



# Monitoring of urban water and moisture dynamics in Pécs, SW Hungary

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#### **Outline**



- Former environment of World Heritage Sites in Pécs,
- Monitoring network for hydromet events,
- Advance techniques for monitoring of buildings on heritage sites.

# Medieval Urban Landscape of Pécs

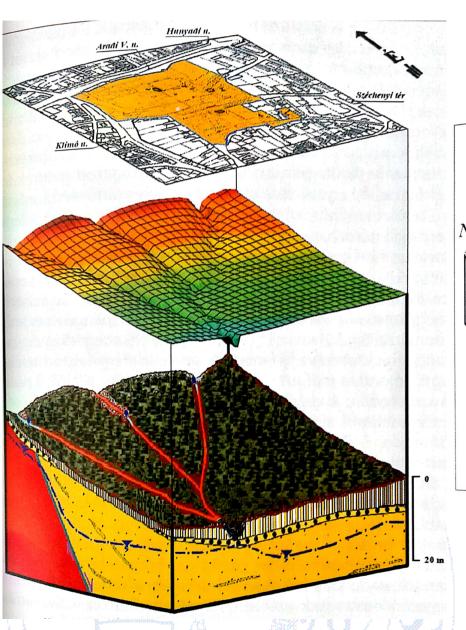


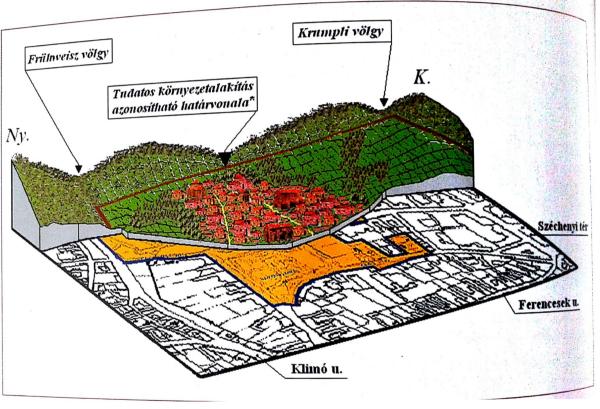


http://mek.oszk.hu/01900/01902/html/index1491.html

## **Original environment of WHSs**

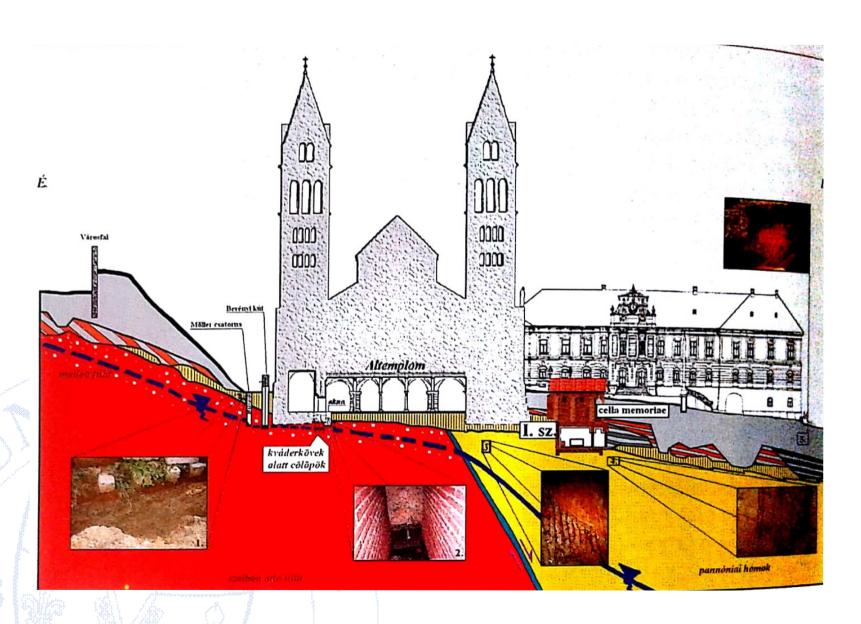






János Kraft ©





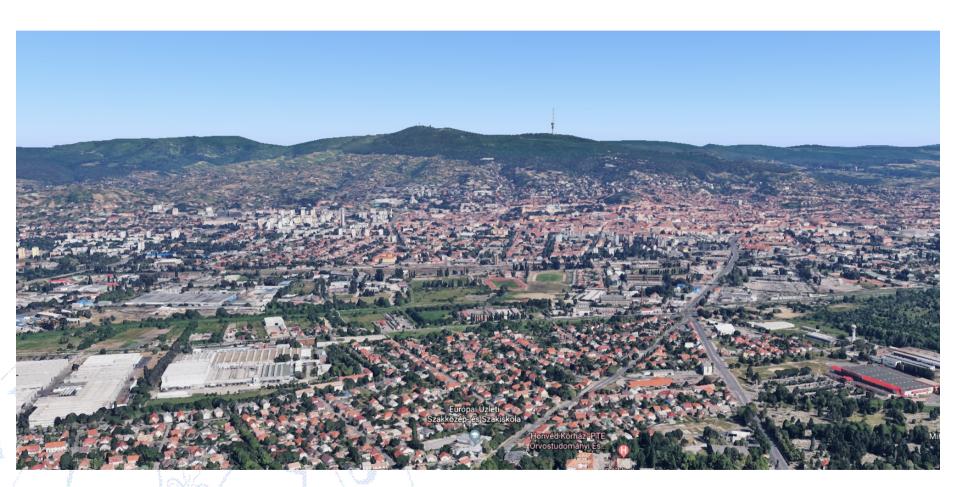
# Antropogen deposition in the city center





#### **Present environment**





https://earth.google.com/web/@46.06486166,18.22450689,121.72175452a,2243.7955809d,35y,-9.25888295h,80.45309069t,0r

