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**Modular robotics in the development of multifunctional locomotion and manipulation systems**

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**Abstract**

The paper at hand introduces the development of a modular locomotion system. It is a robotic system originally inspired by nature. It orientates itself at the example of a snake and can be, first of all, used as a locomotion system for different applications, e.g. inspection and localization in disastrous situations. Extended with additional components it can be also used as a handling and manipulation system. This is achieved by the circumstance that the multi-segment system can be flexibly configured by a variation of the modules' arrangement. By this different functionality and structures of the entire system can be realised.