# 8th GECCO Workshop on Blackbox Optimization Benchmarking (BBOB): Wrap-Up
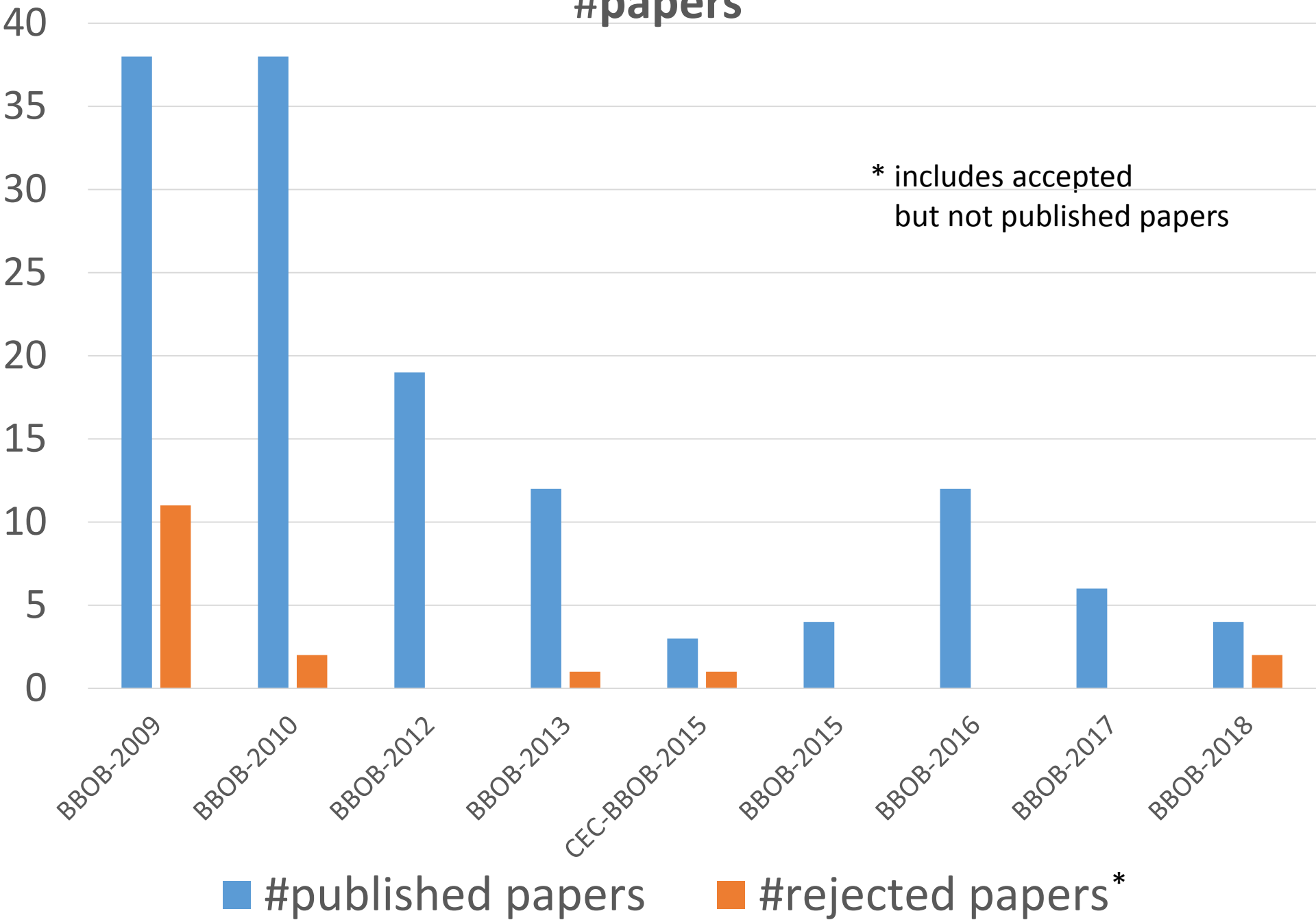
**The BBOBies**
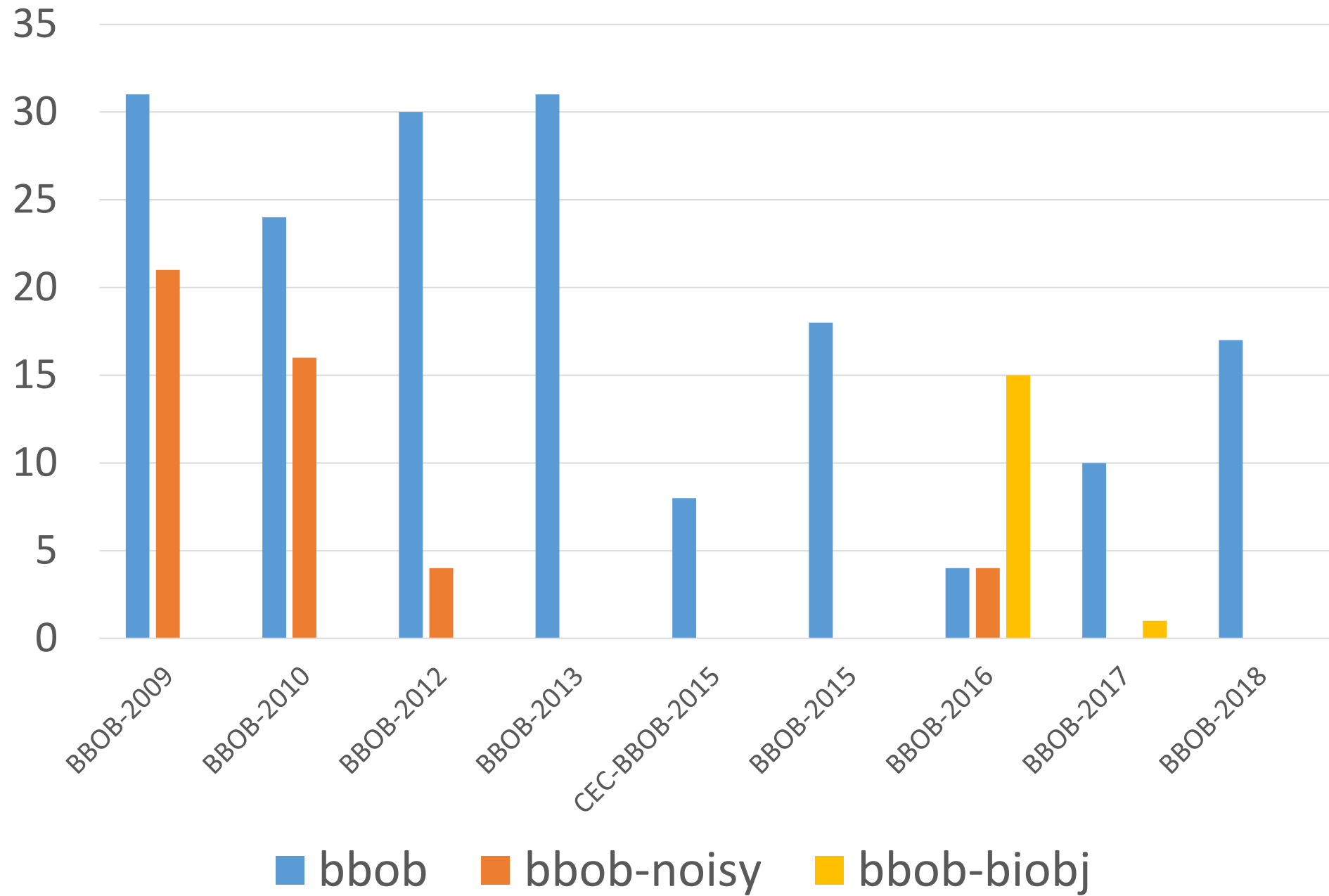
https://github.com/numbbo/coco

