

DMITRY DAGAEV

New Economic School and HSE University

E-mail: ddagaev@hse.ru

RESEARCH INTERESTS

- 1. Tournament design** (optimization of competitive balance, prevention of incentive incompatibility, scheduling, seeding, draw procedures)
- 2. Decision-making in sports** (voting in jury and committees, behavioral biases of athletes, referees, and bettors)
- 3. Game theory** (game-theoretical modeling of economic and political competition, as well as competition in sports)
- 4. Discrete mathematics** (many-valued logic, combinatorics, graph theory, scheduling)

EDUCATION AND DEGREES

- Candidate of Sciences (PhD) in Mathematics** *May, 2011*
Lomonosov Moscow State University
Department of Mathematics and Mechanics
Specialization: Discrete Mathematics and Mathematical Cybernetics
- M.A. in Economics** *June, 2008*
New Economic School
Specializations: Microeconomics, Finance
- M.Sc. (Diploma) in Mathematics** *June, 2006*
Lomonosov Moscow State University
Department of Mathematics and Mechanics
Diploma with distinction

WORK EXPERIENCE

HSE University *June, 2018 - present*
Head of Laboratory of Sports Studies

- Coordination of basic and applied research projects of the laboratory including:
 1. Scheduling the Russian Premier League
 2. Optimization of referees assignments for football tournaments
 3. Mathematical models of transfer market values of football players

HSE University *April, 2013 - May, 2023*
Deputy Vice-Rector (2013-2021), Director for Academic Development (2021-2022), and Vice-Rector for Basic Research (2022-2023)

- Development and implementation of mechanisms for researchers' academic development (academic bonuses for publications, competition of small research projects, publication activity evaluation etc.)
- Coordination of nearly 150 basic research projects at HSE University

- Teaching: ‘Calculus’, ‘Discrete Mathematics’, ‘Game Theory’, ‘Mathematical Models of Political Economy’, ‘Economic and Political Risks Modelling’, ‘Sports Economics’, ‘Fans, Media and Technology: The Commercial Side of Sports’
- Author of the Massive open online course ‘Game Theory’ on Coursera (started in 2015, more than 56000 registered students; average evaluation score of the course by students = 4.8 out of 5.0)
- ‘Best instructor’ award (awarded annually to 15-20% of instructors through student voting) – 2012, 2014, 2015, 2016, 2017, 2019, 2023

RESEARCH PAPERS

- Dagaev D., Paklina S., Reade J., and Singleton C. (2023). The Iron Curtain and Referee Bias in International Football. *Journal of Sports Economics* (in print).
- Adhikari A., Anatolyev S., and Dagaev D. (2023). Do Mistakes Provoke New Mistakes? Evidence from Chess. *IEEE Transactions on Games* (in print). <https://doi.org/10.1109/TG.2023.3275710>
- Dagaev D. and Zubanov A. (2022). Round-Robin Tournaments with Limited Resources. *Social Choice and Welfare*, **59**(3), 525-583. <https://doi.org/10.1007/s00355-022-01402-w>
- Dagaev D. and Stoyan E. (2020). Parimutuel betting on the eSports duels: Evidence of the reverse favourite-longshot bias. *Journal of Economic Psychology*, **81**. Article 102305. <http://doi.org/10.1016/j.joep.2020.102305>
- Dagaev, D. and Schurov, I. (2020). Bachel’s game with lottery moves. *Discrete Mathematics*, **343**(4). Article 111704. <http://doi.org/10.1016/j.disc.2019.111704>
- Dagaev, D., Lamberova, N., and Sobolev, A. (2019). Stability of revolutionary governments in the face of mass protest. *European Journal of Political Economy*, **60**. Article 101812. <http://doi.org/10.1016/j.ejpoleco.2019.08.003>
- Dagaev, D. and Rudyak, V. Y. (2019). Seeding the UEFA Champions League participants: evaluation of the reforms. *Journal of Quantitative Analysis in Sports*, **15**(2), 129-140. <http://doi.org/10.1515/jqas-2017-0130>
- Dagaev, D. and Suzdaltsev, A. (2018). Competitive intensity and quality maximizing seedings in knockout tournaments. *Journal of Combinatorial Optimization*, **35**(1), 170-188. <http://doi.org/10.1007/s10878-017-0164-7>
- Dagaev, D. and Sonin, K. (2018). Winning by losing: Incentive incompatibility in multiple qualifiers. *Journal of Sports Economics*, **19**(8), 1122-1146. <http://doi.org/10.1177/1527002517704022>
- Dagaev D. (2018). Decision-making in International Sports Organizations — a Survey. *Journal of the New Economic Association*, **40**(4), 167-174. (in Russian) [Дагаев Д. А. Принятие решений в международных спортивных организациях: обзор результатов. *Журнал Новой экономической ассоциации*. 2018. Т. 40. № 4. С. 167-174.] <http://doi.org/10.1177/1527002517704022>
- Dagaev D. (2013). On the Complexity of Three-Valued Logic Functions Taking Two Values. *Mathematical Problems of Cybernetics*, **18**, 35-122. (in Russian) [Дагаев Д.А. О сложности функций трехзначной логики, принимающих два значения // В кн.: Математические вопросы кибернетики Вып. 18. М.: Физматлит, 2013. С. 35-122.]

