

GlickoS Rating for Roundnet

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1 Why an Elo System in Roundnet

Ranking systems are a key feature in every Roundnet tournament. An accurate ranking can lead to a balanced tournament with an overall positive experience, while a less accurate ranking can ruin a tournament by creating unbalanced groups or make bracket games too hard at early rounds.

Even though at times it may be easy to spot which team should be ranked 1st, 2nd or 3rd, a more rigorous and impartial approach shall be used when dealing with more serious competitions and a broader range of teams. Most of the nation-wise ranking rely on the easier and computationally light *Point-Based* ranking, inspired from the [ATP Tennis ranking](#), which awards a pre-defined number of points to each player solely based on their final position at the event.

This points allocation method highly depends on the tournament size and its accuracy relies on the assumption that many athletes will eventually have the opportunity to compete in many events. This assumption fails in Roundnet as each European Nation – beside Roundnet Germany (RG) and maybe Roundnet France (RF) – has few tournaments and few players, yielding rankings that advantage player which play more often or that team-up with good players.

The [Elo system](#) solve such issues by awarding points based on each individual match of an event. The Elo system assume a player's strength via a rating and updates each rating according to the opponent's rating. RG introduced [their version of the Elo](#) for their domestic tournaments back in 2023 and it has been very popular ever since.

I see the future of Roundnet as a more interconnected sport, with ETS and big events having participation from all over Europe; thus, my objective is to build a Elo system that is comprehensive of all events that take place in Europe, but not limited to. Despite the success of RG Index (RGX), the RGX does not include the European Tournaments nor it includes each nation's domestic tournament (although RG seems to be moving in that direction since it [added](#) the Swiss tournament in the ranking and its slowly adding the ETS in PlayerZone (PZ)). Nonetheless, adding some nation's tournament will lead to a potential bias for those who play in such nations and will make the ranking not accurate unless the nations share many tournaments were many player from both nation match up against one another.

ETS are indeed the kind of tournament one should look for when dealing with international rankings, as many athletes from many countries face each other. Indeed, by facing each other at international events, the player will implicitly "validate" and "correct" their national rankings, making it fairer for all.

In this pdf you will find a guide to the ranking. Section 2 will explain the mathematical aspects that regard the computation of the ratings. Section 3 will explain how the site is structured. Section 4 will go through some problem that arised in the making of the ranking and what are the possible solutions. At the end of the pdf there is a complete list of all tournaments in the database.

2 What is the Glicko system?

The common Elo system used by RGX takes into account a single rating which varies when games are played. The Elo represent the best guess to actually capture the "true" rating of a player and each rating update can be thought of as taking a step closer to the latent "true" value of a player.

Regardless of its succesfull implementation in chess, I think that the small world of Roundnet could benefit from a more complex model which utilizes more paramter that reflect some key aspects of Roundnet. For a given rating r , the update formulae for r' after a tournament for Elo and my proposed Glicko are:

$$r' = r + K \sum_{i=1}^n \left(S_i - \frac{1}{1 + 10^{(r_i - r)/400}} \right) \quad (\text{ELO})$$

$$r' = r + k(\text{RD}) \sum_{i=1}^n g(\text{RD}_i) \left(S_i - \frac{1}{1 + 10^{g(\text{RD}_i)(r_i - r)/400}} \right) \quad (\text{GLICKO})$$

$$r' = r + k(\text{RD}) \sum_{i=1}^n w_i g(\text{RD}_i) \left(S_i - \frac{1}{1 + 10^{g(\text{RD}_i)(r_i - r)/400}} + b \right) + \lambda (\bar{r} - r) \quad (\text{GLICKOS})$$

where $i = 1, \dots, n$ are the n opponents in the tournament and

- S_i is the score outcome of each match, r_i are the opponents ratings;
- RD is the **Rating Deviation**;
- $k(\cdot)$ is a function which is *directly* proportional to RD while $g(\cdot)$ is *inversely* proportional to the opponents' RD_{*i*};
- w_i is the weight given to the match depending on the tournament phase;
- 400 is chosen such that a difference between the two teams ratings of 400 points gives an approximated 90% win-probability to the higher rated team;
- b is a **Drift Constant** which gives a per game bonus to each player on the basis that players who play more often may improve irrespective of whether they win or lose;
- λ is a **Neighbourhood Parameter** and $\bar{r} = \frac{1}{n} \sum_{i=1}^n r_i$ is the mean rating of the opponents.

For more mathematical details see [Prof. Glickman website](#) and the [description of the R package PlayerRatings](#).

The model displayed on federicograzi.shinyapps.io/GlickoRanking is GLICKOS with the parameters values set as described below.

2.1 Combining the two Players

In the just shown formulas, only one rating and one RD is contemplated per team, nonetheless each player has its own individual Rating and RD. Indeed, this ranking uses composite values, that is

$$r_{\text{team}} = \frac{r_1 + r_2}{2}$$
$$\text{RD}_{\text{team}} = \sqrt{\frac{\text{RD}_1^2 + \text{RD}_2^2}{2}}$$

Then, each value is fed into [GLICKOS](#) as r and RD.

2.2 Score

Similar to chess, the usual values for S_i are also employed in this model:

- Win $\rightarrow S_i = 1$;
- Draw $\rightarrow S_i = 0.5$;
- Loss $\rightarrow S_i = 0$.

A difference with the [RGX](#) and this model is that, although it agrees that a 2-1 win (1-2 loss) should not count the same as a 2-0 win (0-2 loss), this model uses more extreme score outcomes

- 2-1 Win $\rightarrow S_i = 0.75$;
- 1-2 Loss $\rightarrow S_i = 0.25$.

PZ simple coding to $2 - 1 \rightarrow 2/3$ and $1 - 2 \rightarrow 1/3$ was thought to give too much credit for a single set in a match were the outcome is not a clean sweep. In this model, thus, its harder to lose (win) points by simply losing (winning) one set in a Bo3 matchup, although it is still a scenario that happens.

2.3 Rating Deviation

The first important addition in [GLICKOS](#) is the *Rating Deviation* (RD). The RD measures the uncertainty of the rating: a high RD means that a player may not be competing frequently or that a player has only competed in a small number of tournament games. A low RD indicates that a player competes frequently; this is due to the player's RD decreasing every time one plays. The reasoning behind adding this parameter is that the more games played, the more information is learned about a player's ability, so the more precise the rating becomes. As time passes without seeing a player's ability, we become more uncertain about the player's strength and this is reflected in the RD increasing.

Indeed, the RD update formula when a player is inactive is

$$RD_{\text{now}} = \min \left(\sqrt{RD_{\text{old}}^2 + c^2 t}, 200 \right) \quad (\text{Inactivity Update})$$

where t is the time passed between *now* and *old* and c is a constant that determines how much time needs to pass before a player's rating is so uncertain that the RD needs to reset to the default one. For my ranking $c = 14$, which yields a reset-time of 2 years.