#### **Recent flash floods**







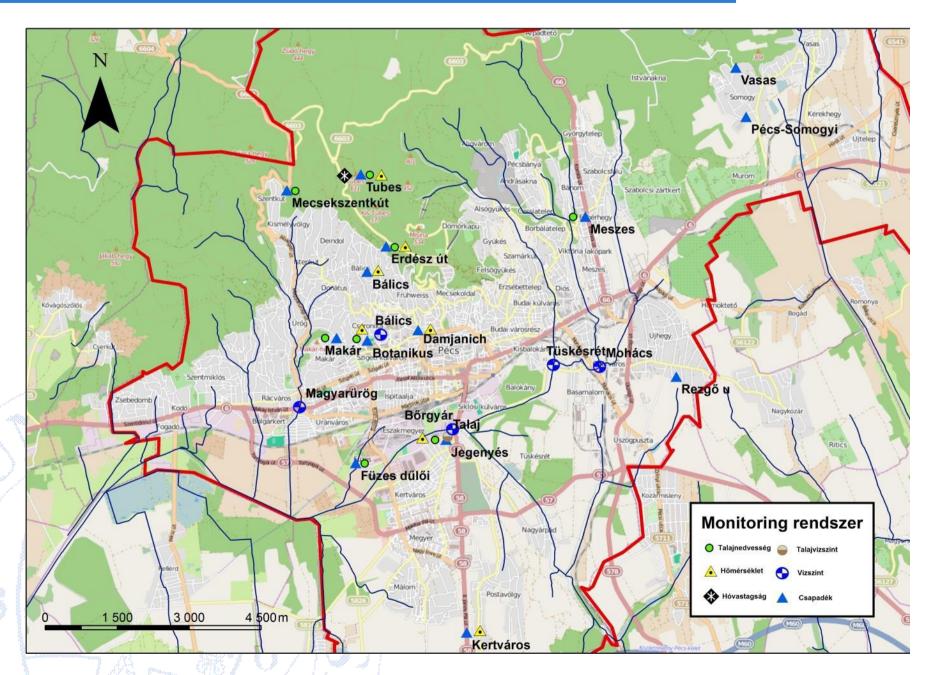






#### **Hydromet Monitoring Network in Pécs**





#### **Monitoring network**

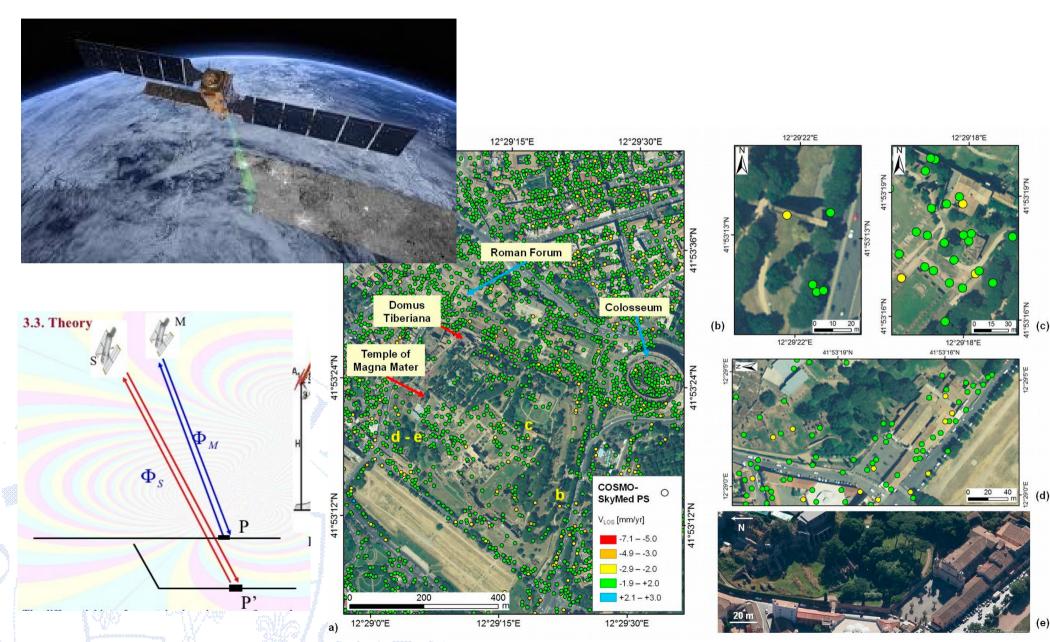


- 14 stations: rain gages, precip measurement (tipping bucket)
- station: rain gage (sonic)
- 7 locations: soil moisture
- 7 locations: stream gages
- 6 stations: air temperature
