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BIG DATA IM PROFI-FUSSBALL

Analyse von Positionsdaten der Fußball-Bundesliga mit neuen innovativen Key Performance Indikatoren

Literatur

Carling, C., Reilly, T. & Williams, A. (2009). *Performance Assessment for Field Sports: Physiological, Psychological and Match Notational Assessment in Practice*. London: Routledge.

Carling, C., Wright, C., Nelson, L. J. & Bradley, P. S. (2014). Comment on 'Performance analysis in football: A critical review and implications for future research'. *Journal of Sports Sciences*, 32, 2.

Castellano, J., Casamichana, D. & Lago, C. (2012). The use of match statistics that discriminate between successful and unsuccessful soccer teams. *Journal of Human Kinetics*, 31, 139-147

Drust, B. (2010). Performance analysis research: Meeting the challenge. *Journal of Sports Sciences*, 28, 921 f.

Fujimura, A. & Sugihara, K. (2005). Geometric analysis and quantitative evaluation of sport teamwork. *Systems and Computers in Japan*, 36 (6).

Groom, R., Cushion, C. J. & Nelson, L. J. (2011). The delivery of video-based performance analysis by England youth soccer coaches: Towards a grounded theory. *Journal of Applied Sport Psychology*, 23, 16-32.

Horton, M., Gudmundsson, J., Chawla, S. & Estephan, J. (2014). Classification of passes in football: Matches using spatiotemporal data. *arXiv preprint arXiv:1407.5093*.

Hughes, M. & Bartlett, R. M. (2002). The use of performance indicators in performance analysis. *Journal of Sports Sciences*, 20, 739-754.

Lago-Peñas, C., Lago-Ballesteros, J., Dellal, A., & Gómez, M. (2010). Game-related statistics that discriminated winning, drawing and losing teams from the Spanish soccer league. *Journal of Sports Science & Medicine*, 9, 288-293.

Link, D. (2014). Using of Invasion Profiles as a Performance Indicator in Soccer. *Proceeding of International Association of Computer Science in Sports 2014 Conference, Darwin, Australia, 22-24 June 2014*.

Liu, H., Gomez, M. A., Lago-Peñas, C. & Sampaio, J. (2015). Match statistics related to winning in the group stage of 2014 Brazil FIFA World Cup. *Journal of Sports Sciences*, 33 (12), 1205-1213

Mackenzie, R. & Cushion, C. (2013). Performance analysis in football: a critical review and implications for future research. *Journal of Sports Sciences*, 31, 639-676.

Memmert, D. & Perl, J. (2009a). Analysis and simulation of creativity learning by means of artificial neural networks. *Human Movement Science*, 28, 263-282.

Memmert, D. & Perl, J. (2009b). Game creativity analysis by means of neural networks. *Journal of Sport Science*, 27, 139-149.

Memmert, D., Lemmink, K. A. P. M., Sampaio, J. (2016). Current Approaches to Tactical Performance Analysis in Soccer Using Position Data. doi:10.1007/s40279-016-0562-5.

Perl, J., Grunz, A. & Memmert, D. (2013). Tactics in soccer: an advanced approach. *International Journal of Computer Science in Sport*, 12, 33-44.

Perl, J. & Memmert, D. (2011). Net-based game analysis by means of the software tool SOCCER. *International Journal of Computer Science in Sport*, 10, 77-84.

Pollard, R. & Pollard, G. (2005). Long-term trends in home advantage in professional team sports in North America and England (1876-2003). *Journal of Sports Sciences*, 23, 337-350.

Taki, T. & Hasegawa, J. I. (2000). Visualization of dominant region in team games and its application to teamwork analysis. *Computer Graphics International, 2000, Proceedings* (pp. 227-235). IEEE.

Tenga, A., Ronglan, L. T. & Bahr, R. (2010). Measuring the effectiveness of offensive match-play in professional soccer. *European Journal of Sport Science*, 10 (4), 269-277

Staufenbiel, K., Riedl, D. & Strauss, B. (in Druck). Learning to be advantaged: The development of home advantage in high-level youth soccer. *International Journal of Sport and Exercise Psychology*.

Wallace, J. L. & Norton, K. I. (2014). Evolution of World Cup soccer final games 1966-2010: Game structure, speed and play patterns. *Journal of Science and Medicine in Sport*, 17, 223-228.

Weimar, D. & Wicker, P. (2014). Moneyball revisited: Effort and team performance in professional soccer. *Journal of Sports Economics* (doi: 10.1177/15270025145617).

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