計測自動制御学会中部支部
第 1 回「制御理論ワーキングセミナー」

主催：計測自動制御学会中部支部

　下記のとおり，セミナーを開催いたします．関心をおもちの方は，どなたでもご自由にご参加下さい．

日　　時：2008 年 7 月 2 日（水）　15：30〜17：00
会　　場：名古屋大学　工学部 3 号館 3 4 2 番教室
講　　師：Professer　Sergej　Celikovsky
　　　　　Czech Technical University in Prague,
　　　　　Czech Republic
題　　目：Partial exact linearization design for the Acrobot walking
概　　要：

A new control concept for a class of simple underactuated mechanical system, the so-called Acrobot, is presented here. Despite being seemingly a simple system, the acrobot comprises many important difficulties when controlling the most challenging underactuated system - the walking robot. This paper presents the design of the asymptotical tracking of the prescribed trajectory generated by a suitable openloop input of the acrobot. Such a design is based on the partial exact linearization of the third order combined with a certain robust stabilization technique. The proposed control is then demonstrated by the exponential tracking of the walking like trajectory of the acrobot. Besides theoretical proofs, our approach is supported by numerical simulations and illustrated by acrobot movement animations. Some outlooks to apply these concepts to more complex walking-like structures are presented as well.

問合せ先：名古屋工業大学極微デバイス機能システム研究センター
　　　　　山田　学／電話(052) 735-5545，FAX(052) 735-5546
　　　　　E-mail：yamada.manabu@nitech.ac.jp