# #papers



* includes accepted
but not published papers

Legend: ■ #published papers  ■ #rejected papers*

Categories: BBOB-2009, BBOB-2010, BBOB-2012, BBOB-2013, CEC-BBOB-2015, BBOB-2015, BBOB-2016, BBOB-2017, BBOB-2018

# BBOB Submissions (accepted #data sets)
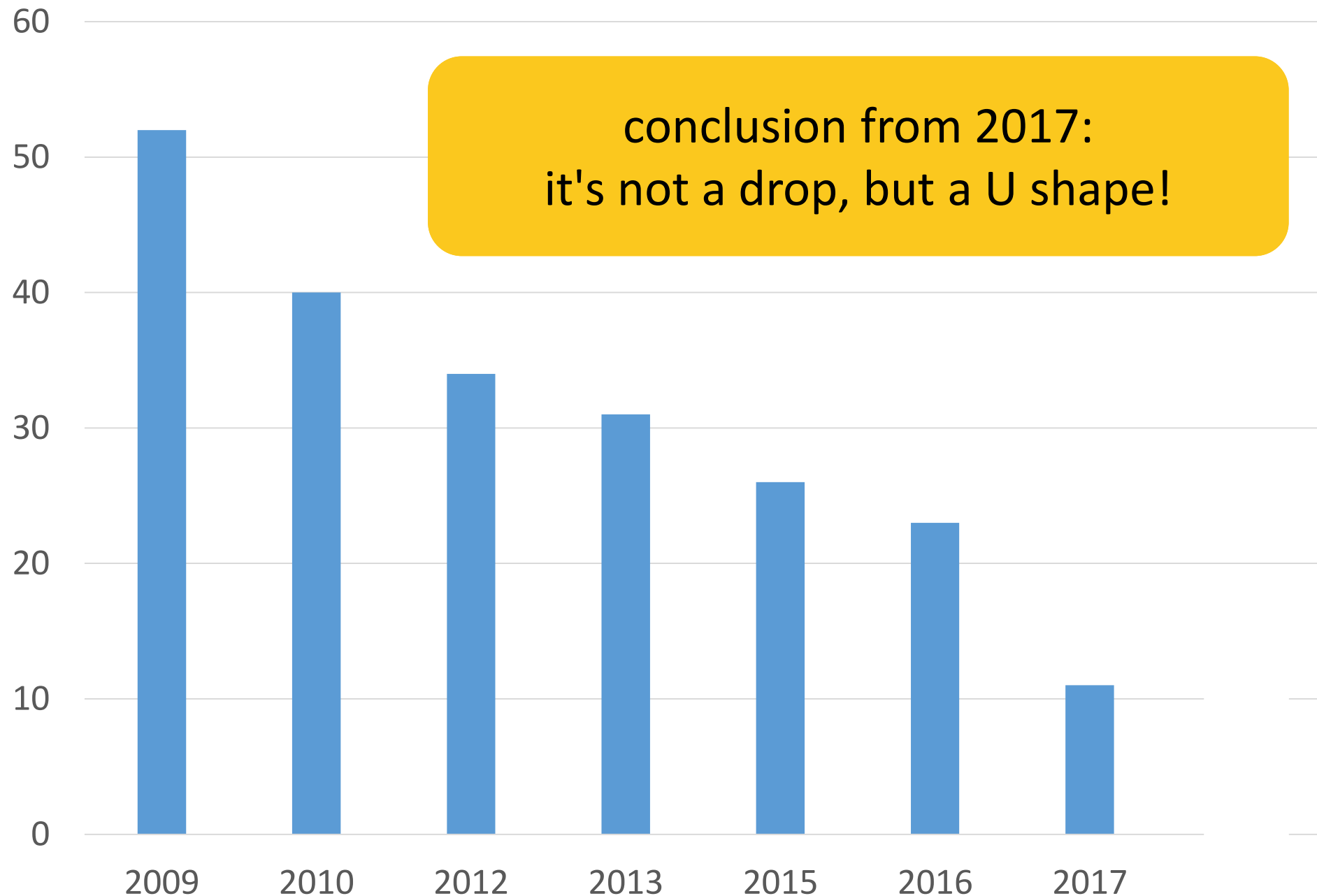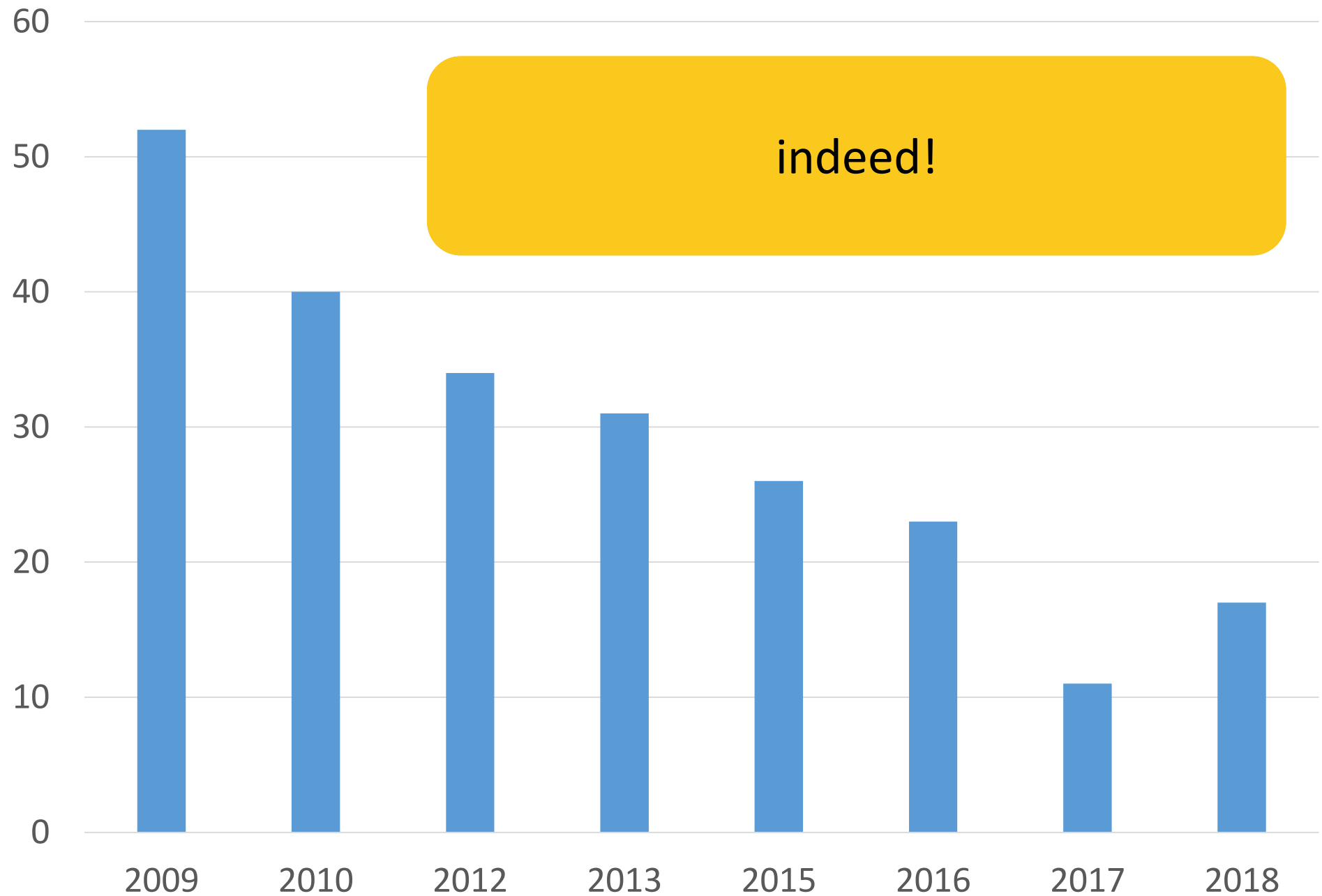


Legend: bbob, bbob-noisy, bbob-biobj

# # submitted data sets per year



conclusion from 2017:
it's not a drop, but a U shape!

# # submitted data sets per year



indeed!

# Some more numbers

- 191 issues closed since last GECCO (compared to 164 the year before)

