MUMBAI Indians won the Indian Premier League (IPL) for the first time. Were they also the best team? In our July 2011 and July 2012 issues of Science Reporter, we confirmed that Chennai Super Kings really deserved to win at IPL-4, and that Kolkata Knight Riders towered over the rest of the competition at IPL-5 2012.

Again, this year, there were nine teams to start with, but now Sunrisers Hyderabad replaced Deccan Chargers. Thus, as before, there was a full blown double round-robin tournament with a total of 72 matches, and the four best teams at the end of this stage went into the playoff rounds to identify the two teams that would meet in the final. In all, 76 matches were played, but not all teams played the same number of matches. To find the “best” team in the tournament we shall use the same mathematical algorithm again.

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Last year, on the night of 20 May 2012, when each team had played the other twice, for a total of 72 matches, Delhi Daredevils topped the league. This year, they were right at the bottom. And the winner last year, Kolkata Knight Riders did not make the cut at all, being third from the bottom. What a reversal of fortunes!

As before we use the Kendall-Wei scheme for tournament ranking [T.H. Wei, The algebraic foundations of ranking theory, Cambridge University Press, London, 1952] [M.G. Kendall, Further contributions to the theory of paired comparisons, Biometrics 11 (1955), p. 43]. This is a process of recursive iteration; points are to be given according to the strengths of the teams beaten. Since this cannot be known beforehand, the raw scores are improved until the weighted scores are obtained, and at each stage, the “strength” of the team is revised until a stable, converged value is reached.

The IPL organizers however continue to use the row-sum procedure to rank the teams, where 2 points are given to each team that wins, a tie or a no-result (e.g. a match abandoned due to rain) earns 1 point and no points for a loss. In this simple formulation, a team got the same 2 points for beating the best team or the worst team. The KW scheme is a weighted scheme, while the IPL scheme is based on raw scores obtained from adding points uniformly irrespective of the strength of the team that was overcome. Further, where a variable number of matches has been played, it is possible to normalize the weighted scores to obtain an exergy indicator that provides the fairest ranking.

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The top four teams here are the same that the IPL promoters chose to go to the playoff stage (Mumbai, Chennai, Rajasthan and Hyderabad), but not in that order. As the Net Run Rate was used in the IPL rankings to resolve ties (both Mumbai and Chennai had 22 points each), Chennai with an NRR of +0.530 was ranked ahead of Mumbai (NRR of +0.441). These four teams had to play another four matches at the playoff stage.

The Kendall-Wei algorithm allows the recursive iteration to be continued over these additional games as well. This is reflected in the final standings shown in Table 2. Mumbai had played 19 games, Chennai and Rajasthan 18 games each and Hyderabad 17 games. The rest of the teams had of course played 16 games each. To take into account the variable number of matches played, an exergy measure is computed from the weighted points accumulated and the number of matches played [G. Prathap, The Energy-Exergy-Entropy (or EEE) sequences in bibliometric assessment, Scientometrics, 87 (2011), 515-524].

We see indisputably that Mumbai Indians are well and truly the most deserving champions of IPL-6 2013.

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