Axelrod's First Tournament

```
import axelrod as axl
import matplotlib.pyplot as plt
```

Selecting Players

```
first_tournament_participants_ordered_by_reported_rank = [
    s() for s in axl.axelrod_first_strategies
]

number_of_strategies = len(first_tournament_participants_ordered_by_reported_rank)

for player in first_tournament_participants_ordered_by_reported_rank:
    print(player)
```

```
Tit For Tat
First by Tideman and Chieruzzi: (D, D)
First by Nydegger
First by Grofman
First by Shubik
First by Stein and Rapoport: 0.05: (D, D)
Grudger
First by Davis: 10
First by Graaskamp: 0.05
First by Downing
First by Feld: 1.0, 0.5, 200
First by Joss: 0.9
First by Tullock
First by Anonymous
Random: 0.5
```

Creating the tournament

```
tournament = axl.Tournament(
    players=first_tournament_participants_ordered_by_reported_rank,
    turns=200,
    repetitions=5,
    seed=1,
)

results = tournament.play()
```

```
Playing matches:   0%|          | 0/120 [00:00<?, ?it/s]Playing matches:  13%|         | 16/
Analysing:   0%|          | 0/25 [00:00<?, ?it/s]Analysing: 100%|      | 25/25 [00:00<00:00,
```

Viewing the ranks of the participants

```
for name in results.ranked_names:
    print(name)
```

```
First by Stein and Rapoport: 0.05: (D, D)
First by Grofman
First by Shubik
Tit For Tat
First by Nydegger
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First by Anonymous
Random: 0.5
```
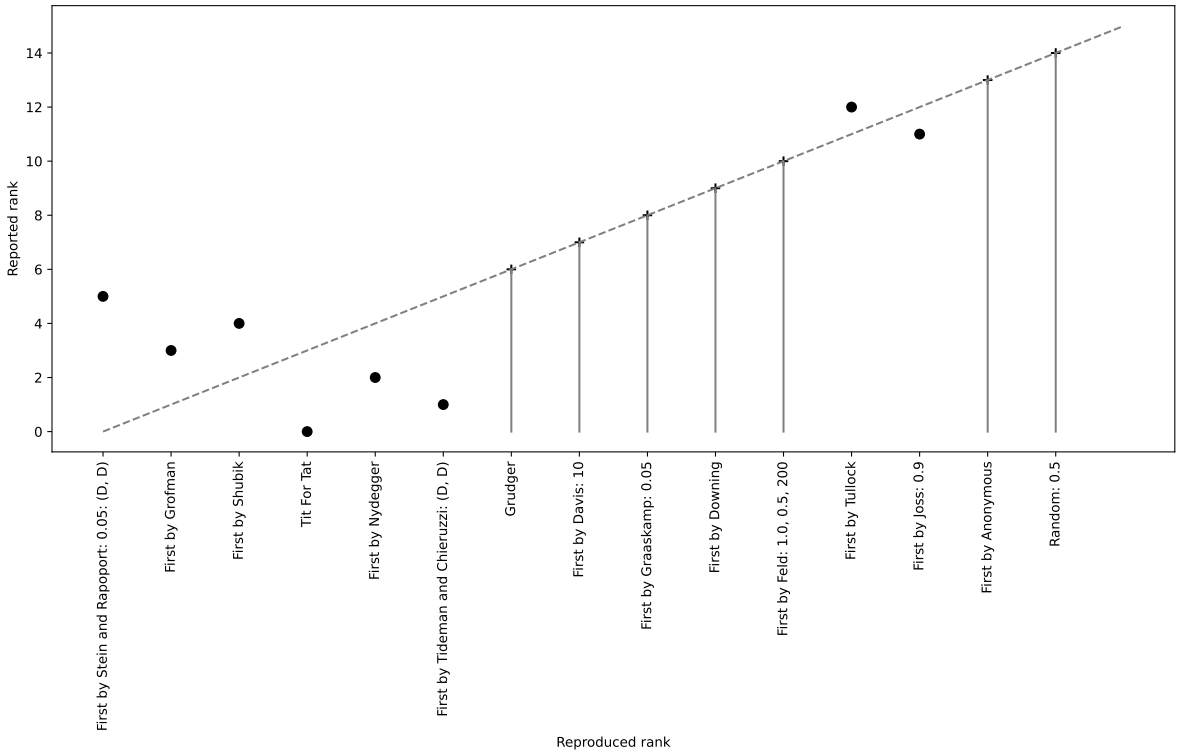

```
plt.figure(figsize=(15, 6))

plt.plot((0, 15), (0, 15), color="grey", linestyle="--")
```