Reparametrization as of October 30, 2025:

In case of Squad competition where the number of matches of each player is small and vary, the value of c is set to 18. This is done to prevent RD to drop excessively with a relative small number of games and to make the RD drop with tournaments with more games, which mean more reliable changes in the rating.

Meanwhile, the formula to update the RD after an event is

$$RD = \sqrt{\frac{1}{1/RD_{\text{now}}^2 + 1/d^2}} \quad (\text{Tournament Update})$$

where d is a quantity that is proportional both to the RD of the opponents you face, and the number of games played in the tournament. For a more detailed explanation please refer to [Prof. Glickman website](#).

This means that facing opponents with high RD will give to the model less information about your "true" level since you faced someone that the model is still uncertain about, while facing someone with low RD will give much more information about your "true" level. Thus, there might be times in which your RD drops more or less depending on the opponents and the number of games played.

As shown in Formula [GLICKO](#), the RD determines the amount of variation in the rating after an event: the higher the RD the greater the magnitude of the variation, and viceversa. You can experiment with how the RD influences the rating with the Calculator that will be explained in Section [3.4](#).

Example

Say that before winter-break a you have a rating of 1500. Suppose that you won't play any tournaments during winter, but will grind a lot, becoming better than you were before winter-break. If your rating was (say) 1500 and we assume it was close to your "true" value, this means that by grinding all winter, you should've reached a "true" value 1600. Nonetheless, at your first tournament post-winter you will be under-rated due to not having competed, but indeed, this long break made your rating uncertain and this is represented by having a higher RD, as it increased during the month of inactivity.

Thus, the rating system will give higher variation to make you reach faster your true value. For example, for a 50% win-probability match the Elo variation is ± 10 points and it would take at least 10 wins to reach your "true" value of 1600, meanwhile with high RD – say 200 – you will obtain around^a ± 30 points for a win, getting you to 1600 faster.

^aThe variation depends on the RD of the opponent which is not specified for simplistic reasons

2.3.1 A Real Life Example to Understand the RD¹

To better understand how this effects the rating, we can look at Andrea Borsotti's rating and rating deviation, and how it changed over time.

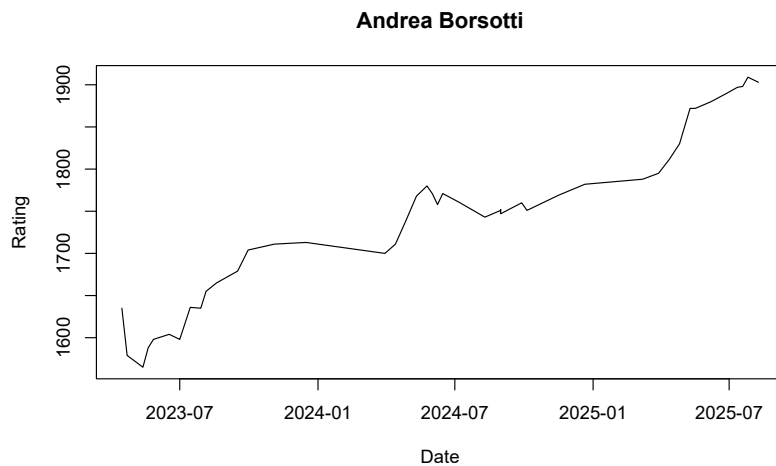


Figure 1: Rating

¹Data as of October 14, 2025. Up to date values may differ.

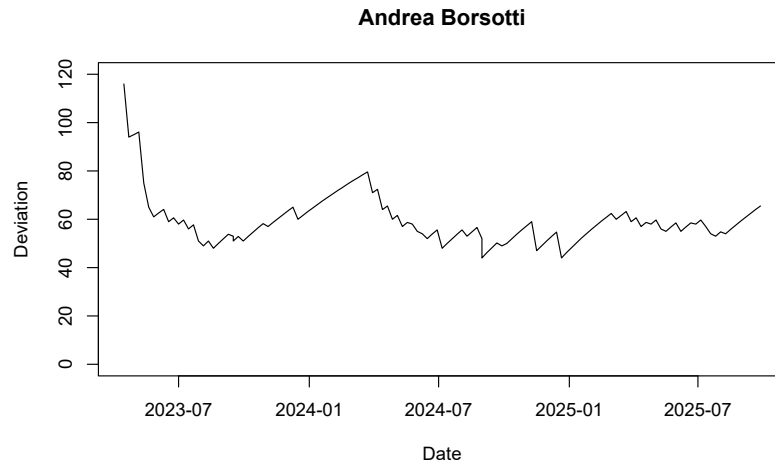


Figure 2: Rating Deviation

Figure 1 shows the rating change during time. It can be seen that during Andrea Borsotti's first tournaments there is an increase in rating volatility due to his RD being still high: his updates in the rating have a greater magnitude but as time passes his updates tend to be more reduced in magnitude.

Figure 2 shows how the RD updates over time, both with the inactivity updates – when the RD linearly increases – and the tournaments updates – when it sharply declines. You can see that for his first tournaments during the summer of 2023 his RD drops until it finds a stable value between 60 and 50. Then the winter break comes and due to a lower frequency of tournaments (hence, inactivity) his deviation increase linearly – see [Inactivity Update](#).

This increase in the RD makes his rating become uncertain and, as you can see by comparing the two Figures, at the first tournament of 2024 there is a higher variation in the rating since his RD was not low. Probably during winter Borsotti trained hard and came back in in 2024 stronger than he was before. The Glicko system tried to "catch up" as fast as possible with this increase in his "true" value by letting him vary more. In fact, once the RD drops, also his rating stabilizes, meaning that Glicko actually managed to reach a value close to his "true" latent value.

Nonetheless, keep in mind that **high rating increase are not limited to high RD**. Indeed, the 2025 season showed Borsotti playing always with a stable and low RD but still managing to gain a huge amount of points, due to him beating many top level athletes rather than simply high RD.

2.4 Drift Constant

The *Drift Constant* is a slight increase in the probability of winning, this translates in a small value of bonus points that are given to each player. This slight drift will slowly bias the player who play more often and represents the learning process that each player experience at every tournament. Everytime you face a player, you encounter new ways of playing, you become more familiar with different playstyles and with different players. You start to recognize patterns quicker and this ability is captured by the drift constant.

The value b varies depending on the tournament. Table 1 show the various values of b for each tournament type. This choice was made to give more value to important EURA international tournaments and to the other biggest tournaments in Europe– as of now the French National tournaments and German Master series. The usual national tournaments are usually played against the same players without much change in who you face, so you usually don't meet new athletes during such tournaments, and thus b was set to 0.

