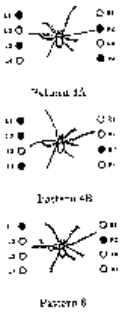
Locomotion
Organizers & Chairs: Hirofumi Miura, Shigeo Hirose

Research on Locomotion
Hirofumi Miura
Kogakuin University

- Researches on 2,4,6,8 Legged Robots will be discussed.
- There are Many Different Motivations for Development of Legged Robot.
- Main Subject will be Researche on The Biped.
- Video Tape of Examples of Legged Robots will be shown in The Talk.

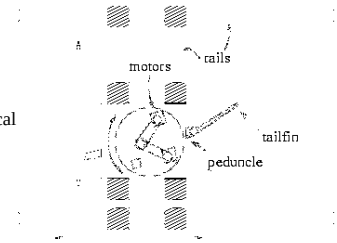


Study on Quadruped Walking Robot in Tokyo Institut of Technology- Past, Present and Future
Shigeo Hirose and Keisuke Kato
Tokyo Institute of Technology

A Minimally Actuated Hopping Rover for Exploration of Celestial Bodies
E. Hale, N. Schara, J. W. Burdick and P. Fiorini
California Institute of Technology

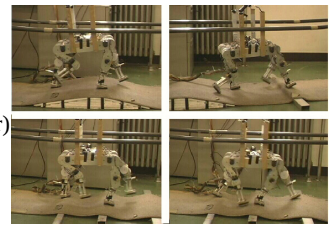
Experiments in Carangiform Robotic Fish Locomotion
R. Mason and J. W. Burdick
California Institute of Technology

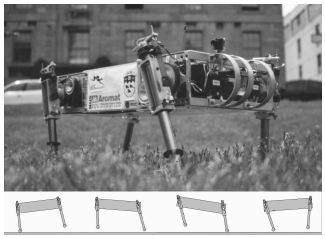
- Fishlike swimming robot
- Three-link
- Fish swims in realistic fluid-mechanical regime
- Most effective swimming gaits found



Adaptive Dynamic Walking of the Quadruped on Irregular Terrain - Autonomous Adaptation Using Neural System Model
Hiroshi Kimura and Yasuhiro Fukuoka
University of Electro-Communications, Japan

- Autonomous Adaptation to Irregular Terrain
- Neural System Model
- CPG(Central Pattern Generator) and Reflexes via CPG
- Realization by Very Simple Method



Stable Running in a Quadruped Robot with Compliant Legs
D. Papadopoulos and M. Buehler
McGill University

- Mechanically simple, autonomous mobile robot with only four motors and four compliant legs
- Dynamically stable, robust locomotion with new (task level) open and closed loop controllers
- Body pitch and roll stability without active control
- Experimental bounding at 1.2 m/s