- 13 of the opened and closed issues since last GECCO have been provided by externals (vs. 19 in 2017)
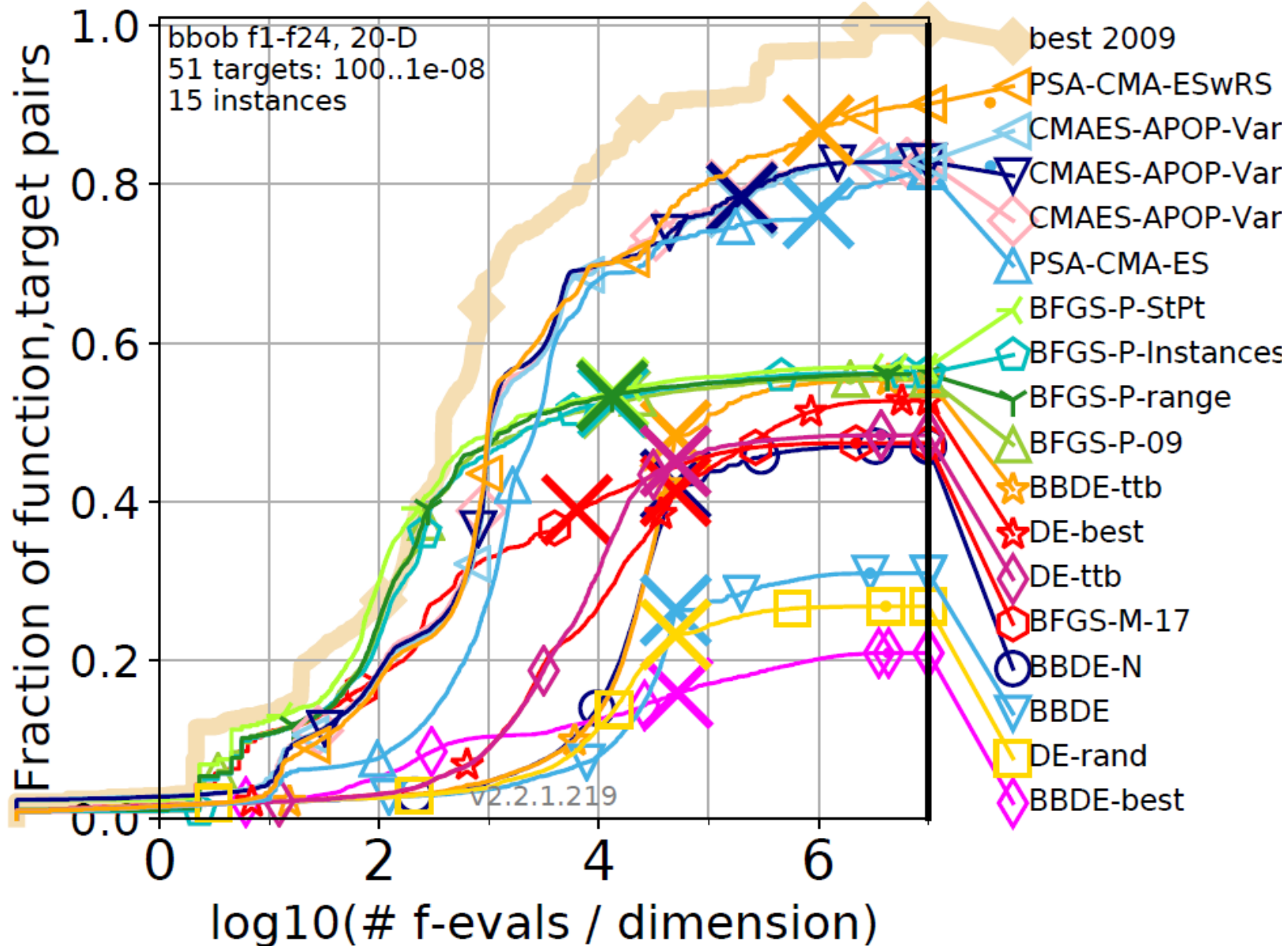
# Some more numbers

- 191 issues closed since last GECCO (compared to 164 the year before)

- 13 of the opened and closed issues since last GECCO have been provided by externals (vs. 19 in 2017)