Table 1 shows the values of b for each tournament and the maximum gain in points that can be obtained. Note that each player will usually obtain less points then those represented in the table.

Tournament Type	b	Theoretical <i>Maximum Effect</i> ² (in points)	
		Low RD (= 50)	High RD (= 80)
ETS	1/20	+5.3	+13.4
STS Major	1/30	+3.5	+9
RG Master	1/30	+3.5	+9
RF TSN	1/50	+2.1	+5.3
EURA Sanctioned	1/50	+2.1	+5.3
Other Tournaments	0	0	0

Table 1: Value of b for different tournaments.

2.5 Neighbourhood Parameter

The *Neighbourhood Parameter* takes advantage of the categories that exists in each tournament. Many tournaments have closed categories which you can enter only by obtaining a certain status – wether its EURA Pro, German Pro or Baguette Status in France. This "status" suggests that to compete in the highest stage of a tournament, you must at least be the best of the lower category or, essentially, that your level is high enough to earn you such status.

Thus, the Neighbourhood Parameter will slightly adjust your rating based on the category you play in by computing the average rating of your opponents, observing the difference with your rating and adding it to your rating after scaling it by a factor of λ .

²Calculation based on tournament with 3 group matches and 5 bracket matches.

Table 3 shows the values of λ in 2025 and its Mean Absolute Value: note that this effect is both positive – in case you have a lower rating than your opponents – or negative – if you have highly rated with respect of your opponents – and thus its average effect is always 0. Table 3 thus depicts how much it impacts on average (either positive or negative).

Tournament Type	λ	Mean Absolute Value in 2025
ETS	1/30	3.2
RG Master	1/40	2.1
EURA Sanctioned	1/50	1.4
Winter Leagues ³	1/50	1.4
Other Tournaments	0	0

Table 3: Value of λ for different tournaments.

This parameter pushes up those who still have a low rating but have gained an important status and prevent those with high rating to gain a large number of points by simply beating lower rated players. It essentially slightly clusters the rating of each category towards its average value.

³Swiss League 2024 not included as athletes didn't play enough games to make the Neighbourhood insightful

Example

Consider a ETS events. Take two high level contender team with a Rating of 1500. Assume that at the first ETS of the season one manages to gain Pro status and the second doesn't. In this scenario, the first team will play Pro at the second ETS, but will surely lose many games to higher rated opponents, say 4 loss to teams rated 1900, 1800, 1700 and 1600. At the same time, the second team will still have to play Contender and will surely win many games to lower rated opponents, say 4 wins against teams rated 1100, 1200, 1300 and 1400.

In this scenario, its not fair that after the tournament the first team will have a lower rating than the second team, since also the second team would've performed in the same way. The NP will try to solve this issue by adjusting as follows:

$$\begin{aligned}\frac{1}{\lambda} \frac{1}{4} \sum_{i=1}^4 r_i - r_1 &= \frac{1}{30} \left[\frac{1}{4} (1900 + 1800 + 1700 + 1600) - 1500 \right] = \\ &= \frac{1}{30} (1750 - 1500) = \frac{1}{30} 250 = +8.5. \\ \frac{1}{\lambda} \frac{1}{4} \sum_{j=1}^4 r_j - r_2 &= \frac{1}{30} \left[\frac{1}{4} (1100 + 1200 + 1300 + 1400) - 1500 \right] = \\ &= \frac{1}{30} (1250 - 1500) = \frac{1}{30} (-250) = -8.5.\end{aligned}$$

In this way, the first team will have countered some of the points lost by playing in the Pro category for which they are not at level, and the same will happen for the second team which has a higher rating than the contender average level.

Note that this is a highly extreme example.

2.6 Weights

Given the nature of Roundnet as a multi-phase tournament, each phase is weighted differently based on the importance in determining the winner of the tournament.

For a general tournament here are the Weights for the most common phases. The 2024 Worlds also had different individual weights based whether it was Gold, Silver or Bronze group and bracket stage and placement matches.

Phase	w_i
Single Match Group Stage	0.50
Double Match Group Stage	0.775
Bracket Stage	1
Third Place Match	0.85
Lower Bracket Stage	0.35
Placement Games	0.25
Positioning Games (RB)	0.45
Bundesliga Match (RG)	0.70

2.7 Penalization

The ranking also include a penalization term in case a player is inactive for long periods of time. After 42 weeks – or approximately 9 or 10 month – 5% of a player rating is deducted. This penalization does not effect the RD, which continues to increase regardless of the penalization.

Here is a table with possible penalization values for different rating values.

Rating	Penalization
2000	-100
1900	-95
1800	-90
1700	-85
1600	-80
1500	-75
1400	-70
1300	-65
1200	-60
1100	-55
1000	-50

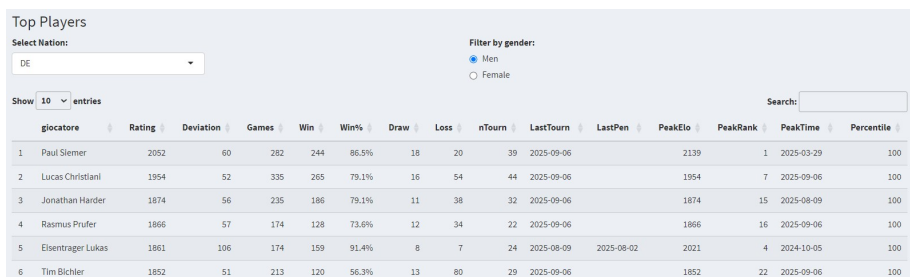
3 Navigate the Site

Whether you are looking on the **RCB site** or on the **Shiny site** you have the same interface with 4 panels. I will briefly explain what you are seeing in each panel.

3.1 Nation Ranking

The first panel is the one that shows the current ranking. Here you can choose which Nation's Ranking to display. There is also the possibility to see only European athletes, or include also American athletes by choosing all.

- Rating and Deviation represent the current Rating and RD of the player.
- Some summary statistics follow.
- LastTourn and LastPen tell you respectively the last time a player took part in a tournaments and the last time the player was penalised due to inactivity. If LastPen is empty, the player was never penalized.
- PeakElo represent the maximum Rating reached by the player, while PeakRank is the maximum global rank reached by the player. PeakTime tells you the time when the player was at his PeakRank.
- Percentile is at what overall percentile the player is.