- 5 stations: soil temperature
- 1 station: Wind, solar radiation, dysdrometer, ceilometer, weighing rain gage and groundwater table elevation measurements

TETTYE FORRÁSHÁZ

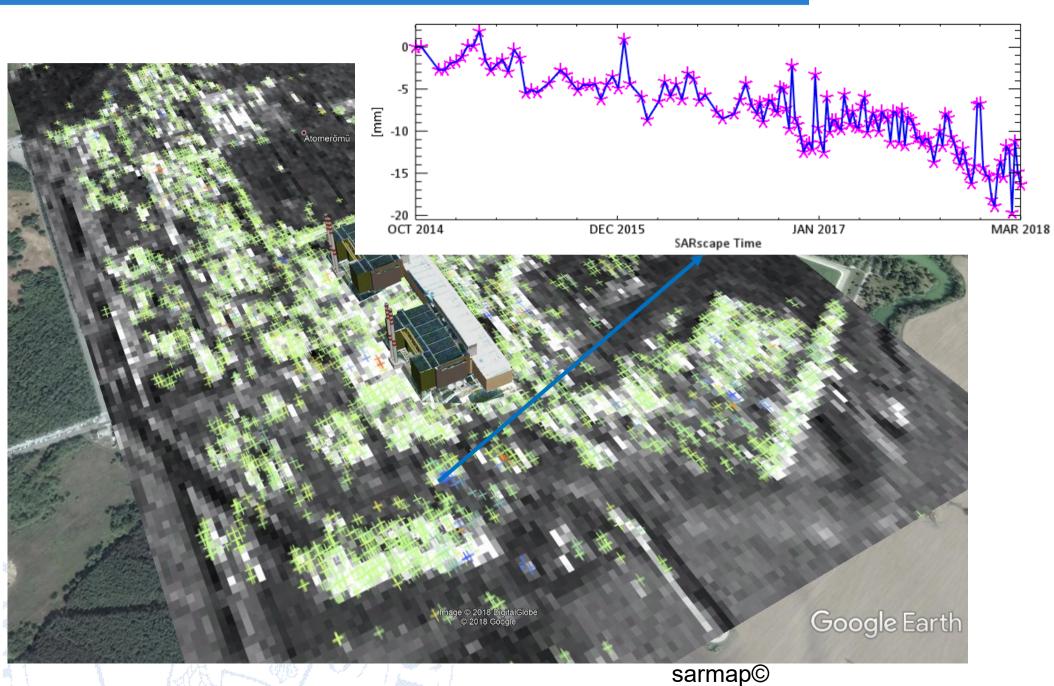
#### **New techniques – SAR Interferometry**





# We are monoitoring different sites









## Thank you for your attention,

#### Köszönjük a figyelmet!

