

IEEE TRANSACTIONS ON COMPUTATIONAL INTELLIGENCE AND AI IN GAMES

A PUBLICATION OF THE IEEE COMPUTATIONAL INTELLIGENCE SOCIETY, THE IEEE COMMUNICATIONS SOCIETY,
THE IEEE COMPUTER SOCIETY, THE IEEE CONSUMER ELECTRONICS SOCIETY,
THE IEEE INSTRUMENTATION AND MEASUREMENT SOCIETY, THE IEEE ROBOTICS AND AUTOMATION SOCIETY,
THE IEEE SENSORS COUNCIL, AND THE IEEE SYSTEMS, MAN, AND CYBERNETICS SOCIETY

www.ieee-cis.org/pubs/tciaig



DECEMBER 2016

VOLUME 8

NUMBER 4

TCIARR

(ISSN 1943-068X)

SPECIAL ISSUE ON REAL-TIME STRATEGY GAMES

GUEST EDITORIAL

Guest Editorial: Real-Time Strategy Games *M. Buro, S. Ontañón, and M. Preuss* 317

SPECIAL ISSUE SHORT PAPER

Hybrid Pathfinding in *StarCraft* *J. Hagelböck* 319

SPECIAL ISSUE PAPERS

Competitive Algorithms for Coevolving Both Game Content and AI. A Case Study: *Planet Wars* *M. Nogueira-Collazo, C. C. Porras, and A. J. Fernández-Leiva* 325
 Multiscale Bayesian Modeling for RTS Games: An Application to StarCraft AI *G. Synnaeve and P. Bessière* 338
 Evolving Effective Microbehaviors in Real-Time Strategy Games *S. Liu, S. J. Louis, and C. A. Ballinger* 351
 Coevolving Robust Build-Order Iterative Lists for Real-Time Strategy Games *C. Ballinger, S. Louis, and S. Liu* 363
 GHOST: A Combinatorial Optimization Framework for Real-Time Problems ... *F. Richoux, A. Uriarte, and J.-F. Baffier* 377

REGULAR ISSUE PAPERS

Coevolutionary CMA-ES for Knowledge-Free Learning of Game Position Evaluation *W. Jaskowski and M. Szubert* 389
 Intentionality and Conflict in *The Best Laid Plans* Interactive Narrative Virtual Environment *S. G. Ware and R. M. Young* 402
 Statistical Relational Learning for Game Theory *M. Lippi* 412

ANNOUNCEMENTS

Call for Papers—Special Issue on AI-Based and AI-Assisted Game Design 427
 Call for Papers—Special Issue on Intelligence in Serious Games 428