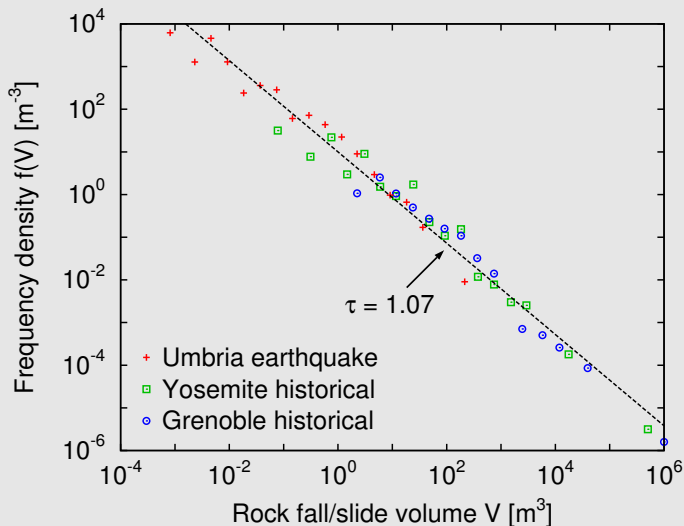
Frequency Density of Regolith Landslides

Waiting Time Distributions
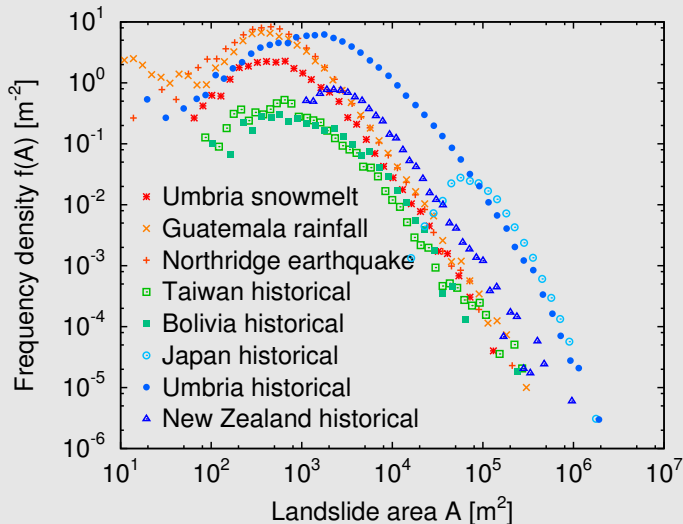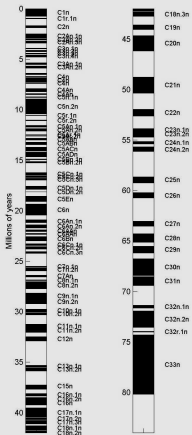
Magnetic Field Reversals
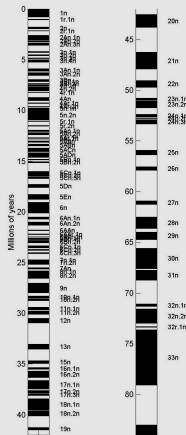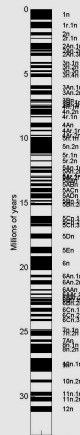

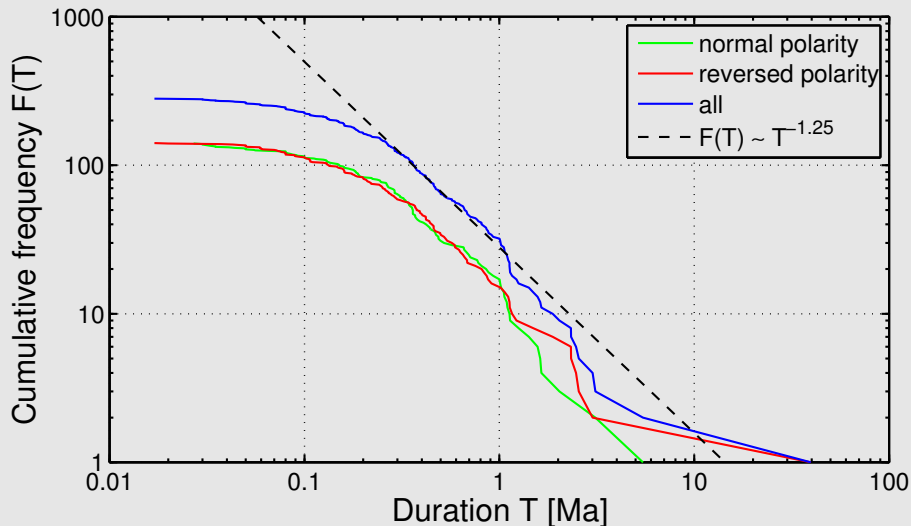Heirtzler et al., 1968   Kent and Gradstein, 1986   Cande & Kent 1995   Huestis & Acton, 1997
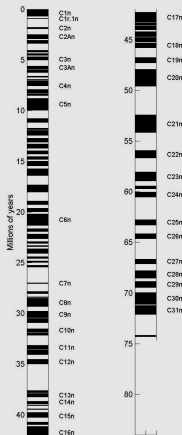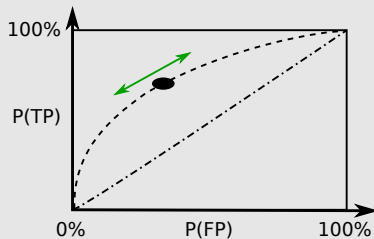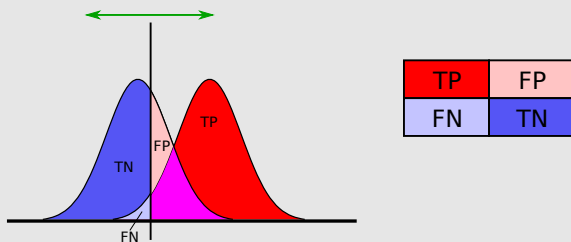
Quelle: Woods Hole Oceanographic Institution