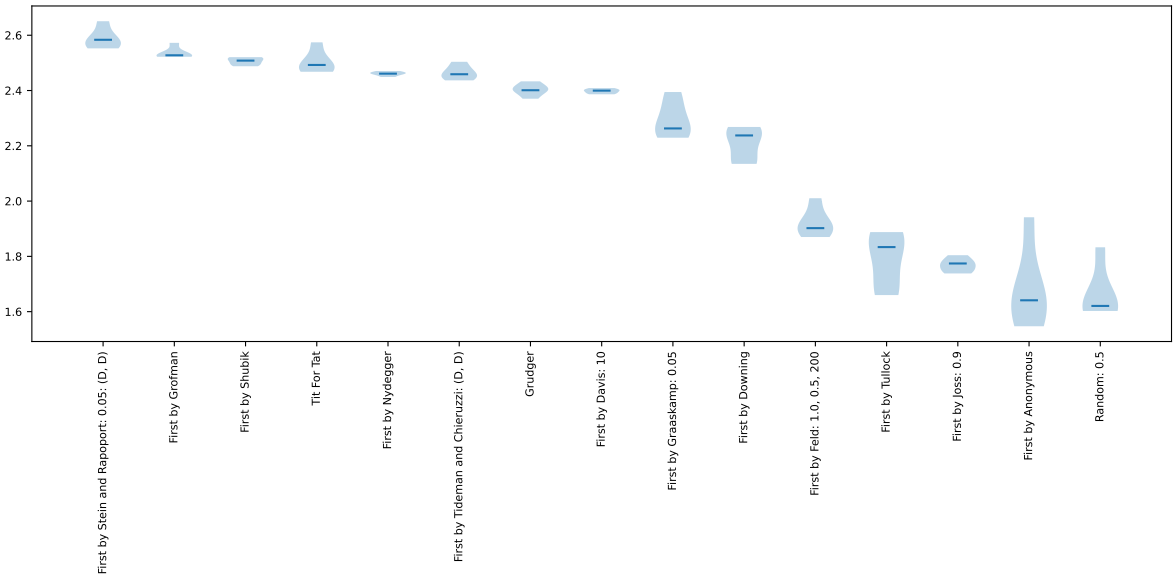
```
for original_rank, strategy in enumerate(
    first_tournament_participants_ordered_by_reported_rank
):

    rank = results.ranked_names.index(str(strategy))

    if rank == original_rank:

        symbol = "+"

        plt.plot((rank, rank), (rank, 0), color="grey")

    else:

        symbol = "o"

    plt.scatter([rank], [original_rank], marker=symbol, color="black", s=50)

plt.xticks(range(number_of_strategies), results.ranked_names, rotation=90)

plt.ylabel("Reported rank")

plt.xlabel("Reproduced rank")

plt.show()
```



Visualising the scores

```
plot = axl.Plot(results)

p = plot.boxplot()

p.show()
```

```
/var/folders/ch/_c9dv9nx6knflvc6jvh4r5_40000gs/T/ipykernel_18324/2183058005.py:5: UserWarning
  p.show()
```


2.6
2.4
2.2
2.0
1.8
1.6
First by Stein and Rapoport: 0.05: (D, D)
First by Grofman
First by Shubik
Tit For Tat
First by Nydegger
First by Tideman and Chieruzzi: (D, D)
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