

ASSESSMENT OF STABILIZING FEEDBACK CONTROL OF WALKING, A TUTORIAL

Maarten Afschrift, Sjoerd M. Bruijn Jaap H. van Dieën (In alphabetical order, equal contributors)

ABSTRACT

Walking without falling requires stabilization of the trajectory of the body center of mass relative to the base of support. Model studies suggest that this requires active, feedback control, especially in the mediolateral direction. In older adults and in individuals with neurological or orthopedic disorders that affect walking ability, falls during gait are a common cause of injuries, hospitalization and loss of independence. In this tutorial, we illustrate how gait analysis can be used to assess the stabilizing feedback control of gait. We present methods ranging from those that require limited input data (e.g. position data of markers placed on the feet and pelvis only) to those that require full-body kinematics and electromyography. Analyses range from simple kinematics analyses to inverse dynamics. These methods assess stabilizing feedback control of human walking at three levels: 1) the level of center of mass movement and horizontal ground reaction forces, 2) the level of center of mass movement and foot placement and 3) the level of center of mass movement and the joint moments or muscle activity. We show how these can be calculated and provide a GitHub repository (<https://github.com/VU-HMS/Tutorial-stabilizing-walking>) which contains open access Matlab and Python code to calculate these. Finally, we discuss what information on feedback control can be learned from each of these.

1. INTRODUCTION

Preventing a fall while walking requires stabilization of the position of the body center of mass over the base of support. The common occurrence of falls in toddlers who learn to walk, illustrates the difficulty of this control process. Falls are quite common also in older adults and in people with orthopedic or neurological disorders (Lord et al., 2001; WHO, 2007) and more importantly in these groups the consequences of falls are often severe (MacIntyre & Dewan, 2016; Talbot et al., 2005; Wenning et al., 1999).

From a mechanical perspective, it is not surprising that falls are common during walking. In human bipedal gait, the base of support is formed by those parts of the feet that are in contact with the floor. The base of support during walking is small, particularly in single stance. In addition, a large part of the total body mass is located high above the base of support. Consequently, even small deviations of the center of mass position can result in substantial gravitational moments that accelerate the center of mass out of the base of support. Both internal sources of noise (e.g. sensory noise and motor noise) and external perturbations (e.g. uneven terrain, gusts of wind) can cause deviations in center of mass position with respect to the base of support. Given that walking is inherently unstable, ongoing (intermittent or continuous) stabilization is needed, to avoid cumulative effects of small perturbations over time. When major perturbations occur, which are here defined as external mechanical events that disturb the relation between center of mass and base of support beyond the variance observed in unperturbed gait, the need for stabilizing control is evident.

Stabilization of gait can be achieved by passive and active mechanisms. Passive stabilization relies on the passive mechanical properties (stiffness, damping and inertia of the human body), whereas active

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Systems Theory and Applications Ricardo S. Sánchez-Peña, Mario Sznaier, 1998-08-17 Designed as a university textbook this text on robust systems theory includes problems with every chapter a solutions manual and Matlab files containing worked examples

Non Linear Gain Measurements in Semiconductor Laser Diodes and Stabilization and Application of Self-pulsating Laser Diodes Yaron Simler, 1992

Control Engineering, 1962 Instrumentation and automatic control systems

Stabilizing and Specifying Motion Relative to Unstable Trajectories Fu-Yuen Hsiao, 2004

A Procedural Guide for Technical Implementation of the FORECAST Methods of Task and Skill Analysis George Washington University. Training Methods Division, Edgar L. Shriver, 1961 The methods of task and skill analysis are described in this procedural guide FORECAST is directed toward developing means for accurate forecasting the training demands imposed by new electronic weapon systems Methods for forecasting training needs for a guided missile system were constructed and experiments were performed The system of analysis was modified and refined in FORECAST II in which transfer of training increased proficiency and equipment minimizing effects of the method were studied A study of the application of the FORECAST concepts to equipment other than that on which the methods were developed was also conducted and these procedures have now been incorporated in the IMPROVED NIKE HERCULES HIPAR course It is believed that the procedures described herein can serve as a basis for further implementation or development of this type of analysis by personnel working in this technical field Author

Proceedings of the 33rd IEEE Conference on Decision and Control, 1994 Robot Control

Mark W. Spong, Frank L. Lewis, Chaouki T. Abdallah, 1993

Bragg Gratings, Photosensitivity, and Poling in Glass Fibers and Waveguides, 2001

AIAA Guidance Navigation and Control Conference, 1996 Proceedings of the 1992 American Control Conference, 1992

AIAA Aerospace Sciences Meeting and Exhibit, 42nd, 2004

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