Top Players															
Select Nation: DE															
Filter by gender: <input checked="" type="radio"/> Men <input type="radio"/> Female															
Show 10 entries															
Search:															
	giocatore	Rating	Deviation	Games	Win	Win%	Draw	Loss	nTourn	LastTourn	LastPen	PeakElo	PeakRank	PeakTime	Percentile
1	Paul Siemer	2052	60	282	244	86.5%	18	20	39	2025-09-06		2139	1	2025-03-29	100
2	Lucas Christiani	1954	52	335	265	79.1%	16	54	44	2025-09-06		1954	7	2025-09-06	100
3	Jonathan Harder	1874	56	235	186	79.1%	11	38	32	2025-09-06		1874	15	2025-08-09	100
4	Rasmus Prufer	1866	57	174	128	73.6%	12	34	22	2025-09-06		1866	16	2025-09-06	100
5	Eisentrager Lukas	1861	106	174	159	91.4%	8	7	24	2025-08-09	2025-08-02	2021	4	2024-10-05	100
6	Tim Bichler	1852	51	213	120	56.3%	13	80	29	2025-09-06		1852	22	2025-09-06	100

Figure 3

Note that only *active* players are shown in this page. An *Active* player is defined by having played:

- **At least 3 Tournaments;**
- **At least 15 Games;**
- **At least a Tournament Game in the *Last 2 Years*.**

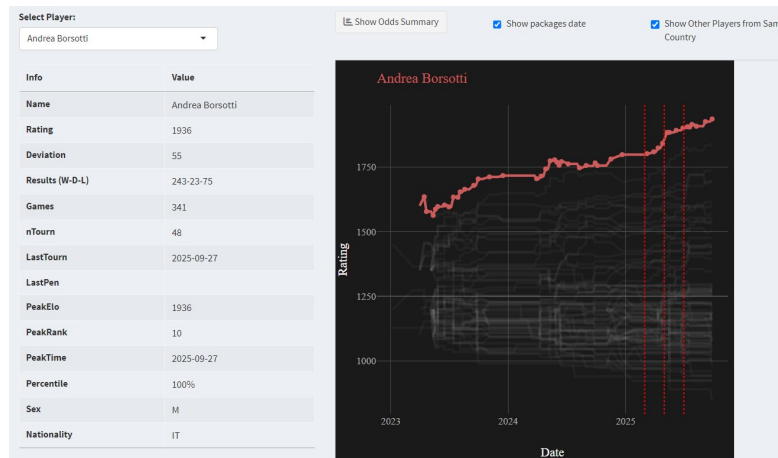


Figure 4

3.2 Player's Page

In the Player's detail page one will find more precise information regarding the statistics of a single athlete.

A table with a summary of the values of a player appears once the player is selected, along with the graph of the player's rating. This graph is by default shown with only the single player path, but, as shown in Figure 4 one can add the lines regarding the time in which the package were used and also include the graphs of the players from the same nation. This is thought so that everyone can see if the packages had any important effect in the player's rating, along with comparing him/herself nation-wise and see how well you performed with respect to your fellow players.

Summary Odds

The button [Show Odds Summary](#) displays a pop-up with some interesting matches based on the odds computed via the [GLICKO](#) formula. It displays

- Best Upset = The match the player won with *lowest* Pre-Game Odds among all games
- Best Bracket Upset = The match the player won with *lowest* Pre-Game Odds during a Bracket Phase
- Worst Lost = The match the player lost with *highest* Pre-Game Odds among all games
- Worst Bracket Lost = The match the player lost with *highest* Pre-Game Odds during a Bracket Phase
- Highest Rated Win = The highest rated team the player won against

Summary Odds for Andrea Borsotti

Type	Partner	Team Rating	Opponent Team	Opponent Rating	Pre-Game Odds	Result	Tournament
Best Upset	Riccardo Mercadini	1618	Yosha Vandaele & Levi Vandaele	1752	31.6%	Group Win (1:0)	ETS Padua 2023
Best Bracket Upset	Nicola Bazzani	1860	Paul Siemer & Laura Kunzelmann	1958	36.3%	Bracket Win (2:1)	ETS Basel 2025
Worst Lost	Nicola Bazzani	1731	Murray Noble & Levi Geyer	1350	90%	Group Lost (0:1)	World's Individual Group Stage 2024
Worst Bracket Lost	Riccardo Mercadini	1635	Fabian Claus & Josha Lauterbach	1450	74.3%	Bracket Lost (0:2)	Cologne Trophy 2023
Highest Rated Win	Nicola Bazzani	1860	Paul Siemer & Laura Kunzelmann	1958	36.3%	Bracket Win (2:1)	ETS Basel 2025
Highest Rated Match	Nicola Bazzani	1750	Paul Siemer & Eisentrager Lukas	2048	15.3%	Group Lost (0:2)	STS Championship 2024

Showing 1 to 6 of 6 entries

Dismiss

Figure 5

Points per Tournament

By selecting a Tournament you can look into the individual games of each tournament that a player took part into. The output is the same as in Figure 6.

For most tournaments the matches are in order from first to last played, but sometimes the bracket phase may be inverted, or a few game may be not in order, but generally you should always see "Group → Bracket → Placements"

Select Tournament:			
Master Kiel 2025			
Tournament Infos			
opp1	opp2	Score	Points
Georg Seifarth (1677)	Paul Siemer (2072)	Group Draw (1:1)	0
Pascal Schlosser (1562)	Cedric Strehlow (1558)	Group Win (2:0)	1
Lukas Paschold (1187)	Simon Wimmer (1499)	Group Win (2:0)	0
Jan Petersen (1574)	Rasmus Prufer (1807)	Bracket Win (2:0)	4
Kasimir Neraad (1638)	Lennart Kuhner (1726)	Bracket Win (2:0)	4
Pascal Schlosser (1562)	Cedric Strehlow (1558)	Bracket Win (2:0)	2
Squadra:	Nicola Bazzani (1812)	5/6	11
	Andrea Borsotti (1905)		

Figure 6

All Record of Matches Against Someone

By clicking a row of the table at the end of the page, you can find all the matchups between the selected player and the clicked player.

Matches between Andrea Borsotti and Mattia Pareschi

Show entries Search:

Opponents	Opponent Rating	Partner	Team Rating	Pre-Game Odds	Result	Tournament	Date	Points
Matteo Molli & Mattia Pareschi	3429	Nicola Bazzani	3759	72.1%	Bracket Win (2:0)	Italian Nationals 2025	2025-09-27	5
Luca Tosatti & Mattia Pareschi	3215	Giacomo Colliva	3169	46.7%	Group Win (1:0)	Swim&Spike Forlì 2025	2025-07-19	5
Luca Tosatti & Mattia Pareschi	3215	Giacomo Colliva	3169	46.7%	Third Place Lost (0:2)	Swim&Spike Forlì 2025	2025-07-19	-7

Figure 7

3.3 Tournament Page

This page is intended to look at the general facts and figures of a tournament. Figure 8 shows the possible views. Once selected a tournament and a division one can look at

- Improvements = The Rating improvement from the previous Rating and the Updated Deviation along with the old ones and summary statistics such as Wins, Draws, Loss, Games and CatRating, which is the effect of the Neighbourhood Parameter (2.5);
- Opponents Ratings = The average rating for the opponents of each player during each phase of the tournament. By clicking on the cell one can see in detail who were the opponents. This section is meant to check the level of the Group Stage or Bracket Stage.

