

NAGAI LAB.

[Infrastructure Technology and Management]

International Center for Urban Safety Engineering

<http://www.nagai.iis.u-tokyo.ac.jp>

Civil Engineering Department

Infrastructure Management for Developed Society

Anchorage Performance of RC

As Japanese seismic design code is becoming more strict, larger amount of reinforcement must be placed in Reinforced Concrete (RC) structures at the joint part.

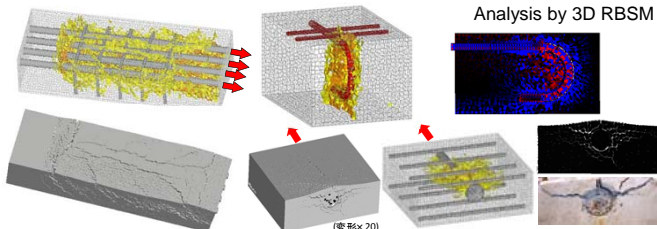


Problems

- Increase the fabrication time
- Poor concrete compaction may occur.

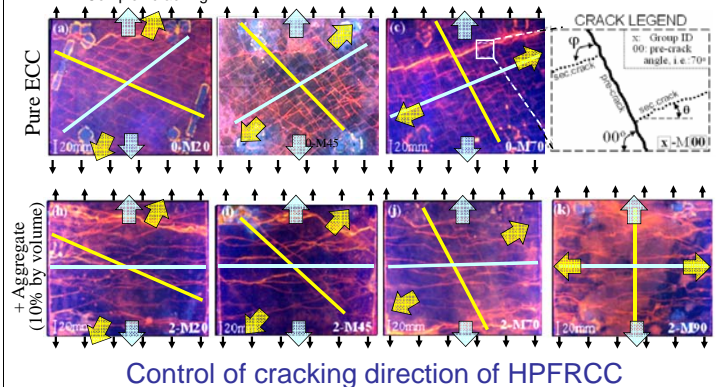
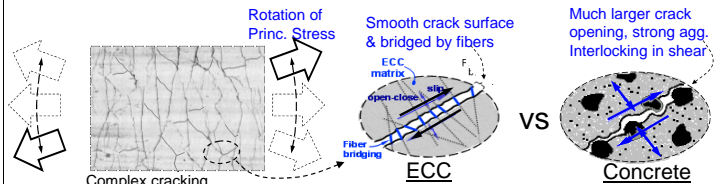
Stress condition in complex reinforcement arrangement

Numerical simulation can clarify
We aim to propose the rational design code



Mechanics of Fiber Reinforced Concrete under Principal Stress Rotation

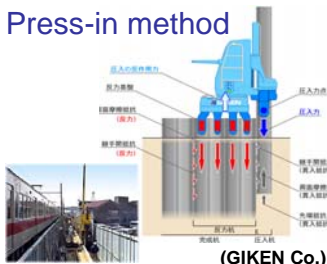
Robust material against the principal stress rotation is developed by focusing the shear performance.



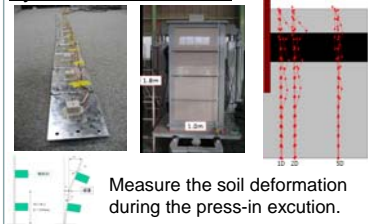
Effective Press-in Driving Method

Press-in method is a revolutionary technique in pile installation technology developed by GIKEN Co. This research is a collaborative work with GIKEN to develop the effective driving method through the experiment and numerical simulation.

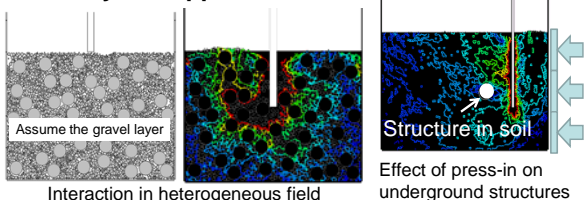
Press-in method



Measurement of soil deformation by inclination sensor

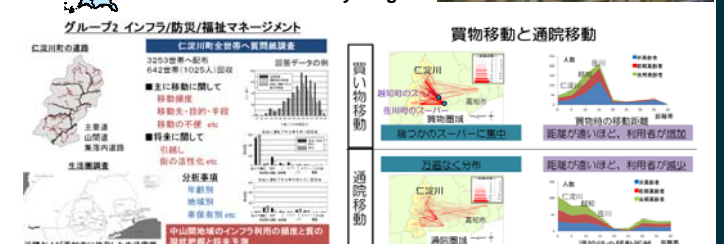
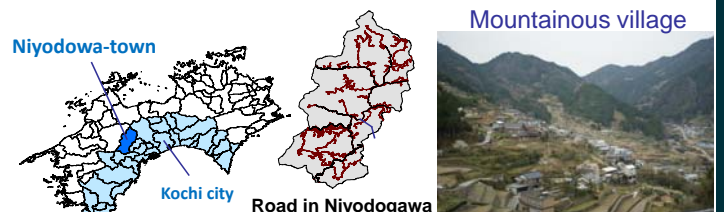


Analytical approach



Infrastructure Management for Aging Society

Japan is now facing a rapid aging problems. To maintain the society and infrastructure in the rural area, this study investigates the maintenance system of infrastructure, transportation system, social network etc. in Kochi Prefecture, Japan.



Movement of residents in daily life