- Dagaev D. (2012). Behavior of the Shannon Function for Some Families of Classes of Three-Valued Logic Functions. *Moscow University Mathematics Bulletin*, **40**(4), 182-184. <https://doi.org/10.3103/S0027132212040092>
- Dagaev D. (2011). Complexity of Functions from Some Classes of Three-Valued Logic. *Moscow University Mathematics Bulletin*, **66**(3), 133-135. <https://doi.org/10.3103/S0027132211030119>
- Dagaev D. (2010). The Complexity of Pseudo-Linear Functions. *Moscow University Mathematics Bulletin*, **65**(2), 88-91.

CURRENT PROJECTS

- Dagaev D. On the outcomes of antagonistic sequential games with ties between players with limited search capacity (Under review in a journal)
- Dagaev D., Karpov I. The Strategies of Broadcasting a Soccer Championship. (Work in progress)
- Dagaev D., Nebolsina A. Hosting Sports Mega-Events: The Costs of Ensuring Rotation (Work in progress)

REVIEWER FOR

European Journal of Operational Research, Annals of Operations Research, International Transactions in Operational Research, Journal of the Operational Research Society, Operations Research Letters, Journal of Economic Behavior and Organization, Journal of Economics and Management Strategy, Social Choice and Welfare, Group Decision and Negotiation, Economics Bulletin, Journal of Sports Economics, Journal of Quantitative Analysis in Sports, Moscow University Mathematics Bulletin, Journal of the New Economics Association, Advances in Systems Science and Applications, Large-Scale Systems Control.

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS

MathSport Asia (Board member)
European Economic Association
European Sport Economics Association

SERVICE

HSE University Academic Council

- A member of the HSE University Academic Council (since 2019)
- A member of the Development Committee of the HSE University Academic Council (since 2019)
- An external member of the Scientific Committee of the HSE University Academic Council (2017-2019)

Other HSE University Committees

- A member of the Research fellow hiring committee
- A member of the Commission for short-term academic visits
- A member of the Student initiatives support committee
- A member of the 'Scientific battles' jury

Conferences organization

- Eastern conference on football economics / Western conference on football and finance – program committee coordinating member

- April International Academic Conference on Economic and Social Development – program committee member, head of the ‘Sports Studies’ section

Olympiads for high school students

- [International Economics Olympiad](#) – Founder (proposed the idea of the Olympiad and launched the project in 2017). This is one of 14 globally recognized [International Science Olympiads](#).
- National Olympiad in Economics – Jury member (since 2010), Head of the Jury (since 2021)
- HSE Olympiad in Economics – Jury member (2010-2017), Head of the Authors committee (2015 – 2017).
- NES (New Economic School) Olympiad in Economics – Jury member (2010-2014), Head of the Organizing committee (2011-2012)
- Various Mathematics Olympiads – Jury member in 2000s.

ACADEMIC PROFILES

HSE <https://www.hse.ru/en/staff/ddagaev>
Google Scholar <https://scholar.google.ru/citations?user=CNXIuL0AAAAJ&hl=ru>

MEDIA APPEARANCES

- Over 35 comments and sci-pop lectures in media (TV, radio, internet) on various sports and science issues.

LANGUAGES

Russian Native
English Fluent
French Basic

REFERENCES

- [Konstantin Sonin](#) (University of Chicago, Harris School of Public Policy)
John Dewey Distinguished Service Professor
E-mail: ksonin@uchicago.edu, ksonin@gmail.com
- [Dennis Coates](#) (University of Maryland, Baltimore County, Department of Economics)
Professor
E-mail: coates@umbc.edu
- [James Reade](#) (University of Reading, Department of Economics)
Professor, Head of Department of Economics
E-mail: j.j.reade@reading.ac.uk
- [Dries Goossens](#) (Ghent University, Department of Business Informatics and Operations Management)
Professor
E-mail: Dries.Goossens@UGent.be