Select a Tournament:

Select a Division:

Improvement

Opponents Ratings

Figure 8

3.4 Calculator

At last, you can find a calculator to understand how the system works. You can either manually input a team Rating and RD, or select players from the database to simulate how many points would a certain game give you.

The calculator has fixed weights of 1 and $b = \lambda = 0$.

Calculate By:

☐ Team
 ☒ Players

Player A1 Rating

1936

Player A2 Rating

1842

Player B1 Rating

1697

Player B2 Rating

1739

Player A1 Deviation

58

Player A2 Deviation

58

Player B1 Deviation

59

Player B2 Deviation

58

Select Players from List

Game Outcome

Team A Win (2:0)

Calculate

Team A

Statistics	Andrea Borsotti	Nicola Bazzani
Expected Win Probability	0.72	0.72
Points	5	5
New RD	58	58

Team B

Statistics	Matteo Molli	Mattia Pareschi
Expected Win Probability	0.28	0.28
Points	-5	-5
New RD	59	58

Figure 9

3.5 Report Wrong Info

Please, report any mistake that you see in the rating either by directly writing to me or by using the panel "Report Wrong Info", which will help you report in a user-friendly and quicker way what to change in the ranking.

Please, feel free to use this section also to suggest changes.

4 Limitations

This ranking model, as any mathematical model that tries to shrink reality into numbers, is an approximation, and it captures as much as we can give to the model. This means that some flaws are inevitable. I will present the limitations and problems which have arisen in the making of this ranking and will briefly try to go over what the next steps for solving such issues could be.

One Ranking for Women and Men

The elephant in the room is the fact that both male and female athletes have the same ranking no matter which category they play in. This problem came up once I started to add many tournaments and many more Women's category appeared in the ranking⁴ causing athletes to have different rating behaviours although they are in the same group.

Table 4 shows a comparison between some Male and Female players with the RGX. The Male athletes, when both datasets have many games, reach similar levels, thus there is concordance between two systems. The same cannot be said for female players. First of all, ratings for athletes which *solely* play in the Women's category will be more difficult to compare to the athletes that play in the Open category, even though the Initialisation takes into account an average lower level and poses another methodology question.

For example, Laura Kunzelmann – which played many tournaments in the Open category – has a quite reliable rating for her level and can be compared with other male athletes. Meanwhile other female athletes with a high rating may not be comparable with a male athlete that has a similar rating.

Thus, if the rating for the male players can be compared with more certainty, the female's rating should be looked into with more detail. In the future I plan to change the code to have an Open and Women rating, but given the state of my poorly written code and my horrible data-managing skills, I prefer to postpone it, confident that the rating still has meaningful insights also for female players.

Initialization

At each tournament the divisions are changed to match one of Table 5's divisions. While EURA's tournament keeps their Pro, Contender and Advanced ratings, for the various Nationals Tour Stop the categories are changed in such way

- Pro Category → Open Contender
- Contender Category → Open
- Advanced Category → Open Intermediate

⁴I say this simply because (unfortunately) in Italy we don't have many women playing, and usually female players tend to play in the Open category.

Table 4: Comparison between GR and RGX for various players. In parenthesis the number of games considered for each player. Data as of October 14, 2025.

Player	GlickoRating	RGX Open	RGX Women
Paul Siemer	2047 (282)	2014 (322)	-
Levi Vandaele	1949 (268)	1680 (35)	-
Tim Bichler	1850 (213)	1800 (362)	-
Louis Mareschal	1842 (318)	1622 (53)	-
Nicola Bazzani	1841 (360)	1773 (34)	-
Paul Schirop	1794 (202)	1832 (425)	-
Gabriel Stoisser	1758 (302)	1582 (44)	-
Tim Klement	1732 (281)	1645 (429)	-
Cedric Widin	1624 (241)	1750 (286)	-
Matias Bermejo Pasetti	1623 (254)	1568 (247)	-
Laura Kunzelmann	1803 (329)	1390 (40)	2103 (267)
Daniela Kadlec	1712 (290)	-	1704 (43)
Theresa Knauf	1650 (199)	-	1848 (345)
Ines Kornek	1621 (154)	-	1744 (172)
Chiara Pernigo	1549 (321)	-	1645 (58)
Natacha Alt	1515 (286)	1192 (28)	1663 (94)
Svenja Kuhner	1346 (161)	-	1540 (277)
Florentin Gilde	1283 (36)	1209 (21)	1499 (224)

- Open Category \longrightarrow Open
- Women's Pro Category \longrightarrow Women's Contender
- Women's Category \longrightarrow Women's Intermediate

The only exception is for RG tournament which have their own *Pro German* and *German Contender* values.

As already mentioned, the Women's category have smaller initial values. The combination of rating and deviation was tuned using Cross-Validation method at the start of this year to give the optimal initial values of Open Pro, Open Contender and Women's Pro that lead to highest predicted win percentage.

Data from 2023 onwards

The competitive roundnet scene started to mature and engage with many athletes starting from 2023: this is the year in which many NGBs started to plan each local Tour Stops. Using 2023 as a starting point helped in having a clear objective and not losing myself in seeking tournaments that maybe are lost.

Nonetheless, I acknowledge that already in 2022 NGBs from Austria, France, Belgium and Germany had high level tournaments which culminated in the

Table 5: Initial Values for each Division

Division	Rating	Deviation
STS Pro	1700	215
Open Pro/Elite	1600	300
Open Elite	1600	200
Pro German	1450	200
German Contender	1300	250
Open Contender	1250	200
Open	1200	200
Open Advanced/Intermediate	1100	200
Intermediate German	1075	220
Women's Pro	1350	100
Women's Contender	1150	200
Women's Intermediate	1100	100
Women's Advanced	1000	150

2022 European Championship in Limerick and 20220 Worlds Championship in Belgium. Excluding such performances may seem unfair to those who have had a great stretch in late 2022 and early 2023, but having a rigorous starting date made it easier to avoid cherry-picking in choosing which tournament should be added and which not.

As of now, I plan to keep it this way until all the data from the last 3 years is obtained. But the desire to add the 2022 Worlds and European Championship never leaves me, and I will eventually look forward towards adding competitions from 2022 (2021 is not yet contemplated).

