

# Decidability in Distributed Tasks

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## 1 INTRODUCTION

## 2 LOOP CONTRACTIBILITY IS UNDECIDABLE

### 2.1 THE HALTING PROBLEM

### 2.2 THE WORD PROBLEM FOR GROUPS

### 2.3 LOOP CONTRACTIBILITY

## 3 THREE-PROCESSOR TASKS ARE UNDECIDABLE

## 4 THE DECIDABILITY OF DISTRIBUTED DECISION TASKS

## REFERENCES

- [1] Beek P.J., Peper C.E., and Stegemen D.F. (1995). Dynamical models of movement coordination. *Human Movement Science*, 14.