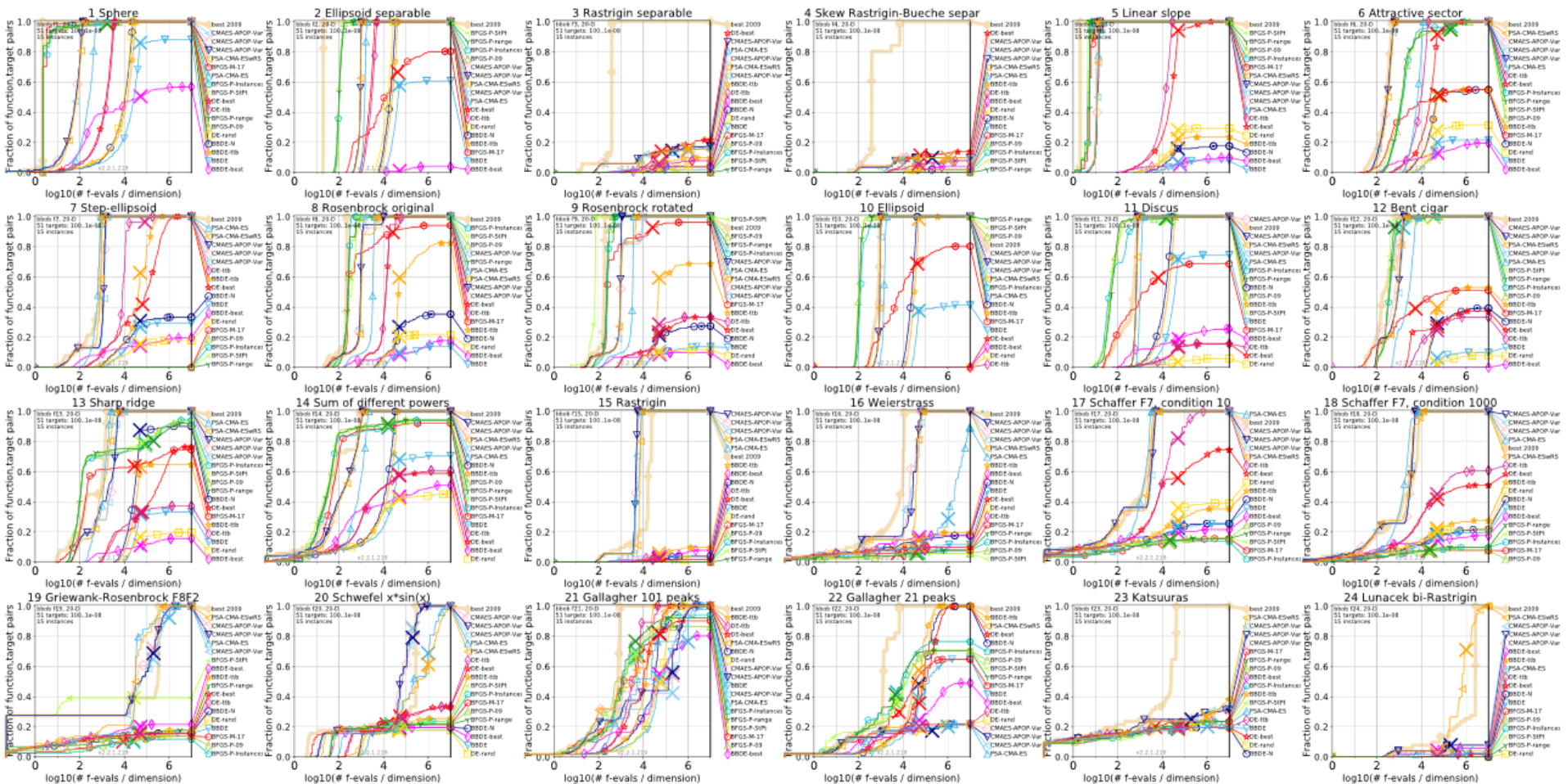**many thanks to the COCO community!**
[please continue and increase your effort]