Moreover, continuously retroactively adding tournaments to the dataset will slightly change the ranking by a few values also for those that did not take part in that tournament. Thus, if you see your rating slightly modified, probably is simply because another past tournament was added.

Lack of Tournaments

Table 6 shows the number of tournament in the database for each nation. I've added the most important USAR tournaments in order to have accurate updates from Worlds 2024 (and eventually Worlds 2026): although the USAR tournament are the most prevalent in the database, the US ranking is not the aim, and thus many tournaments are not included due to few teams participating or not having the Bronze (5.0+) category, which is the one in which most of the national US team compete.

RG has many small to medium tournaments in PZ. For time consuming reasons, I've added only the Masters series and some of the biggest tournament which are not masters. Eventually, many medium to big tournaments will be included, but as of now my main concern is to add the 2023 and 2024

Bundesliga, which will cover the large lack of updates in the german players during winter. Thus, expect variation in the rating for many players.

Unfortunately, Roundnet Spain has lost all the data from the Click'N'Run platform, thus their tournaments from 2023 and 2024 are forever lost, which means that only those of 2025 onwards are in the database. This means that the spanish players have a slight disadvantage since many of their performance are excluded from the model.

Hopefully, I've added all of the main Tour Stops from Austria and Switzerland which I could find either in PZ or Fwango. You can check if some are missing by looking at Table 7,

If a tournament is indeed missing, don't hesitate to forward more data to federicograzi@gmail.com.

For the near future, my first priority is to add tournaments from Poland, Netherlands and Romania, since these are the biggest communities with tournaments on fwango that I have not added yet.

Table 6: Number of Tournaments per Nation in the Database. ETS are included in the count of each Nation. Update as of October 30, 2025

Nations	n
US	50
DE	39
FR	24
SUI	24
BE	23
IT	21
AU	19
SWE	13
POL	13
DEN	13
ROM	8
CZE	5
EN	4
SP	4
LAT	2
NED	2
FIN	1

Coding Names

For some time I've tried to keep all the names with correct accents and letters, but since I'm not running a ID for each player, standardizing every name was the less painfull way to avoid not adding a tournament to the correct player.

I've passed many hours changing the correct names, since it would happen that someone was called Francois in PZ, François in Fwango and Frank in CnR. Please be merciful if your name is slightly inaccurate.

Especially Theo Van Hemelryck, I don't know why but in your first fwango tournament your name was written as "Theo Vanh Hemelryck" and I haven't changed it since. Many errors like this are carried on from poorly written names on fwango.

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I also thank Michele Berlanda who gave me the final push to make this project public by suggesting shiny.

For the French tournament I would like to thank Louis Mareschal who shared the past tournaments with me.

For the Danish tournament I would like to thank Jokob Blaaholm Nielsen who showed interest in the project and kindly forward the data of the 2024 and 2025 season.

For all other files, I would like to thank everyone who received (and will receive) a mail regarding the export from fwango.

List of All Tournaments

Table 7: Tournaments in the Ranking. Updated: October 30, 2025

	Nation	Date	Tournament
1	LAT	2023-01-07	Riga Winter Open 2023
2	US	2023-01-07	GWR 2023
3	ROM	2023-01-28	Cluj Indoor Open 2023
4	DEN	2023-03-11	Nordic Challenger 2023
5	CZE	2023-03-18	Prague Spikedown 2023
6	POL	2023-03-25	Spike The West - Szczecin 2023
7	FR	2023-03-25	RF Majeur Rennes 2023
8	FR	2023-03-25	PPP1.0
9	US	2023-04-01	Florida Spikeball Challenger 2023
10	EUR/FR	2023-04-15	ETS Parigi 2023
11	DE	2023-04-15	Master Freiburg 2023
12	US	2023-04-15	Richmond Major 2023
13	DE	2023-04-22	Cologne Trophy 2023
14	SWE	2023-04-22	SRT Goteborg 2023
15	BE	2023-04-22	RB Brussels Wolf 2023
16	AU	2023-04-29	1. Osttirol Roundnet Open 2023
17	EUR/SUI	2023-04-29	St Gallen Sanctioned 2023
18	POL	2023-04-29	Warsaw Open 2023
19	EUR/FR	2023-05-06	Paris Sanctioned 2023
20	DE	2023-05-13	Master Wurzburg 2023
21	DE	2023-05-14	Master Wurzburg Open Advanced 2023
22	EUR/CZE	2023-05-15	ETS Prague 2023
23	IT	2023-05-20	Padova Spring 2023
24	POL	2023-05-20	Poznan Roundnet Open 2023
25	BE	2023-05-20	RB Kortik 2023
26	SWE	2023-05-20	SRT Uppsala 2023
27	AU	2023-05-27	3. Vorarlberger Roundnet Champions-Cup
28	IT	2023-05-27	RI Bologna 2023
29	FR	2023-05-27	RF Mineur Nantes 2023
30	EUR/SWE	2023-06-03	ETS Stockholm 2023
31	AU	2023-06-10	1. Eschi Open 2023
32	US	2023-06-14	Salt Lake City Major 2023
33	AU	2023-06-17	3. Vienna Victory Cup 2023
34	POL	2023-06-17	Olsztyn Open 2023
35	BE	2023-06-17	RB Brussels Fox 2023
36	DE	2023-06-17	Master Marburg 2023
37	US	2023-06-17	Queen City Classic Spikeball Challenger 2023
38	US	2023-06-17	San Diego Spikeball Challenger 2023
39	IT	2023-06-17	Roundnet Riviera Rimini 2023
40	AU	2023-06-24	Roundnet Austria Graz Open

