

Biological Fluctuation “Yuragi” as the Principle of Bio-inspired Robots

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Abstract. The current robotics and artificial intelligence based on computer technology is very different from biological systems in principle. They suppress the noise by spending much energy and obtain clear states such as on/off and 1/0. On the other hand, the biological system utilizes noise naturally existing in the system and in the environment. The noise is called biological fluctuation “Yuragi (in Japanese).” We are studying applications of Yuragi to robotic systems as collaborative works between robotics and biology in Osaka University.