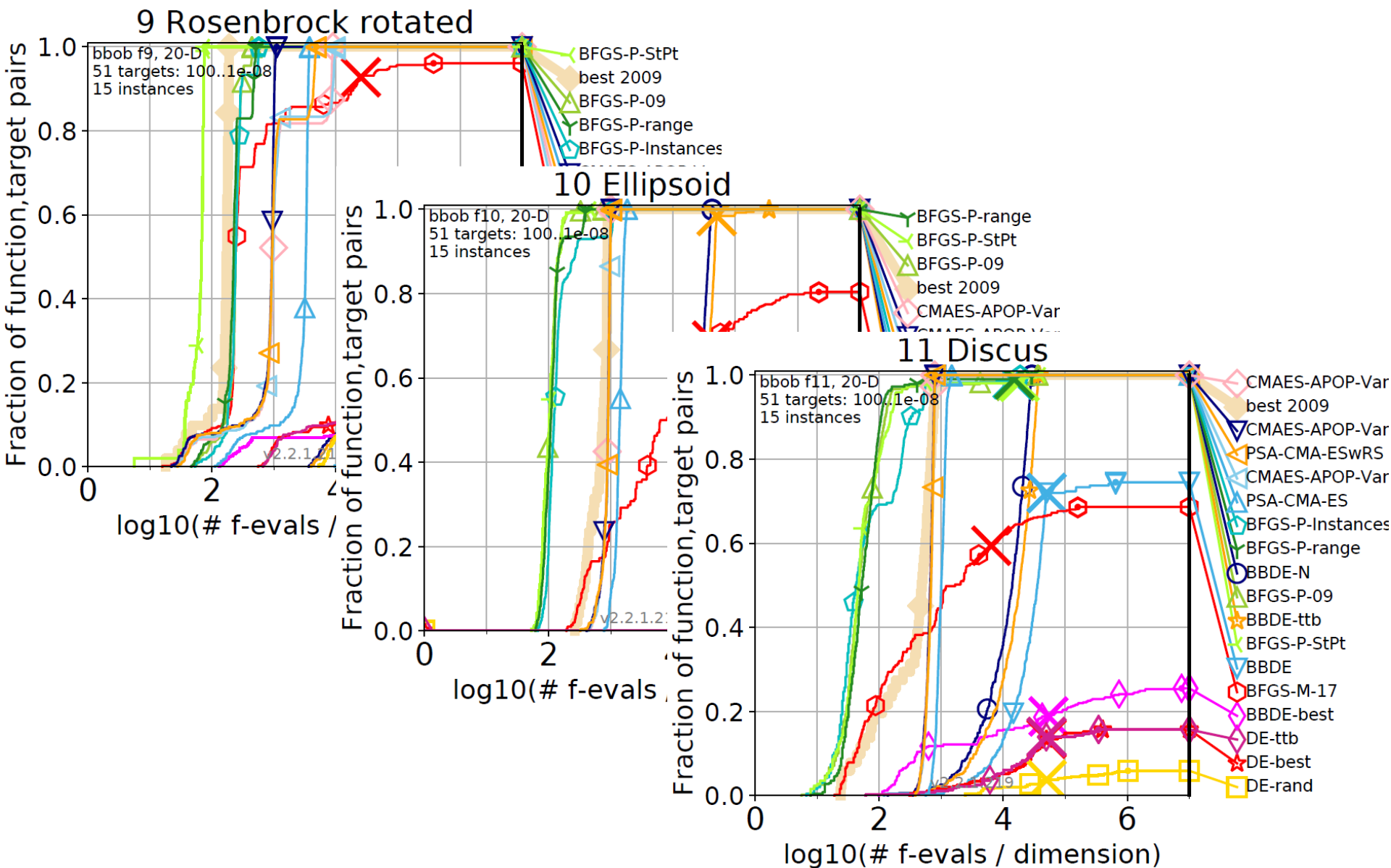
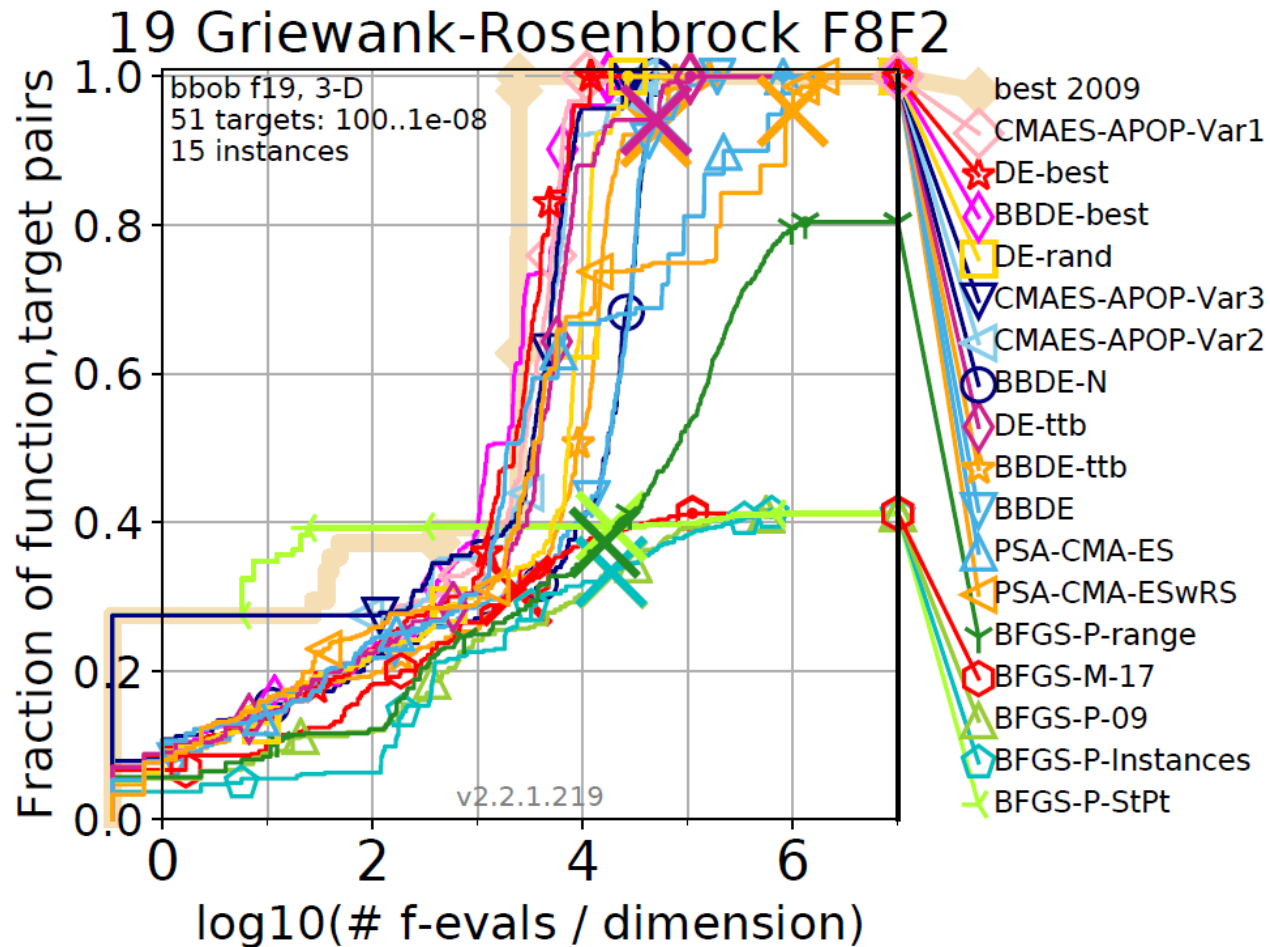# now to the results of BBOB-2018

