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Special Session on Sports Analytics and Informatics 2018 (SPOCS '18)

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Match statistics provide records of meaningful events that occur during the match, such as the score with time, name of scorer or name of injured players. Match statistics also include raw technical data such as the speed, distance, player separation or ball possession. After every match, the data is then processed and analyzed to form an analysis report that can guide both coaches and players in assessing the team performance during the match. While data from match statistics is useful to formulate game strategies, sports data collection begins with physiological data of individual athletes and players during training. Data from physical tests may cover physical skills (e.g., speed, agility, strength, vigor), mental skills (e.g., creativity, calmness, confidence), and technical skills (e.g., finishing, passing, shooting) of individual athletes or players.

In the essence, sports informatics deal with the resources, techniques, and applications required to optimize the acquisition, analysis, and use of sports data. With the rise of sports data website covering wide range of sports such as the American football, baseball, rugby, soccer and even golf, sports analytics have become an essential methodology to transform the sports data into meaningful and useful information used for decision making and strategic planning. Sports analytics exploit the full potential of the data through formulation of data-driven approach to design training scheme, prevent injuries, propose game strategies, visualize game flow, analyze opponent strategies or predict match outcome.

SAIN '18 aims to provide a platform for exchange of research ideas and discussion of practical applications of sports analytics, serving team owners, general managers, coaches, fans, and academics. We invite contributions on both individual or team sports with the objective to improve our understanding of the game or strategies for improving a team or a league. SAIN will be interdisciplinary in nature, and we encourage submissions from both academics and practitioners with a generic interest in sports.

List of Topics

Topics of interests include, but are not limited to:

- Data mining, machine learning and optimization
- Game strategies, tactics, and analysis
- Historical analysis and record progression
- Injury prediction and prevention
- Interactive analysis via visualization tools
- Match outcome prediction
- Performance management and prediction

- Physiological sensors and other sensors integration
- Player acquisition, player valuation and team spending
- Real-time predictive modeling
- Talent identification and management
- Training regimes and scheduling
- Video analysis and player tracking