Earth environmental engineering group

Kitsuregawa and Nemoto lab. (Center for information fusion)

T. Oki, Yoshimura, Pat, Seto and K. Oki lab. (Department of human and social systems)

Sawada lab. (International center for urban safety engineering)

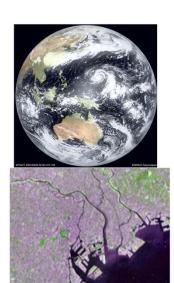
Meguro lab. (International center for urban safety engineering)

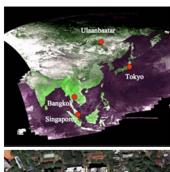
Shibasaki lab. (Department of human and social systems)

W. Takeuchi lab. (Department of human and social systems)

Earth observation and future prediction

Earth environmental changes require a long-term and continuous monitoring over the global scale in a near-real time fashion and a coupled numerical simulation enables us to predict the future scenarios of human activities. Our mission is to provide those basic information to contribute to the societal benefit through satellite remote sensing, rapid computer network system and a large data mining system development. An annual forum on earth environmental monitoring from outer space has been organized in the last 20 years to exchange ideas of researchers.







Flooded Area Fraction (May, Obs) [%]

Obs

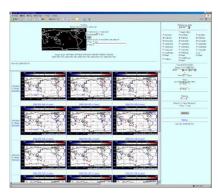
Flooded Area Fraction (May, Sim) [%]

Flooded Area Fraction (May, Sim) [%]

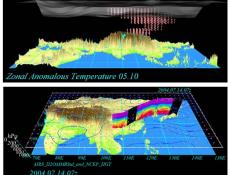
FLD+Diff.

Integrated satellite observation network system from local, regional, continental to global scale.

A numerical hydrological model to estimate a water depth and innundated area coupled with a satellite observation network.



A data mining system on WWW to integrate time, space and different data types



3D weather phenomenon visualization system



A peta-byte (PB) scale data storage system which store the last 30 years of satellite observation data