# Overall Results (20-D)



bbob f1-f24, 20-D
51 targets: 100..1e-08
15 instances

v2.2.1.219

Fraction of function, target pairs

log10(# f-evals / dimension)

best 2009
PSA-CMA-ESwRS
CMAES-APOP-Var
CMAES-APOP-Var
CMAES-APOP-Var
PSA-CMA-ES
BFGS-P-StPt
BFGS-P-Instances
BFGS-P-range
BFGS-P-09
BBDE-ttb
DE-best
DE-ttb
BFGS-M-17
BBDE-N
BBDE
DE-rand
BBDE-best

# Results per Function

# Most Notable Results (in 20-D)

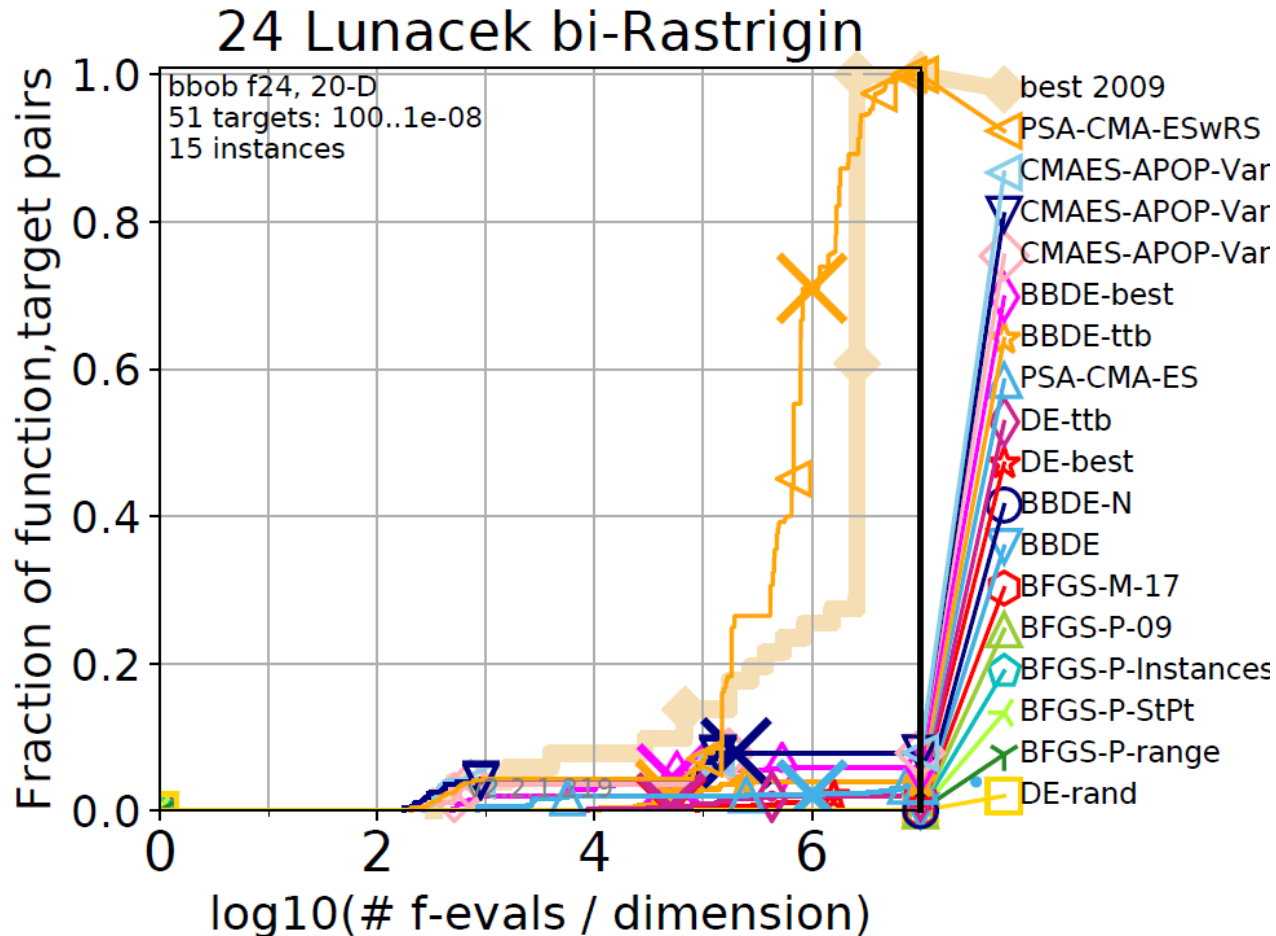# Most Notable Results (in 20-D)



19 Griewank-Rosenbrock F8F2

# Most Notable Results (in 20-D)

# Most Notable Results (in 20-D)



24 Lunacek bi-Rastrigin
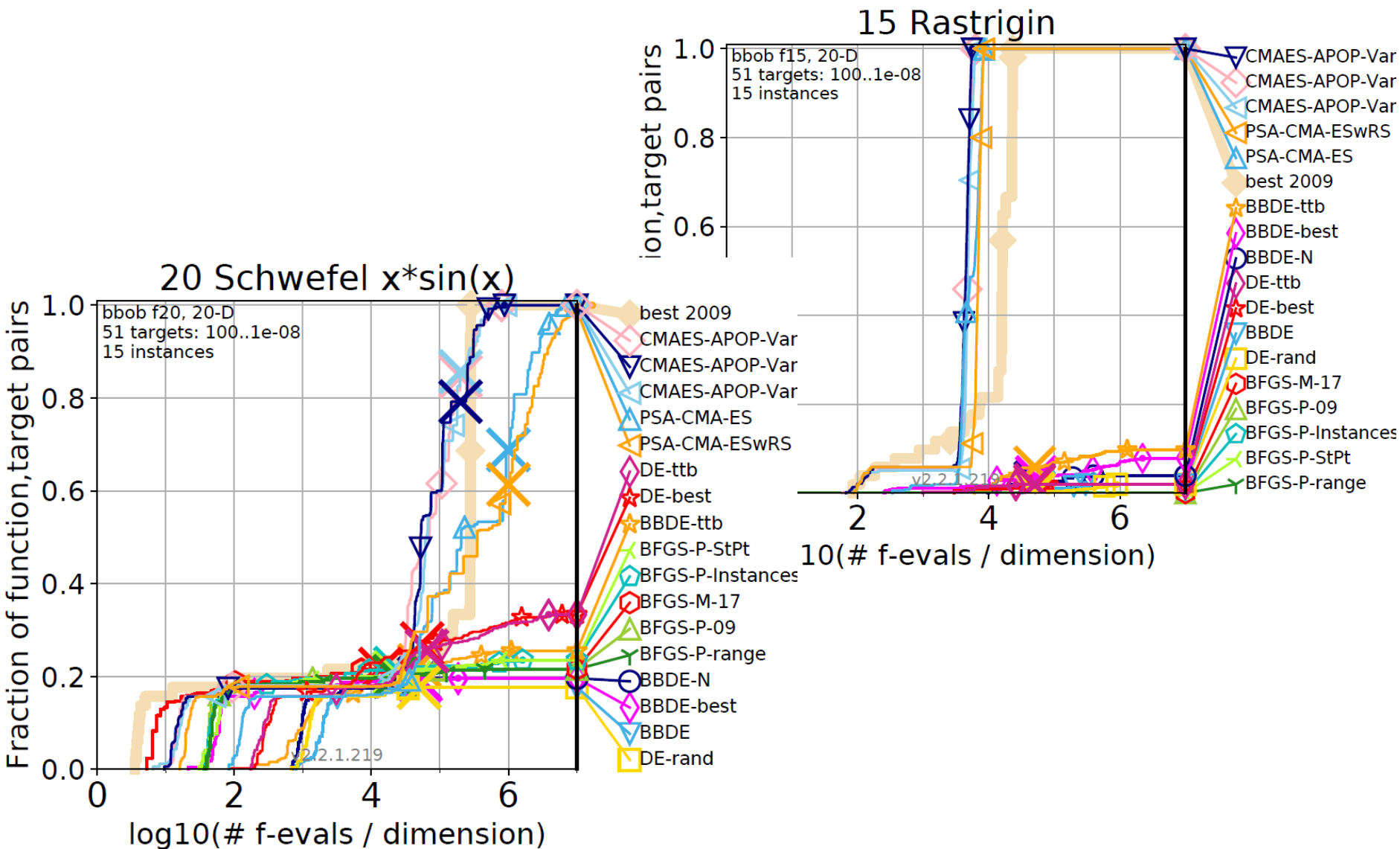
# BFGS (⬡) in Matlab 2017



1 Sphere

2 Ellipsoid separable

Legend (left panel):
- BBDE-N
- BBDE-best
- BBDE-ttb
- BBDE
- BFGS-M-17
- BFGS-P-09
- BFGS-P-Instanc
- BFGS-P-StPt
- BFGS-P-range
- CMAES-APOP-Var
- CMAES-APOP-Var
- CMAES-APOP-Var
- DE-best
- DE-rand
- DE-ttb
- PSA-CMA-ES
- PSA-CMA-ESwRS

15 instances
target Df: 1e-8
v2.2.1.219
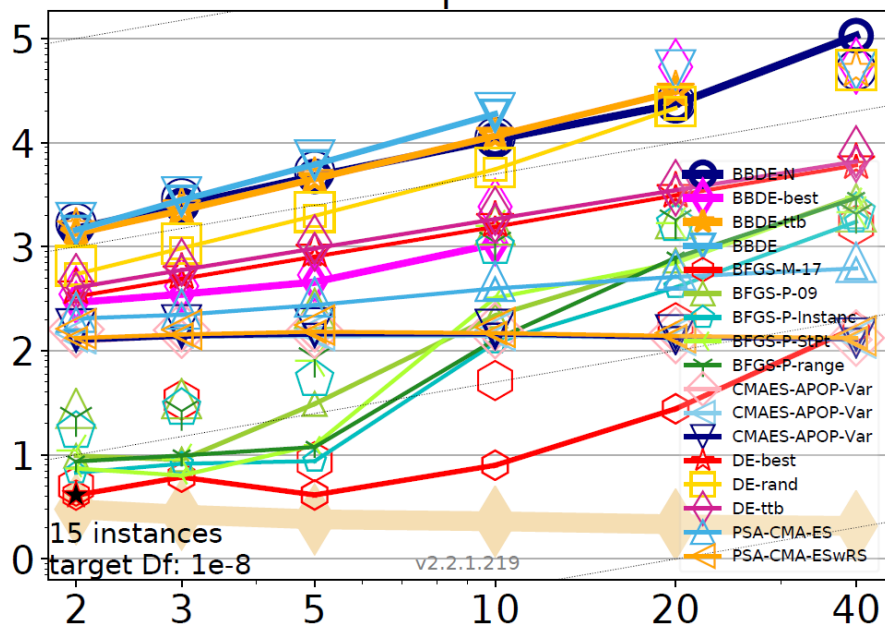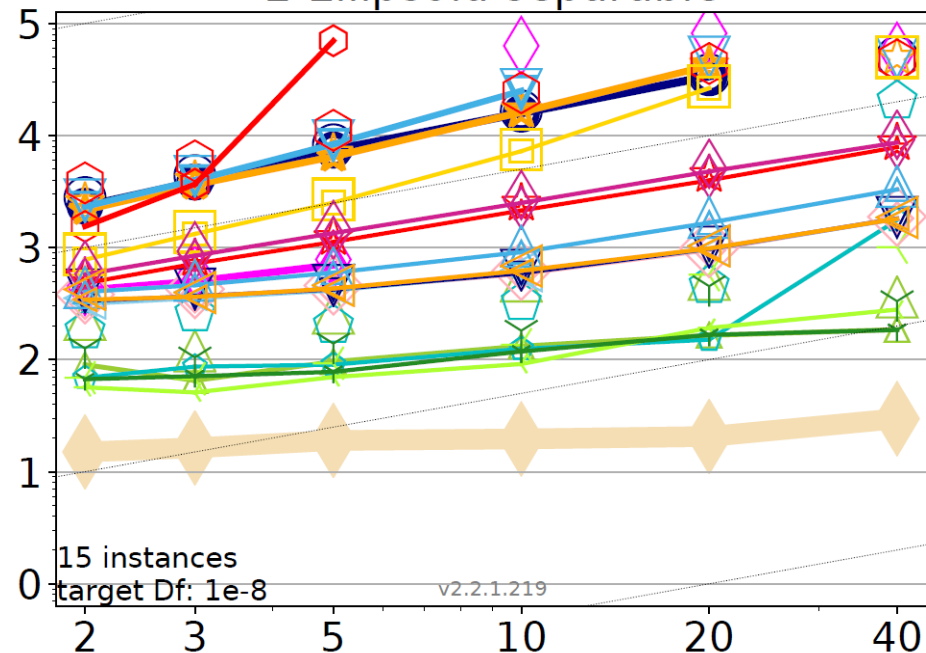
# The (near) Future of COCO

- bbob-largescale suite

- bbob-biobj-ext suite

- bbob-constrained suite

- python module cocoex2 for easier implementation/prototyping of test suites

**again: we can use all your help!**

# Open Discussion

- What would you like to do with COCO?

- What would you like to have implemented in COCO?

- How can we increase the number of new data sets?

- Continuous submission of data?