41	FR	2023-06-24	RF Majeur Montpellier 2023
42	DE	2023-06-24	Master Erlangen 2023
43	AU	2023-06-24	Schaffhausen Cashout 2023
44	US	2023-06-24	NOVA Clash Spikeball Challenger 2023
45	DE	2023-06-25	Master Erlangen Int. 2023
46	AU	2023-07-01	Innsbruck Roundnet Austria Tour Stop 2023
47	SUI	2023-07-01	Luzern 2023
48	POL	2023-07-01	SRT Jonkoping 2023
49	US	2023-07-01	Portland Open Spikeball Challenger 2023
50	FR	2023-07-03	STS Toulouse 2023
51	SUI	2023-07-08	Zurich Open 2023
52	US	2023-07-08	Long Island Spikeball Challenger 2023
53	US	2023-07-08	Windy City Classic 2023
54	EUR/EN	2023-07-15	ETS London 2023
55	IT	2023-07-15	Hot Milano 2023
56	US	2023-07-15	Nashville Cup Spikeball Challenger 2023
57	AU	2023-07-22	Mühlviertler Roundnet Cup 2023
58	US	2023-07-22	Philadelphia Major 2023
59	IT	2023-07-29	Italian Selections 2023
60	BE	2023-07-29	RB Leuven 2023
61	US	2023-07-29	Heatwave VI Spikeball Challenger 2023
62	US	2023-07-29	Maryland Monumental Spikeball Challenger 2023
63	DE	2023-08-05	Master Kiel 2023
64	US	2023-08-05	Bang! 2023
65	DE	2023-08-05	Future Nations Cup 2023
66	EUR/BE	2023-08-12	Gent Sanctioned 2023
67	EUR	2023-08-12	European U21 Championship 2023
68	SUI	2023-08-12	Basel Outdoor 2023
69	US	2023-08-12	Columbus Major 2023
70	AU	2023-08-19	ETS Vienna 2023
71	DE	2023-08-26	RG Championship 2023
72	AU	2023-09-02	Austrian Championship 2023
73	FR	2023-09-02	Lyon Sanctioned 2023
74	NED	2023-09-02	Nederlands Kampioenschap 2023
75	SUI	2023-09-02	Swiss Championship 2023
76	SWE	2023-09-02	Sweden Nationals 2023
77	EUR/IT	2023-09-15	ETS Padua 2023
78	POL	2023-09-16	Polish Championship 2023
79	DE	2023-09-16	Dortmund Roundnet Cup 2023
80	SUI	2023-09-16	Lausanne Open 2023
81	EUR	2023-09-16	ETS Squad Championship 2023
82	BE	2023-09-23	RB Nationals 2023
83	IT	2023-09-29	Italian Nationals 2023
84	US	2023-09-29	STS Championship 2023
85	ROM	2023-09-30	Cluj Napoca Roundnet Open 2023

86	FR	2023-10-14	Championnat de France 2023
87	IT	2023-11-04	Bologna Winter Special 2023
88	US	2023-11-11	USAR Nationals 2023
89	BE	2023-11-25	RB Leuven Winter 2023
90	US	2023-12-02	California State Finals 2023
91	US	2023-12-13	ERS Championship 2023
92	CZE	2023-12-15	EIM 2023
93	SUI	2024-01-06	Zuri Indoor 2024
94	LAT	2024-01-13	Riga Sanctioned 2024
95	SUI	2024-01-13	Schaffhausen Master 2024
96	NED	2024-01-20	Amsterdam Indoor 2024
97	BE	2024-01-24	RB Noorderkamp 2024
98	CZE	2024-02-10	Brno Open 2024
99	DE	2024-02-10	PPP2.0
100	DE	2024-02-11	PPP2.0 Int.
101	DE	2024-02-17	Dresden Winterball 2.0
102	US	2024-02-24	USAR West Regionals 2024
103	US	2024-03-02	USAR East Regionals 2024
104	DEN	2024-03-16	NRC 2024
105	FR	2024-03-16	RF TSN Montpellier 2024
106	POL	2024-03-23	Spike The West - Szczecin 2024
107	US	2024-03-23	USAR South Regionals 2024
108	EUR/SP	2024-03-30	ETS Barcellona 2024
109	DEN	2024-04-06	DRT Aalborg 2024
110	SWE	2024-04-06	SRT Stockholm 2024
111	EUR/IT	2024-04-13	ETS Bologna 2024
112	US	2024-04-13	USAR Southeast Regionals 2024
113	POL	2024-04-20	Warsaw Open 2024
114	DE	2024-04-20	Kohl Indoor 2024
115	SUI	2024-04-20	Bern Master 2024
116	DE	2024-04-21	Kohl Indoor Women's 2024
117	AU	2024-04-27	Vienna Victory Cup 2024
118	FR	2024-04-27	RF TSN Bordeaux 2024
119	DE	2024-04-27	Kohl Invitational 2024
120	US	2024-04-27	USAR Midwest Regionals 2024
121	DEN	2024-05-04	DRT Esbjerg 2024
122	SWE	2024-05-04	SRT Alingsas 2024
123	US	2024-05-04	Los Angeles Grand Slam 2024
124	US	2024-05-11	Oceanside 2024
125	EUR/BE	2024-05-11	ETS Leuven 2024
126	AU	2024-05-13	Salzburger T-Rex Trophy 2024
127	DE	2024-05-18	Master Potsdam 2024
128	EUR/CZE	2024-05-24	Prague Sanctioned 2024
129	AU	2024-05-25	4.Vorarlberger Meisterschaft 2024
130	FR	2024-05-25	RF TSN Lyon 2024
131	SWE	2024-05-25	SRT Spånga 2024

132	US	2024-05-25	Raleigh Challenger 2024
133	DEN	2024-05-25	DRT Aarhus 2024
134	IT	2024-06-01	Bologna Summer Hit 2024
135	DE	2024-06-01	Hameln Roundnet Open 2024
136	ROM	2024-06-01	Cluj Napoca Qualifier 2024
137	EURA/SUI	2024-06-10	ETS Bern 2024
138	BE	2024-06-15	RB Kortik 2024
139	SWE	2024-06-15	SRT Jonkoping 2024
140	US	2024-06-15	Richmond Major 2024
141	IT	2024-06-15	Padova Heatwave 2024
142	US	2024-06-19	USAR Nationals 2024
143	BE	2024-06-22	RB Brussels Fox 2024
144	FR	2024-06-22	RF TSN Nantes 2024
145	DE	2024-06-22	Master Munchen 2024
146	SUI	2024-06-22	St Gallen 2024
147	US	2024-06-22	Minneapolis Challenger 2024
148	IT	2024-07-06	Italian Selections 2024
149	BE	2024-07-06	RB Brussels Wolf 2024
150	DE	2024-07-06	Kiel Kustenkracher 2024
151	AU	2024-07-13	Mühlviertler Roundnet Cup 2024
152	EURA/FIN	2024-07-13	ETS Helsinki 2024
153	SUI	2024-07-13	Zurich 2024
154	SWE	2024-07-13	SRT Boda 2024
155	US	2024-07-13	Chicago Spikeball Major 2024
156	DE	2024-07-20	Master Munster 2024
157	POL	2024-07-27	DEVA Open 2024
158	US	2024-07-27	Seattle Slam 2024
159	SUI	2024-08-03	Basel Sanctioned 2024
160	BE	2024-08-03	RB Gent 2024
161	US	2024-08-03	Salt Lake City Major 2024
162	US	2024-08-10	Boston Challenger 2024
163	EURA/AU	2024-08-12	ETS Vienna 2024
164	BE	2024-08-17	RB Liege Lions 2024
165	DE	2024-08-17	Master Berlin 2024
166	US	2024-08-17	Bang! 2024
167	WORLDS	2024-08-28	World's Individual Group Stage 2024
168	WORLDS	2024-08-30	World's Individual Bracket Stage 2024
169	WORLDS	2024-09-02	World's Squad Group Stage 2024
170	WORLDS	2024-09-02	World's Squad Bracket Stage 2024
171	FR	2024-09-07	RF TSR Lille 2024
172	DEN	2024-09-14	Denmark Championship 2024
173	DE	2024-09-14	RG Championship 2024
174	SUI	2024-09-14	Swiss Nationals 2024
175	POL	2024-09-21	Polish Championship 2024
176	FR	2024-09-21	Championnat de France 2024
177	BE	2024-09-23	RB Nationals 2024

