

# Construction, maintenance and management of concrete structures, especially using self-compacting concrete

## **Project Leader**

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## **Objective**

The objective of the research project is to promote the reliability of concrete construction especially by making self-compacting concrete (SCC) common concrete.

## **Project Outline**

The research project contains four main topics:

- 1) Mitigation of reduction in flowability of fresh mortar due to coarse aggregate during deformation, by means of a new type of superplasticizer with viscosity agent for developing SCC with lower unit cement (powder) and higher aggregate contents
- 2) Development of anti-washout SCC especially for reconstruction and disaster prevention for coastal areas and underwater structures
- 3) Development of concrete work method for rainy weather, making use of SCC
- 4) Application of SCC to the repair and strengthening of existing concrete structures

## **References**

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- 4) Ouchi, M., Hibino, M. and Okamura, H.: "Effect of superplasticizer on self-compactability of fresh concrete," Transportation Research Record, No. 1574, pp.37-40, December 1997.
- 5) Ouchi, M.: "Impact of increase or decrease in population on demand for construction in terms of consumption of cement in each prefecture in Japan," Journal of Society for Social Management Systems, SMS11-7079, Society for Social Management Systems, 2012.

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