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GUEST EDITORIAL

Special issue devoted to papers presented at the second INFORMS workshop on artificial intelligence and data mining, Seattle, November 3, 2007

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The Second INFORMS Workshop on Artificial Intelligence and Data Mining was held in Seattle on November 3rd, 2007. The workshop was a pre-conference workshop to the National INFORMS meeting. Twenty papers were presented at the workshop, divided in two tracks—AI and Data Mining. Twelve papers were submitted for possible publication in this special issue. Three of the accepted papers are being published here as WAID-07 Volume 1.

The first paper, titled 'Coordinating Randomized policies for Increasing Security of Agent Systems,' by Paruchuri et al. looks at the problem of providing decision support to a patrolling or security service in an adversarial domain. The authors use a game-theoretic approach in which adversarial agent acts strategically by modifying its behavior in response to the patrolling strategy set by the principal. A Mixed Integer Programming formulation called DOBSS (Decomposed Optimal Bayesian Stackelberg Solver) has been developed; this system is used in a real-world security system deployed at the Los Angeles International Airport.

The second paper, titled 'Learning-Enhanced adaptive DSS: A Design Science Perspective' by Piramuthu and Shaw addresses the issue of keeping domain-specific knowledge current in knowledge-based decision support systems. The authors propose a generic adaptive DSS framework with learning capabilities that continually monitors itself to keep itself updated.

The third paper, titled 'Efficient Heuristics for Wireless Network Tower Placement,' by Deane et al. looks at the problem of locating wireless network towers. The paper considers the line-of-sight constraints, which are normally not considered in traditional location problems. A new heuristic and a genetic algorithms based metaheuristic has been developed for this problem. The authors present a number of results for some randomly generated problems.

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