178	IT	2024-09-28	Italian Nationals 2024
179	US	2024-10-05	STS Championship 2024
180	DE	2024-10-12	Bundesliga 2024 Matchday 1
181	ROM	2024-10-19	Cluj Napoca Fall Cup 2024
182	BE	2024-11-02	RB Leuven Winter 2024
183	DE	2024-11-09	Bundesliga 2024 Matchday 2
184	IT	2024-11-16	RI Winter Season 2024 Bologna
185	DE	2024-12-07	Bundesliga 2024 Matchday 3
186	IT	2024-12-21	RI Winter Season 2024 Forli
187	US	2024-12-21	ERS Championship 2024
188	SUI	2025-01-11	Swiss Roundnet Liga 2024 Matchday 1
189	DE	2025-01-18	Bundesliga 2024 Matchday 4
190	IT	2025-01-25	RI Winter Season 2024 Padova
191	SUI	2025-02-01	Basel Indoor 2025
192	SUI	2025-02-08	Swiss Roundnet Liga 2024 Matchday 2
193	DE	2025-02-22	Bundesliga 2024 Matchday 5
194	DE	2025-03-01	PPP3.0
195	SP	2025-03-01	Barcellona Master 2025
196	DE	2025-03-02	PPP3.0 Int
197	EURA	2025-03-08	Mallorca Sanctioned 2025
198	FR	2025-03-15	RF TSN Montpellier 2025
199	DE	2025-03-15	RG Bundesliga F6 2025
200	SUI	2025-03-15	Swiss Liga 2024 Final Matchday
201	US	2025-03-15	USAR Southeast Regionals 2025
202	ROM	2025-03-22	Cluj Napoca 2025
203	EURA/FR	2025-03-28	ETS Lyon 2025
204	POL	2025-03-29	Spike The West - Szczecin 2025
205	BE	2025-03-30	RB Brussels WolFox 2025
206	SP	2025-04-02	Master Granada 2025
207	EN	2025-04-05	London Open 2025
208	FR	2025-04-12	RF TSR Grenoble 2025
209	EURA/ROM	2025-04-12	ETS Bucharest 2025
210	DEN	2025-04-14	DRT Esbjerg 2025
211	US	2025-04-16	USAR South Regionals 2025
212	EURA/IT	2025-04-26	Padova Sanctioned 2025
213	POL	2025-04-26	Poznan Roundnet Open 2025
214	FR	2025-04-26	RF TSN Paris 2025
215	DE	2025-04-26	Master Munchen 2025
216	SWE	2025-04-26	SRT Goteborg 2025
217	EURA/BE	2025-05-10	ETS Leuven 2025
218	DEN	2025-05-17	DRT Aalborg 2025
219	IT	2025-05-17	RI Bologna 2025
220	FR	2025-05-17	RF TSN Lille 2025
221	SUI	2025-05-17	Lausanne Open 2025
222	SWE	2025-05-17	SRT Uppsala 2025
223	US	2025-05-17	USAR West Regionals 2025

224	EURA/POL	2025-05-17	Warsaw Sanctioned 2025
225	AU	2025-05-24	Salzburger T-Rex Trophy 2025
226	DE	2025-05-24	Master Stuttgart 2025
227	ROM	2025-05-24	Cluj Napoca Roundnet Open 2025
228	SUI	2025-05-24	Master Schaffhausen 2025
229	DEN	2025-05-31	DRT Aarhus 2025
230	US	2025-06-07	Atlanta Slam 2025
231	EURA/FR	2025-06-07	ETS Paris 2025
232	DEN	2025-06-14	DRT Copenhagen 2025
233	BE	2025-06-14	RB Brussels Fox 2025
234	FR	2025-06-14	RF TSR Nantes 2025
235	SWE	2025-06-14	SRT Stockholm 2025
236	SP	2025-06-16	Master Madrid 2025
237	AU	2025-06-21	Mühlviertler Roundnet Cup 2025
238	SUI	2025-06-21	St Gallen 2025
239	US	2025-06-21	USAR Northeast Regionals 2025
240	EN	2025-06-28	London Major 2025
241	IT	2025-06-28	Hot Milano 2025
242	BE	2025-06-28	RB Kortik 2025
243	FR	2025-06-28	RF TSN Angers 2025
244	DE	2025-06-28	Master Hannover 2025
245	ROM	2025-06-28	Infinity Energy 2025
246	BE	2025-07-05	RB Brussels Wolf 2025
247	EURA/SUI	2025-07-12	ETS Basel 2025
248	IT	2025-07-19	Swim&Spike Forli 2025
249	DE	2025-07-19	Master Freiburg 2025
250	US	2025-07-19	USAR Midwest Regionals 2025
251	EURA/AU	2025-07-26	Roundnet Open Graz 2025
252	DE	2025-07-26	Master Kiel 2025
253	US	2025-07-26	ERS Championship 2025
254	DEN	2025-08-02	DRT Odense 2025
255	SUI	2025-08-02	Basel Summer Clash 2025
256	US	2025-08-02	USAR Boston Sectionals 2025
257	EURA/DEN	2025-08-09	ETS Championship Aarhus 2025
258	US	2025-08-09	Bang! 2025
259	BE	2025-08-16	RB Gent 2025
260	US	2025-08-16	USAR Mountain Regionals 2025
261	AU	2025-08-30	Austrian Championship Vienna 2025
262	DEN	2025-08-30	Denmark Championship 2025
263	DE	2025-08-30	RG Championship 2025
264	SUI	2025-08-30	Swiss Championship 2025
265	EURA	2025-09-06	Euros 2025
266	US	2025-09-13	USAR Albany Sectionals 2025
267	BE	2025-09-20	RB Championship 2025
268	FR	2025-09-20	Championnat de France - Clermont 2025
269	IT	2025-09-27	Italian Nationals 2025

270	SWE	2025-09-27	Sweden Nationals 2025
271	US	2025-10-04	USAR Nationals 2025
272	EN	2025-10-11	British Nationals 2025
273	DE	2025-10-18	Bundesliga 2025 Matchday 1