Magnetic Field Reversals

Receiver Operating Characteristic Curves
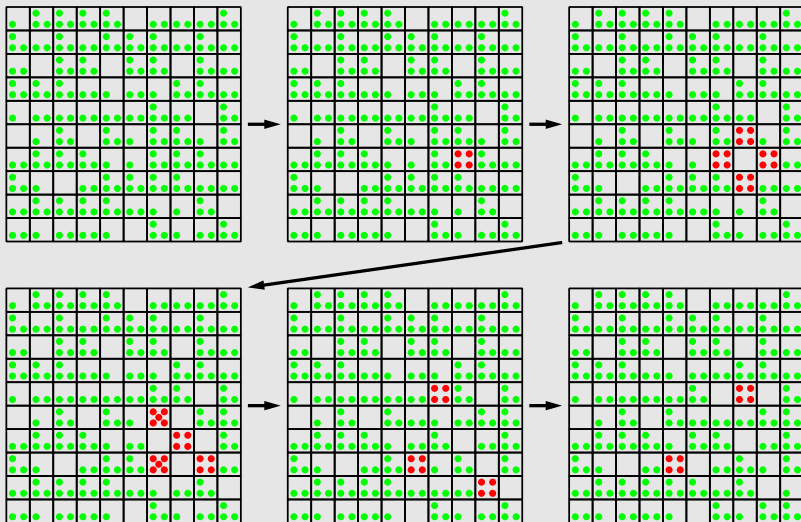

TP	FP
FN	TN

Source: Wikipedia, ©Sharpr

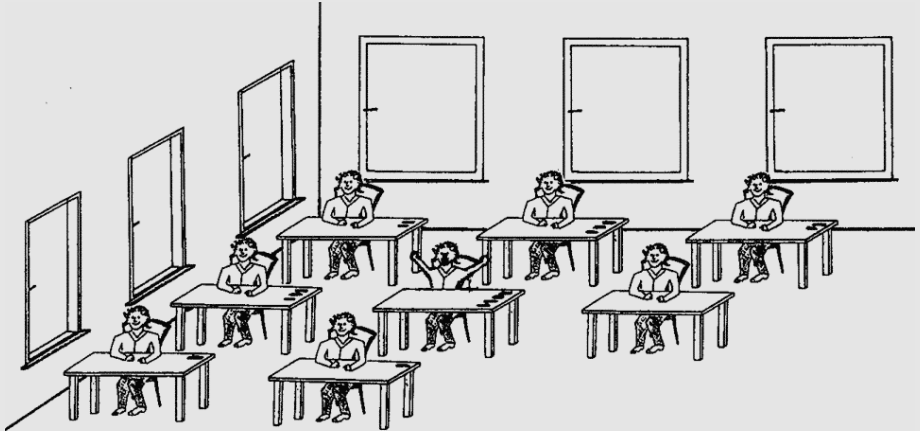## The Bak-Tang-Wiesenfeld (BTW) Model
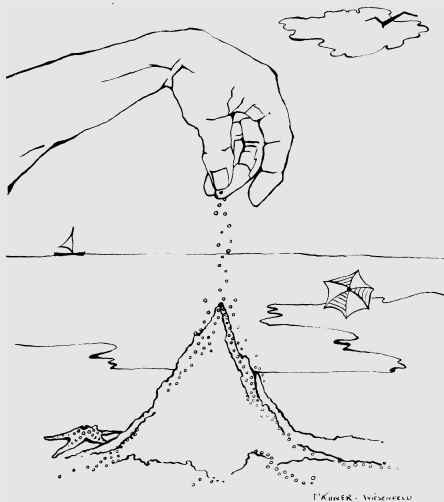
Source: Bak, How Nature Works

The Bak-Tang-Wiesenfeld (BTW) model

The Bak-Tang-Wiesenfeld (BTW) Model

Source: Bak, How Nature Works

The Olami-Feder-Christensen (OFC) Model