Self-Powered Dynamic Systems

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Abstract: A self-powered dynamic system \([1]-[4]\) is defined as a dynamic system powered by its own excessive kinetic energy, renewable energy or a combination of both. The particular area of work is the concept of fully or partially self-powered dynamic systems requiring zero or reduced external energy inputs. The technologies explored can be associated with self-powered devices (e.g. sensors), regenerative actuators, and energy harvesting. The power produced by human motion can be considered as a potential energy input to mechanical devices. A fully solar powered air vehicle is an example of a self-sustained system. A bio-inspired design using biomimetics can be employed to improve the power density of a self-powered system.

References: