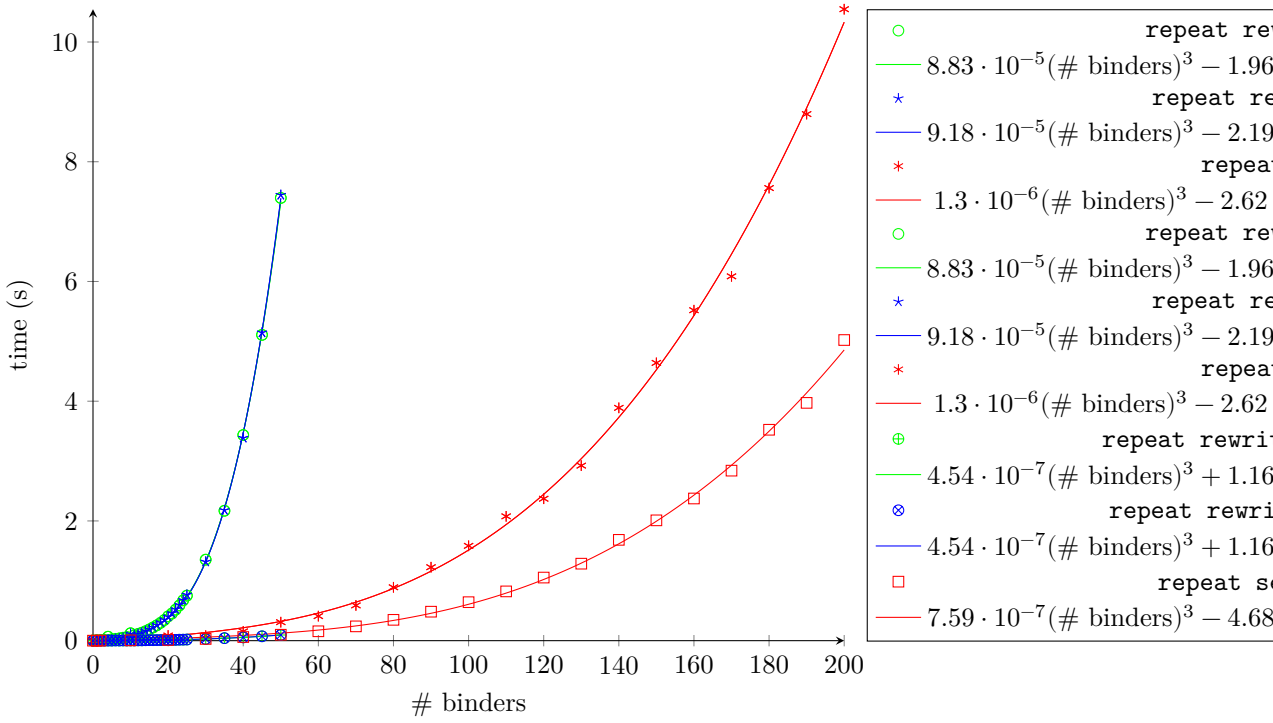


Figure 1: Timing of `rewrite_strat` and `setoid_rewrite` under binders

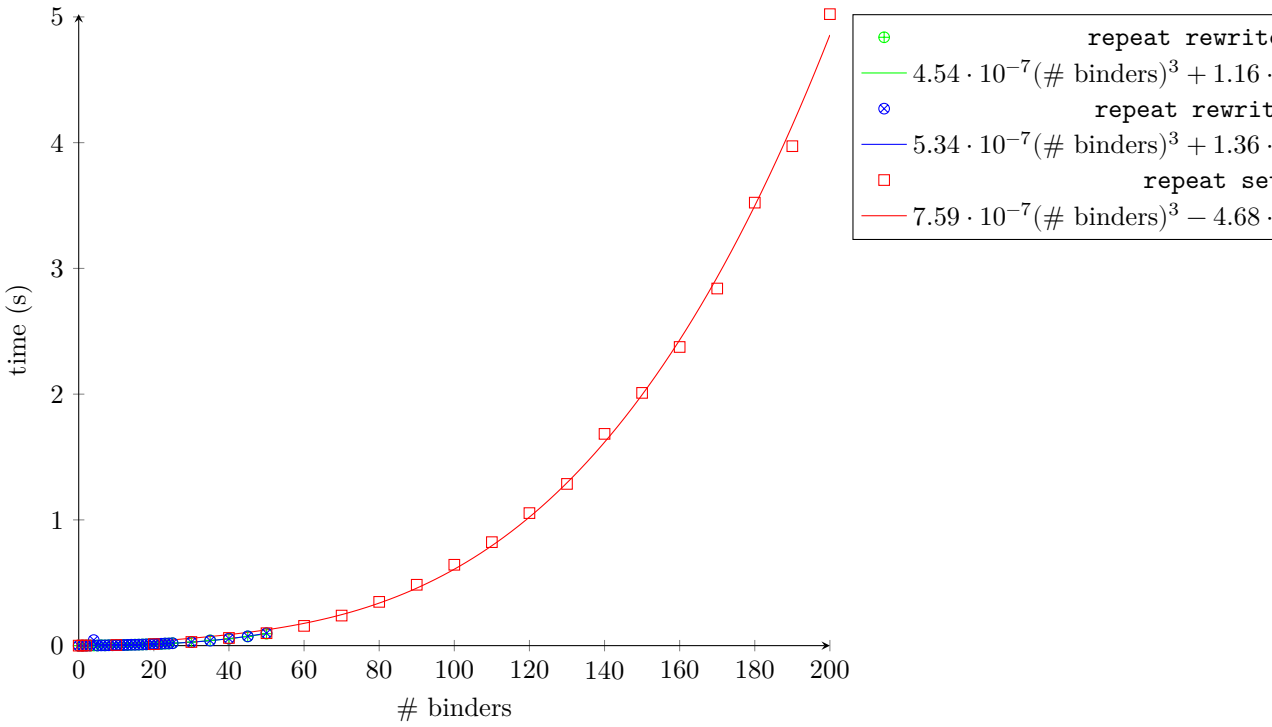


Figure 2: Timing of `rewrite_strat` and `setoid_rewrite` under binders

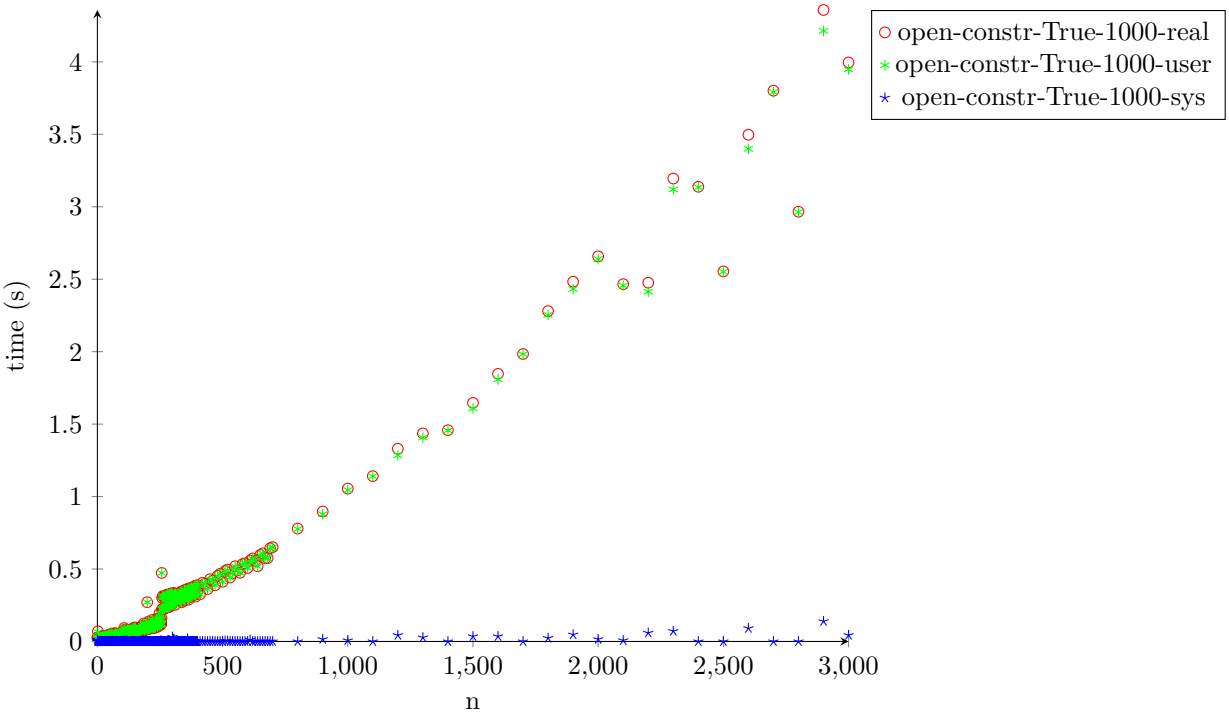


Figure 3: timing-do-n-open-constr-True

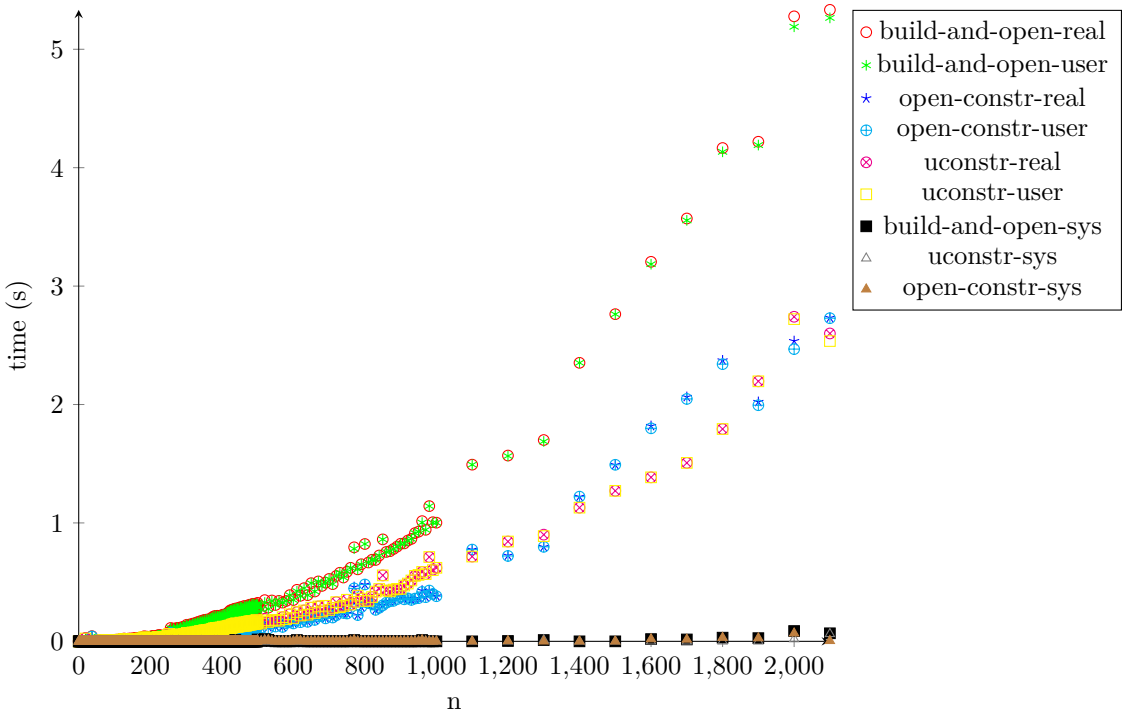


Figure 4: timing-open-constr-n-lambda-no-types-different-names

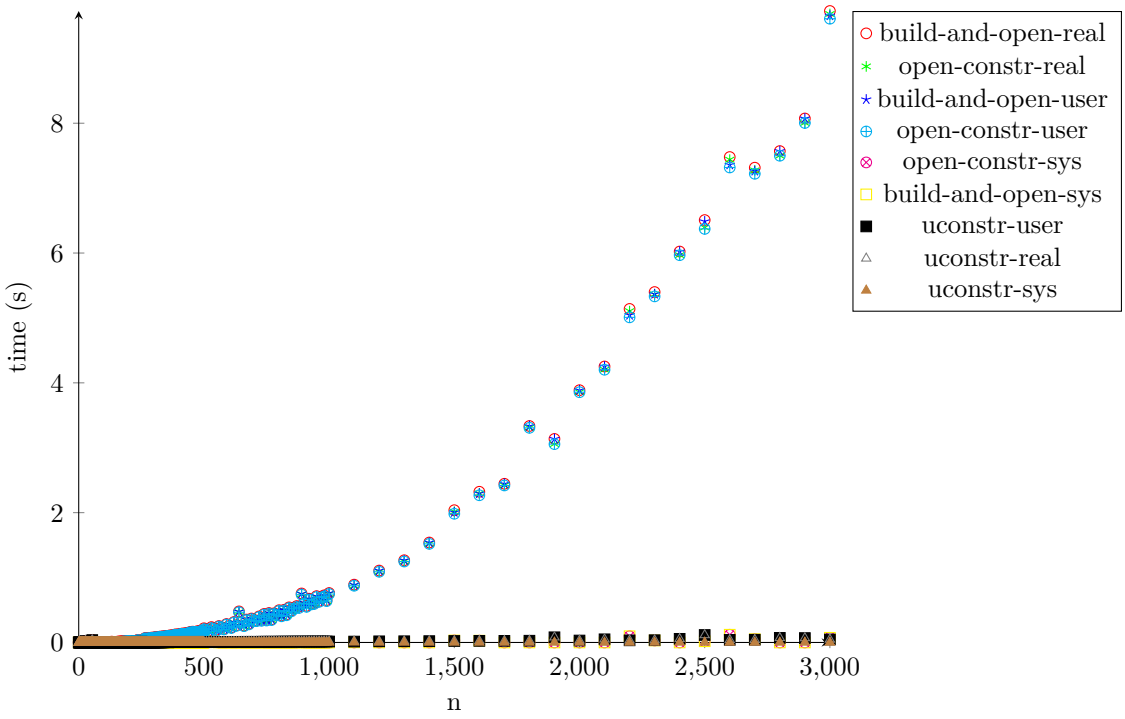


Figure 5: timing-open-constr-n-lambda-no-types-no-names

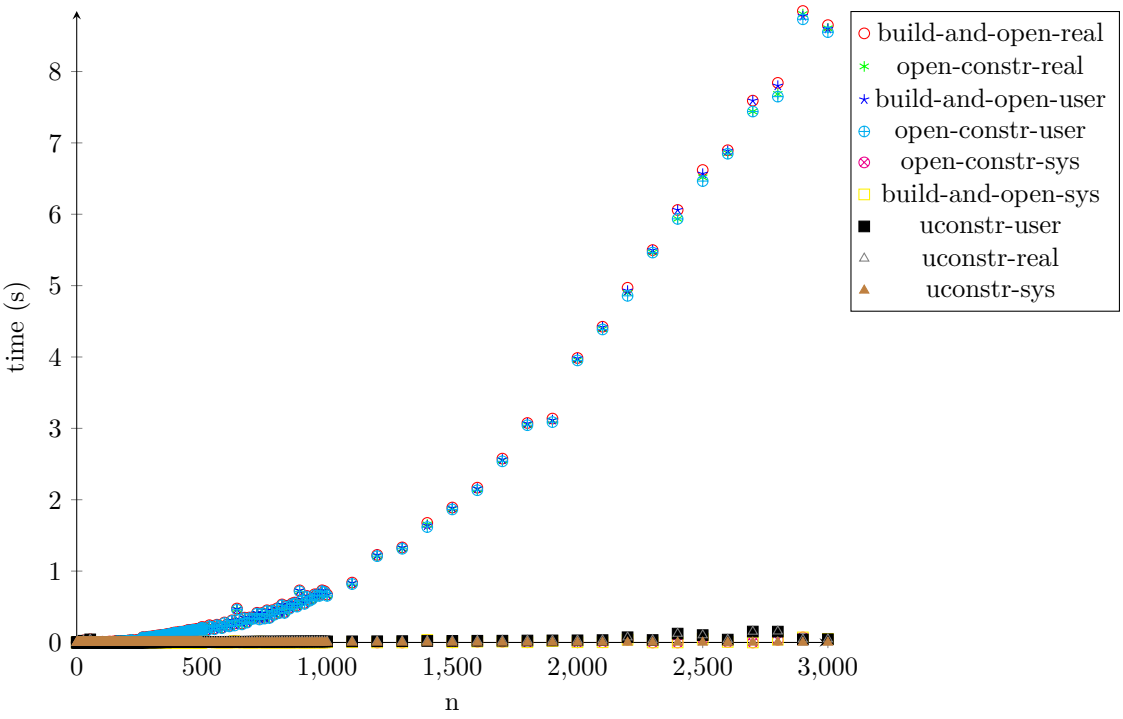


Figure 6: timing-open-constr-n-lambda-no-types-same-names

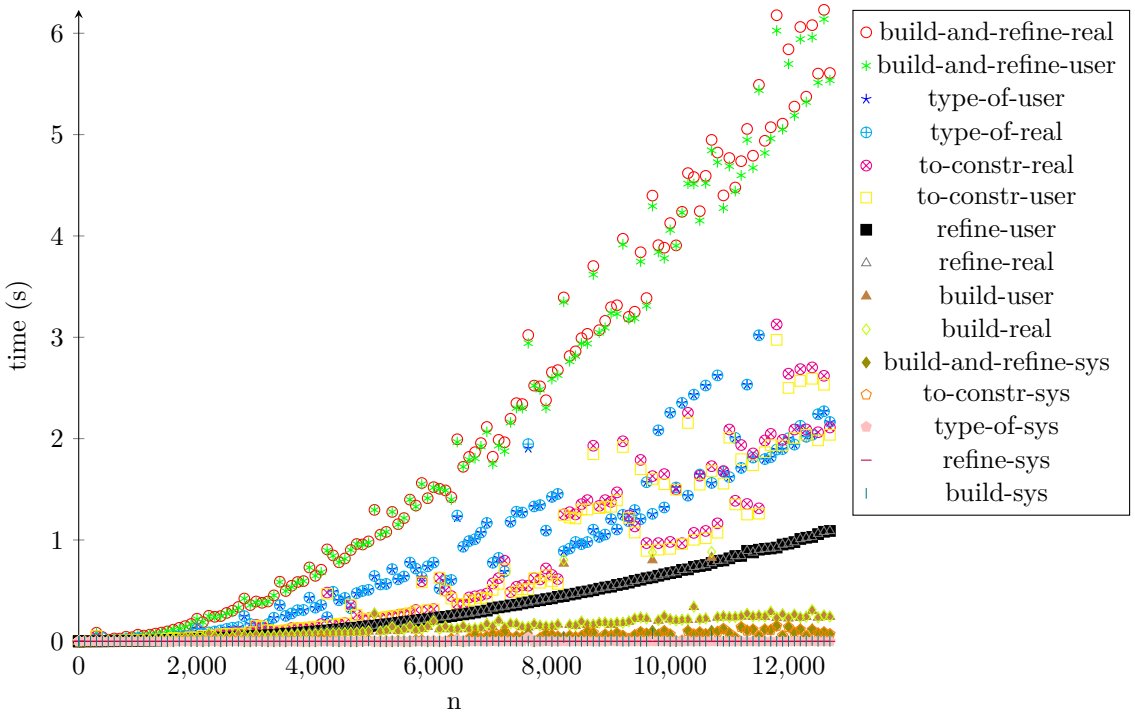


Figure 7: timing-app-n-uconstr

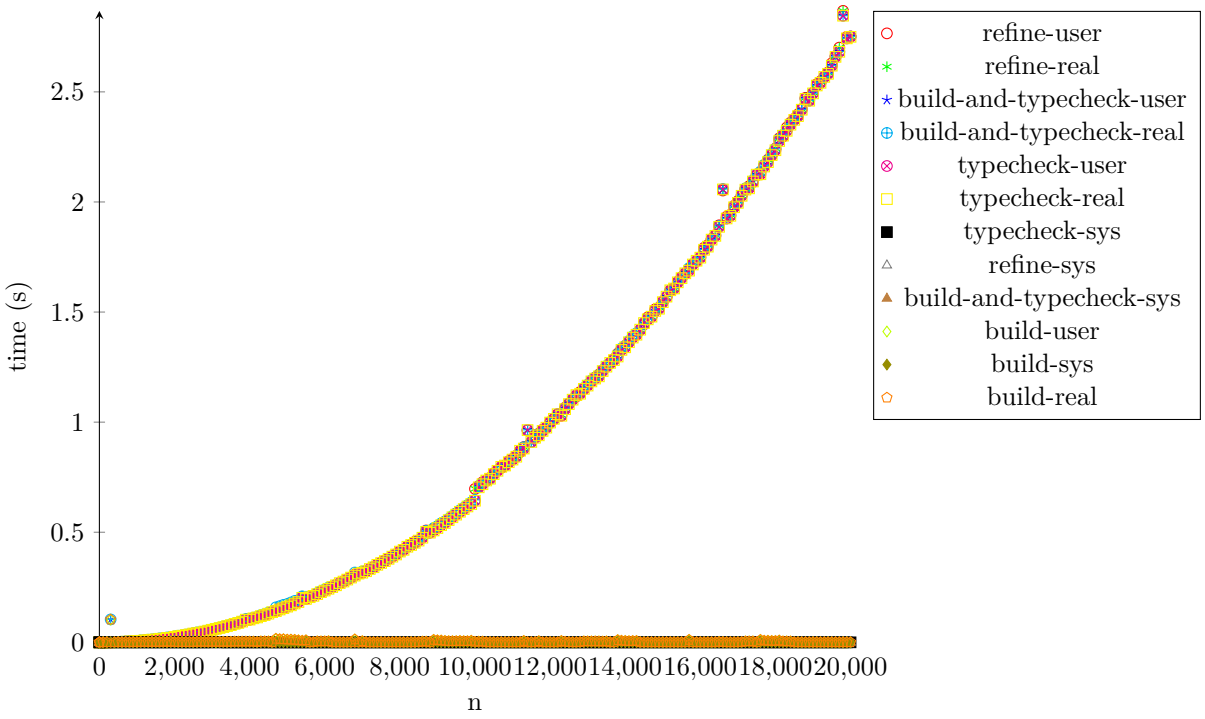


Figure 8: timing-app-n-ltac2

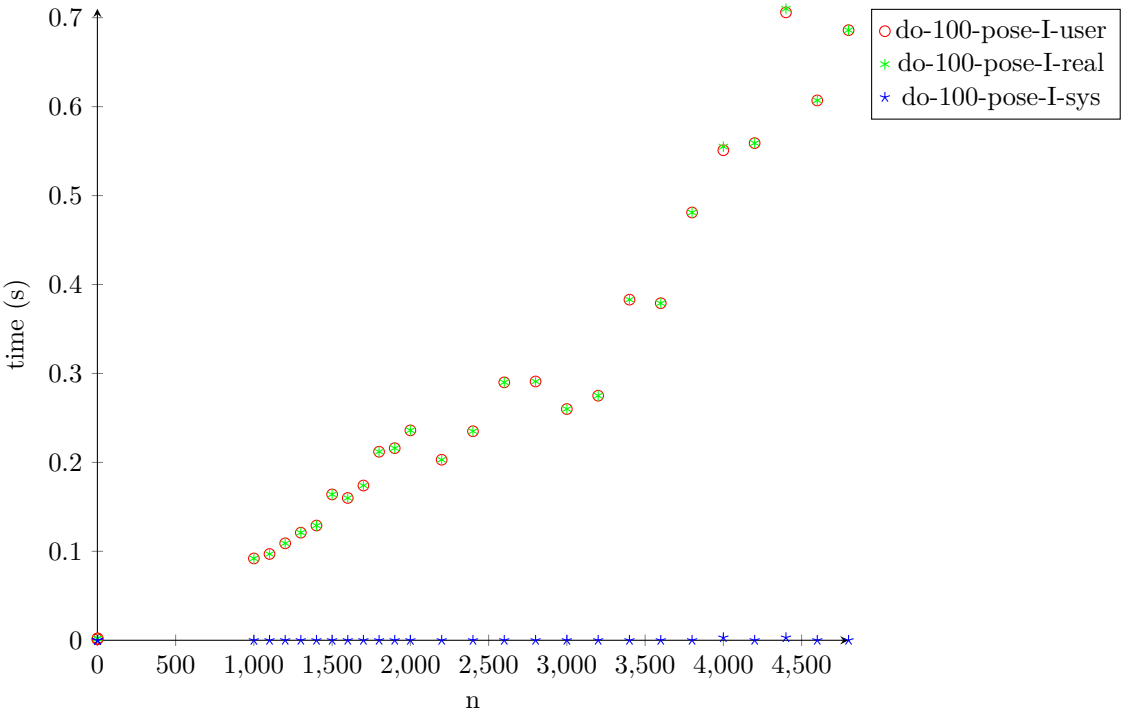


Figure 9: timing-do-n-pose

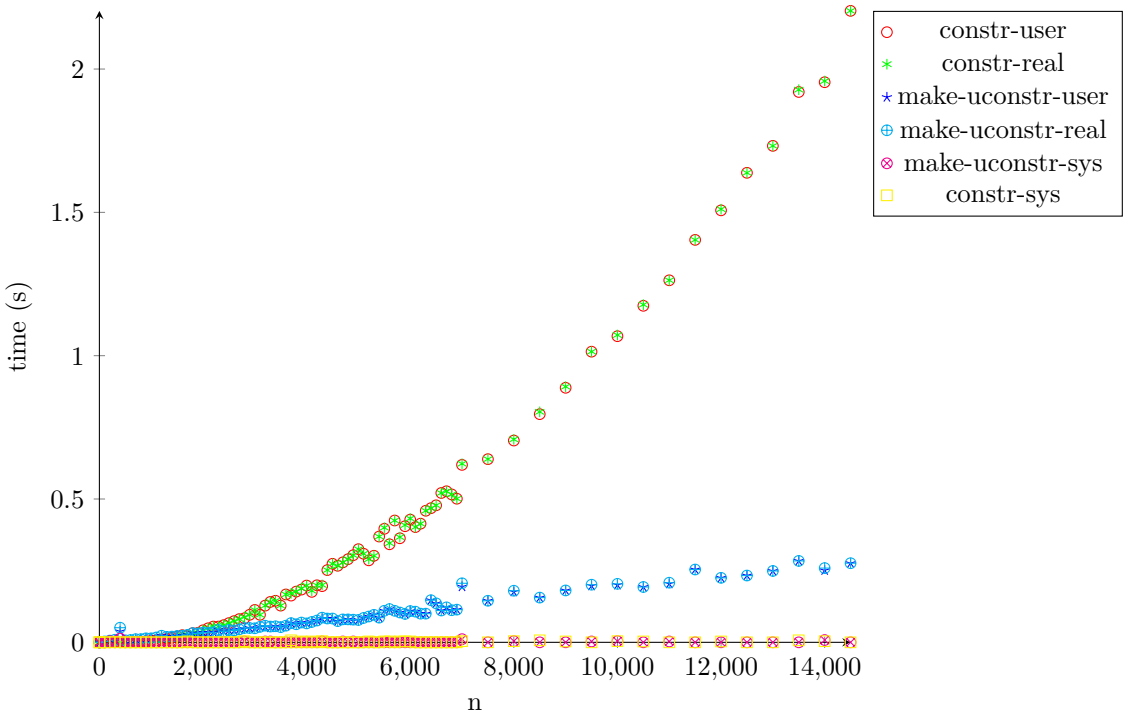


Figure 10: timing-let-n-uconstr

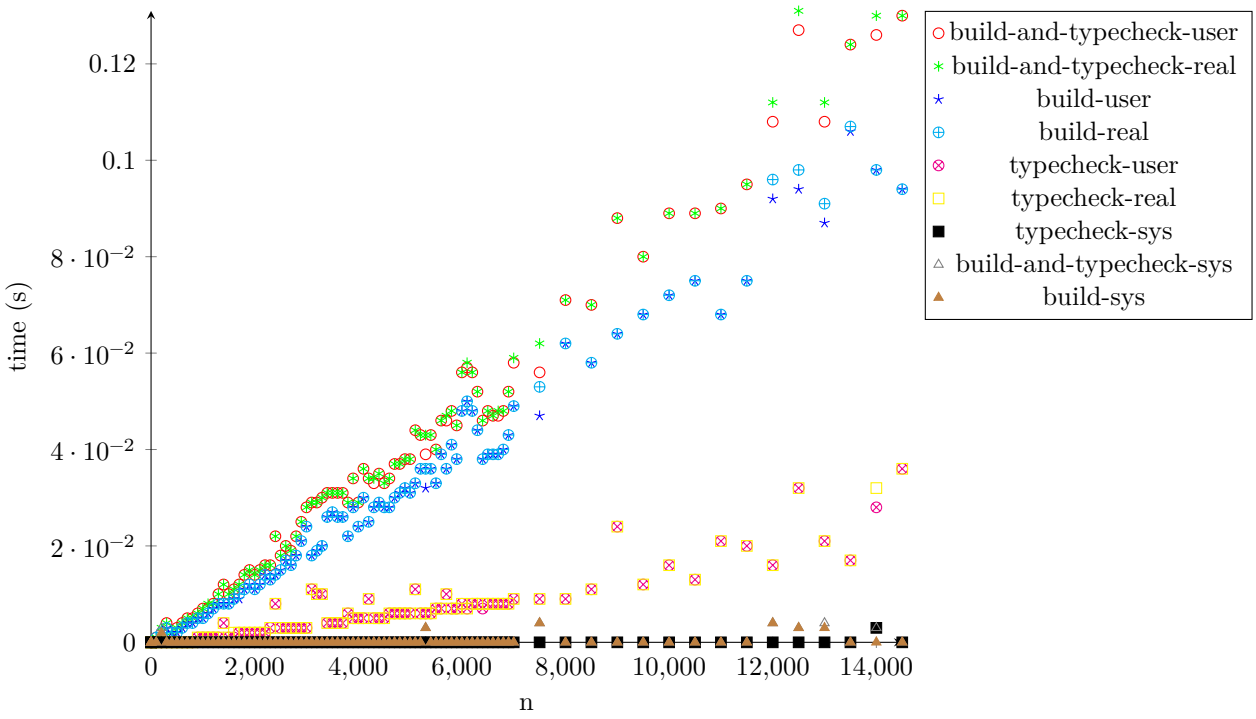


Figure 11: timing-let-n-ltac2

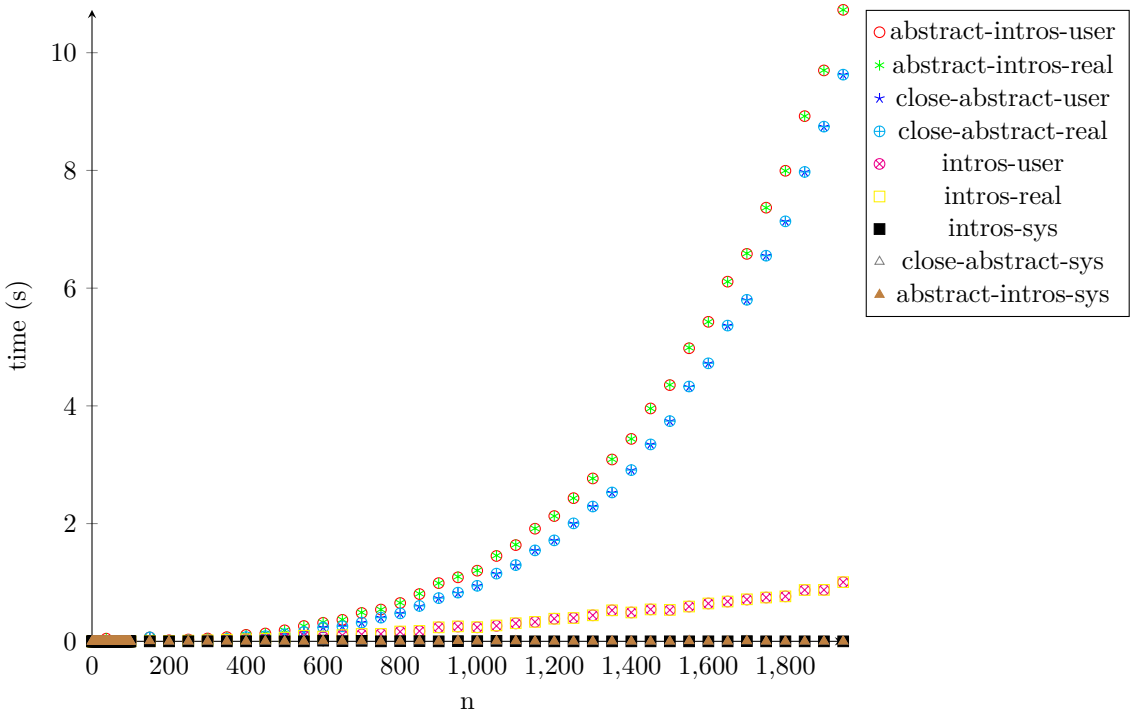


Figure 12: timing-intros-n-let

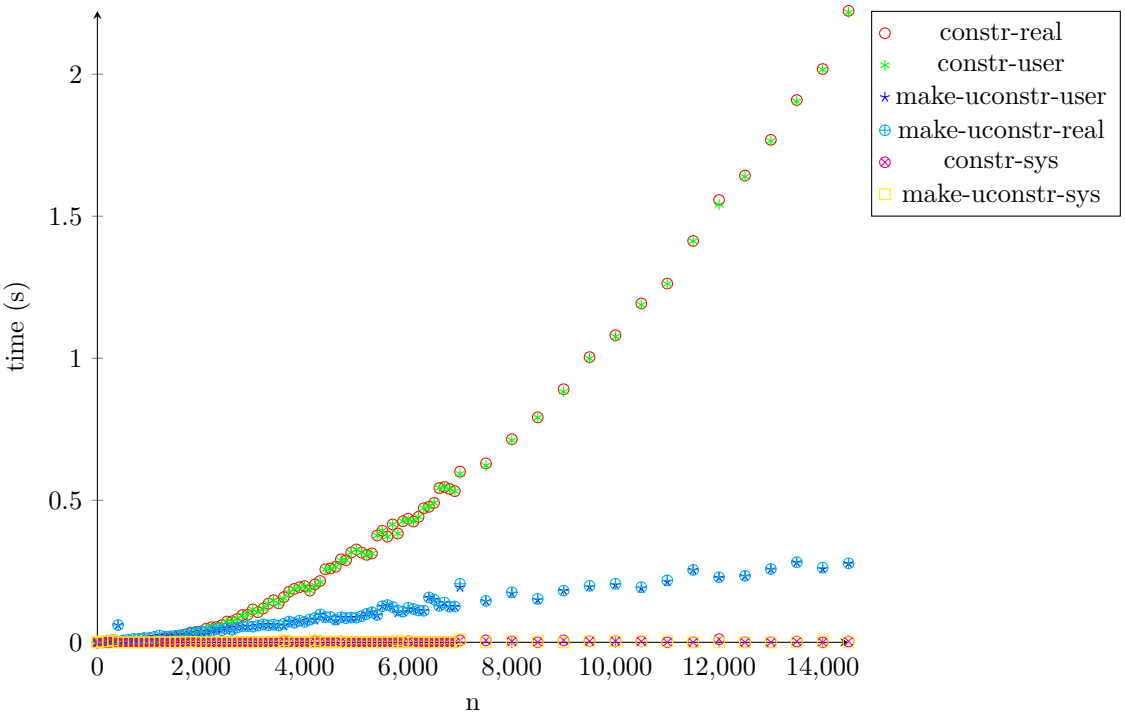


Figure 13: timing-fun-n-uconstr

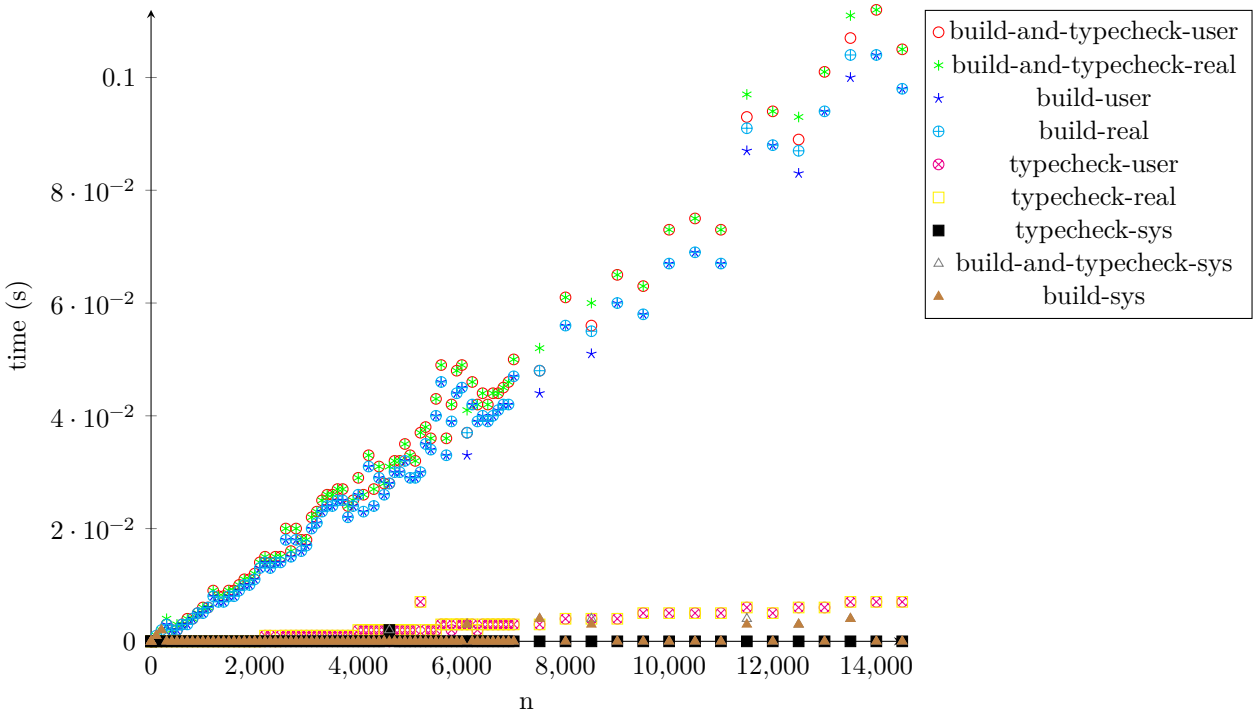


Figure 14: timing-fun-n-ltac2

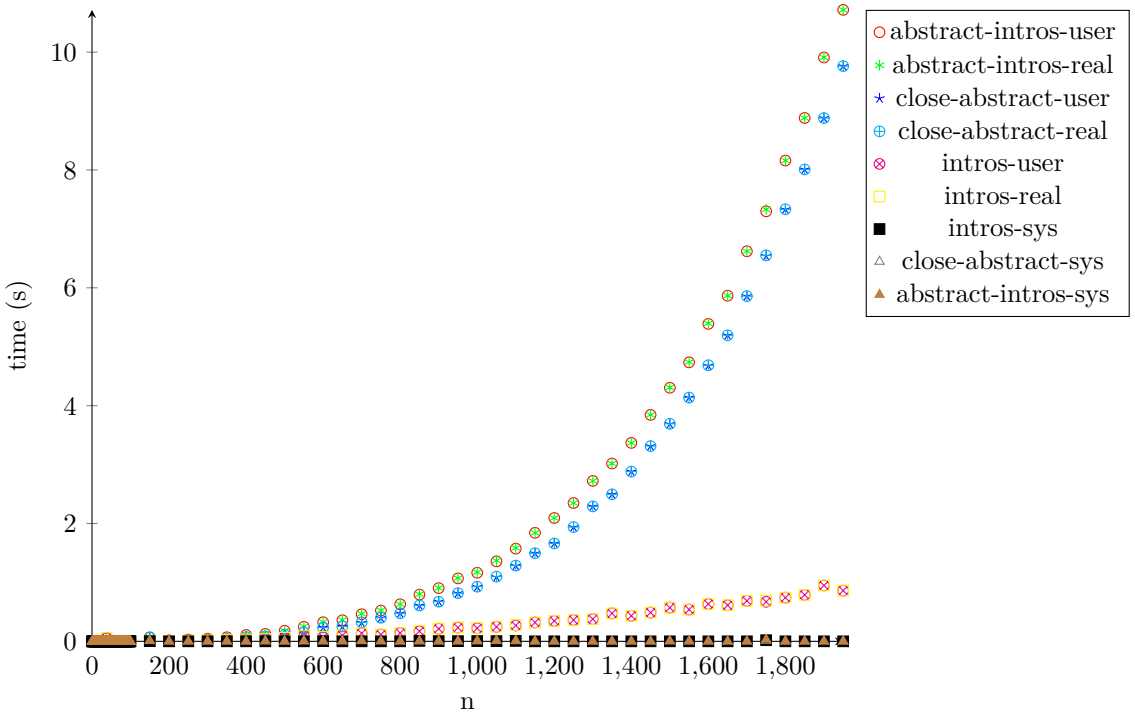


Figure 15: timing-intros-n-fun

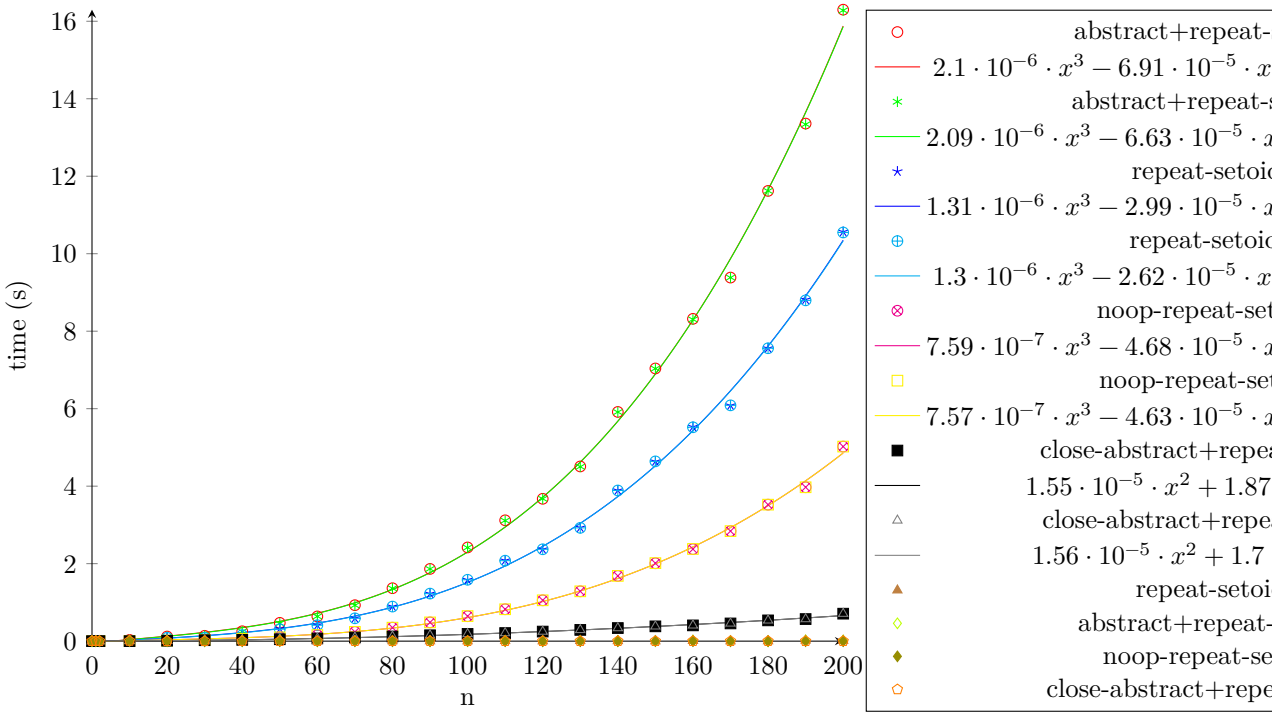


Figure 16: timing-repeat-setoid-rewrite-under-binders

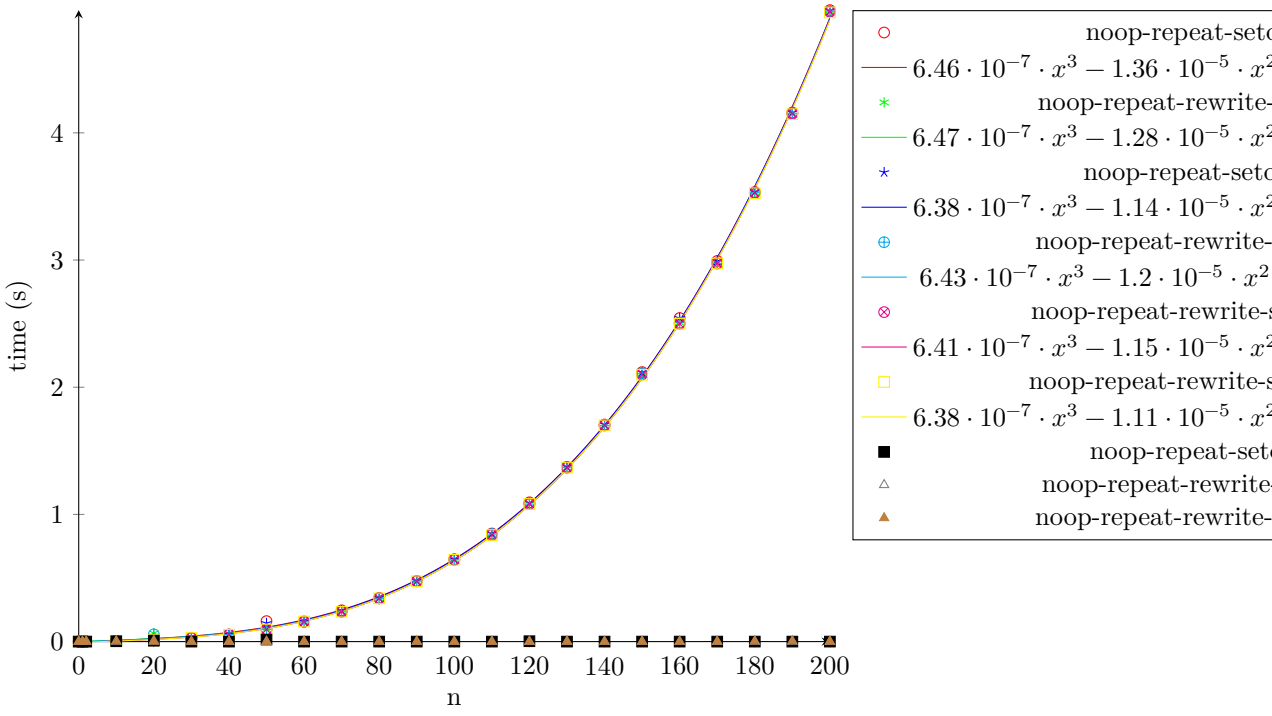


Figure 17: timing-repeat-setoid-rewrite-under-binders-noop

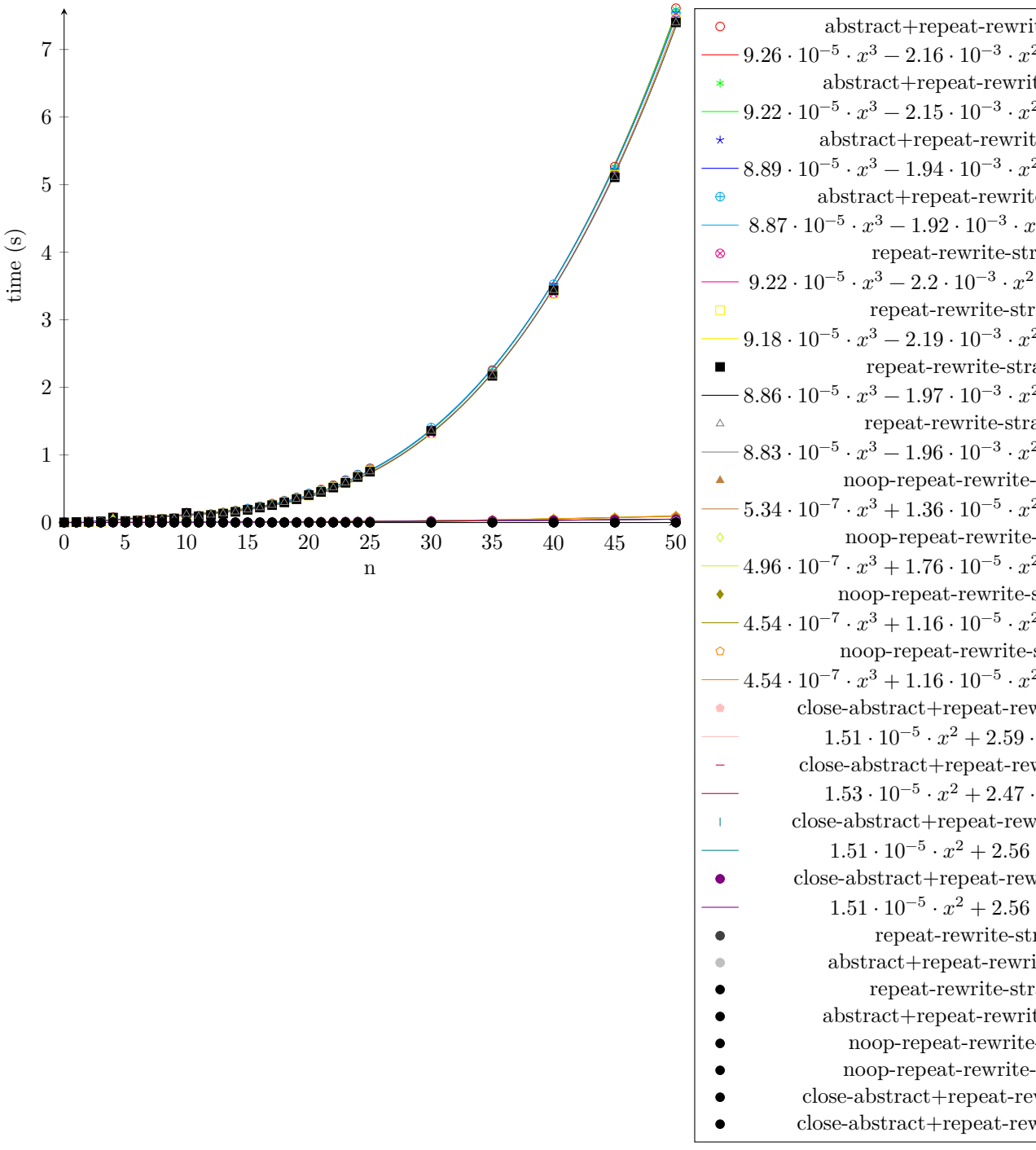


Figure 18: timing-rewrite-strat-under-binders

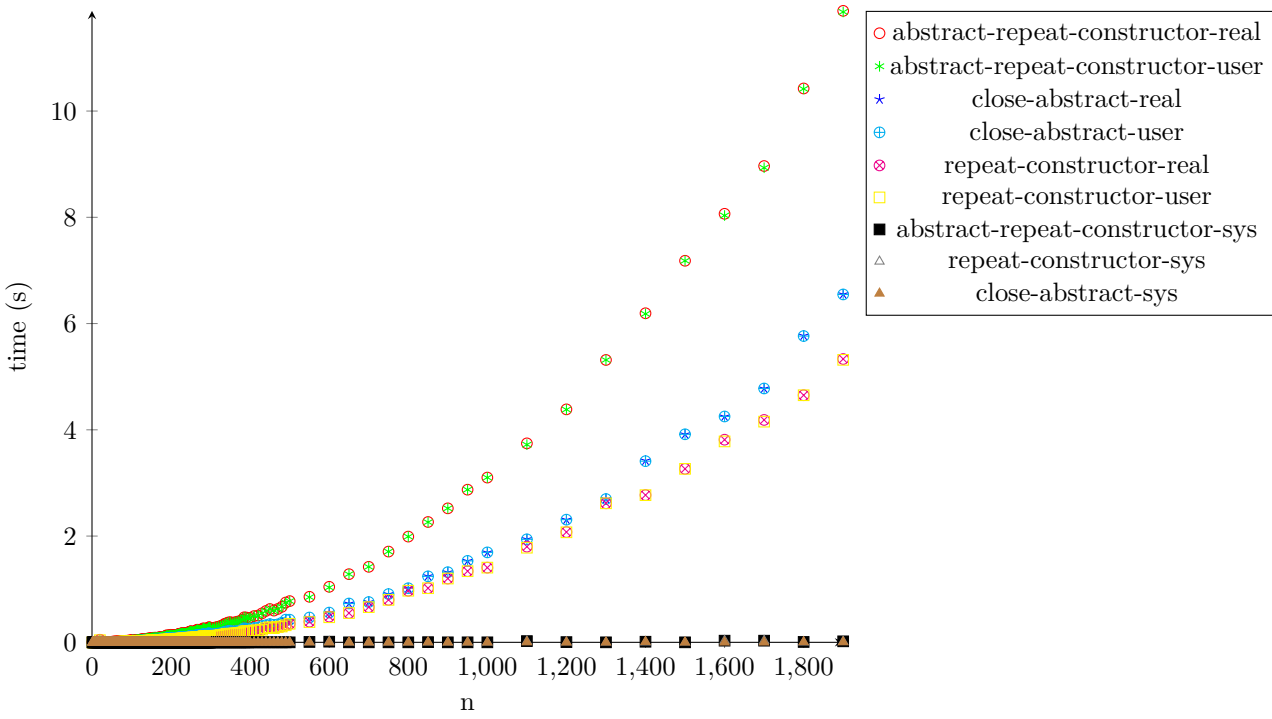


Figure 19: timing-conj-True-repeat-constructor

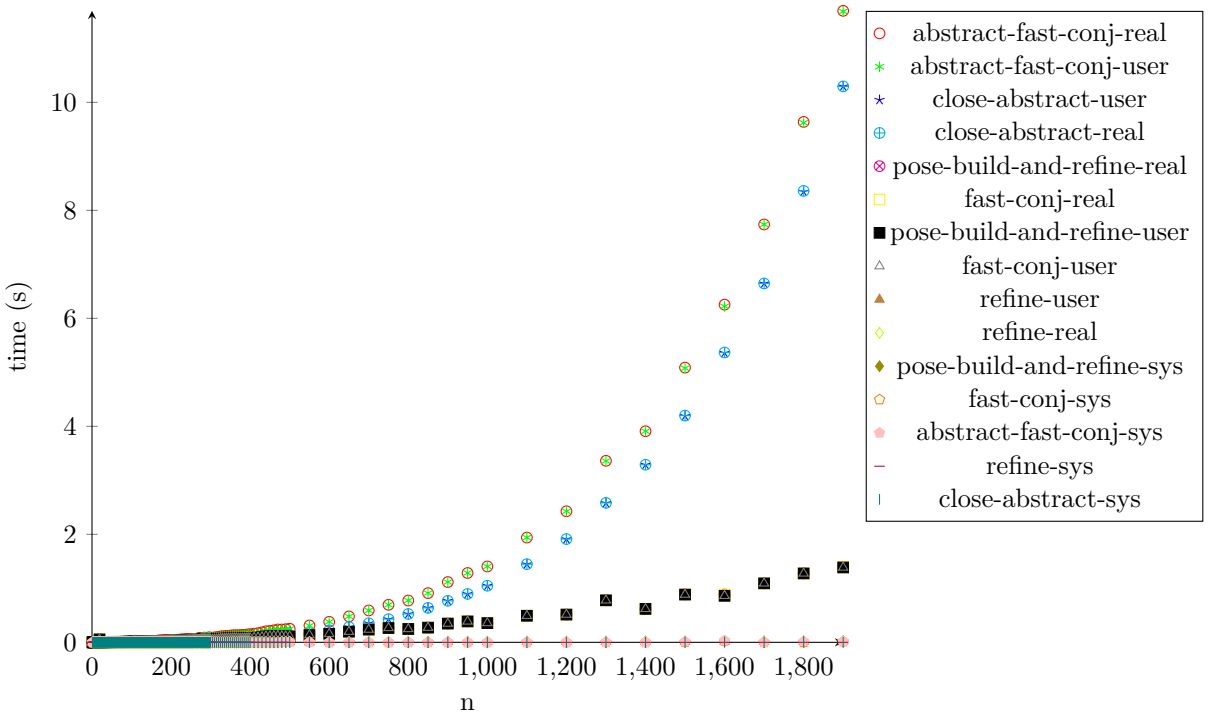


Figure 20: timing-conj-True-fast-conj

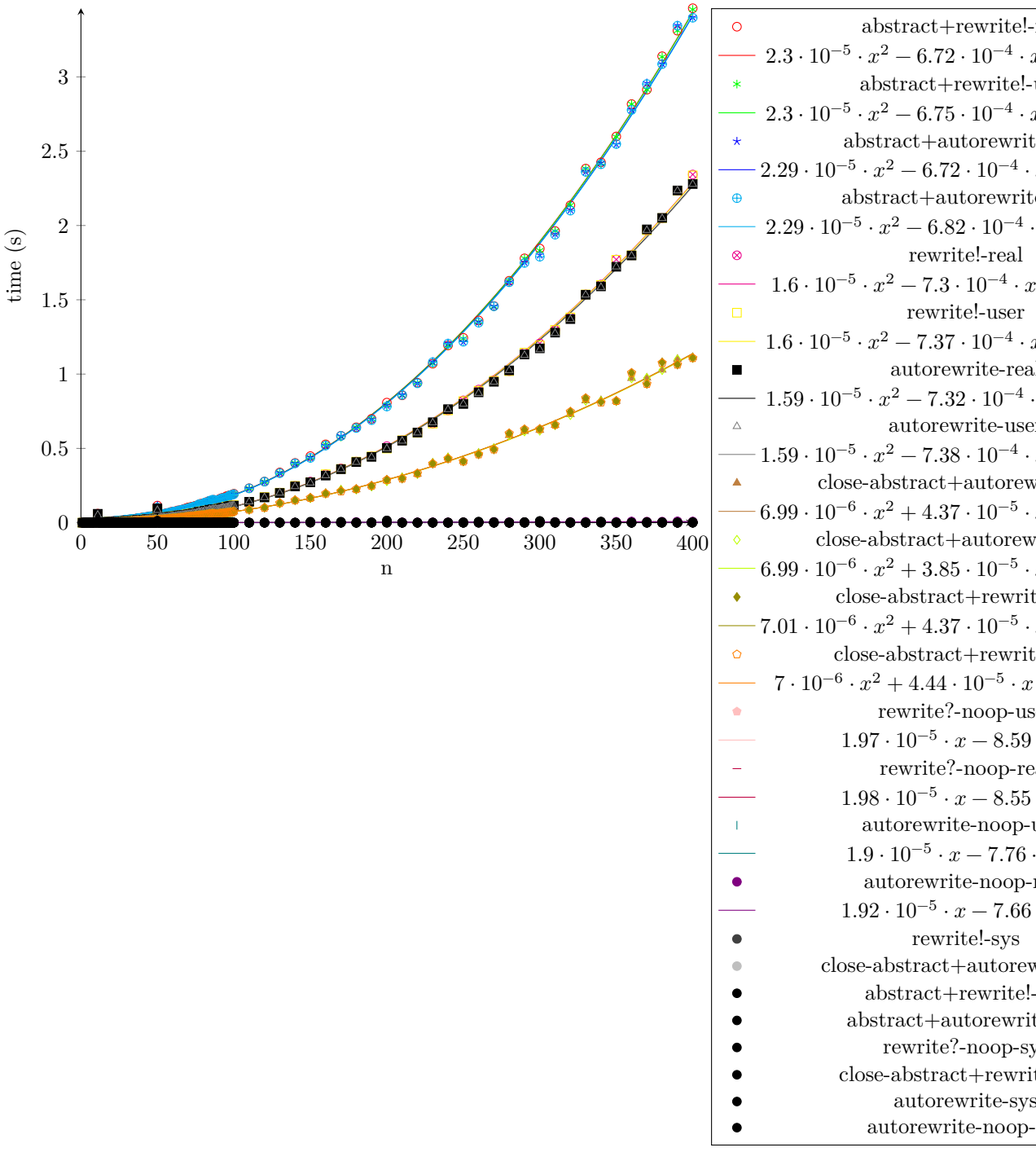


Figure 21: timing-rewrite-repeated-app-autorewrite

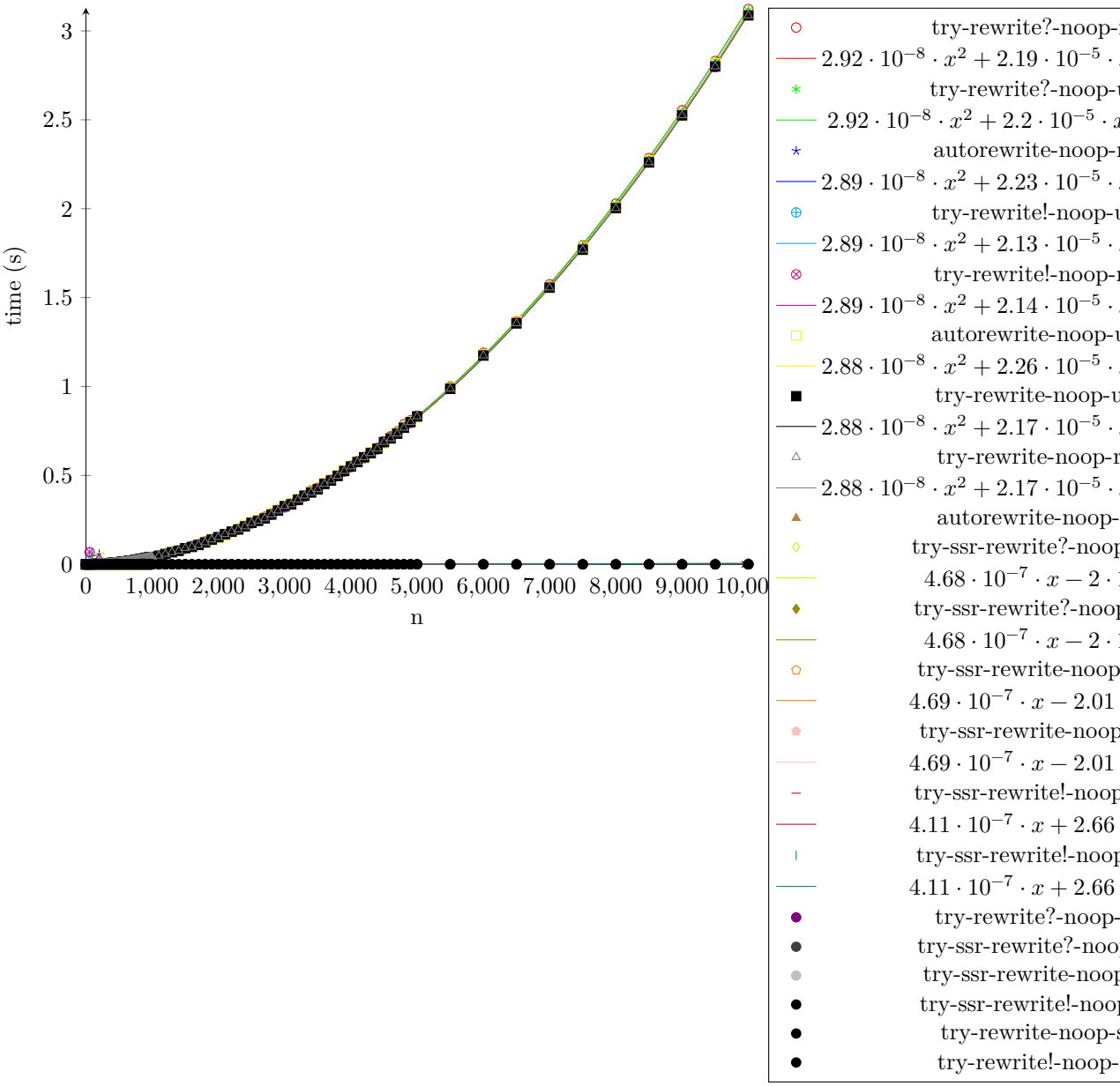


Figure 22: timing-rewrite-repeated-app-autorewrite-noop

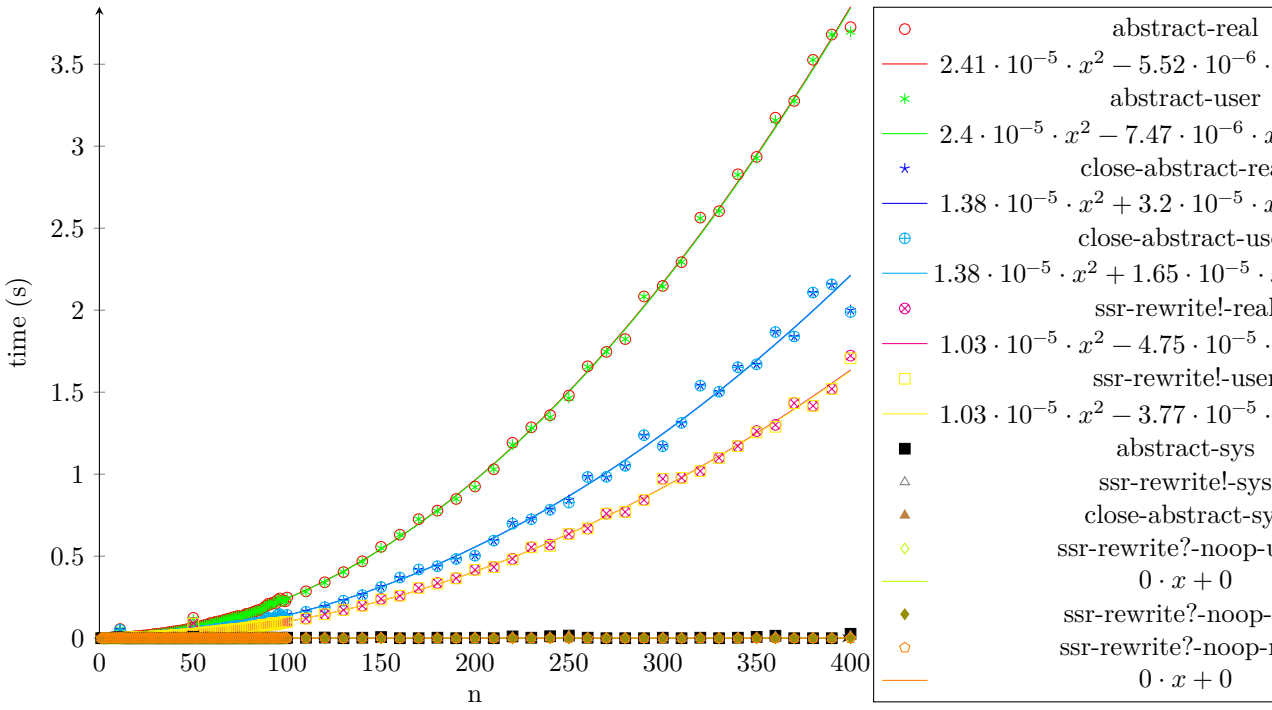


Figure 23: timing-rewrite-repeated-app-ssrrewrite

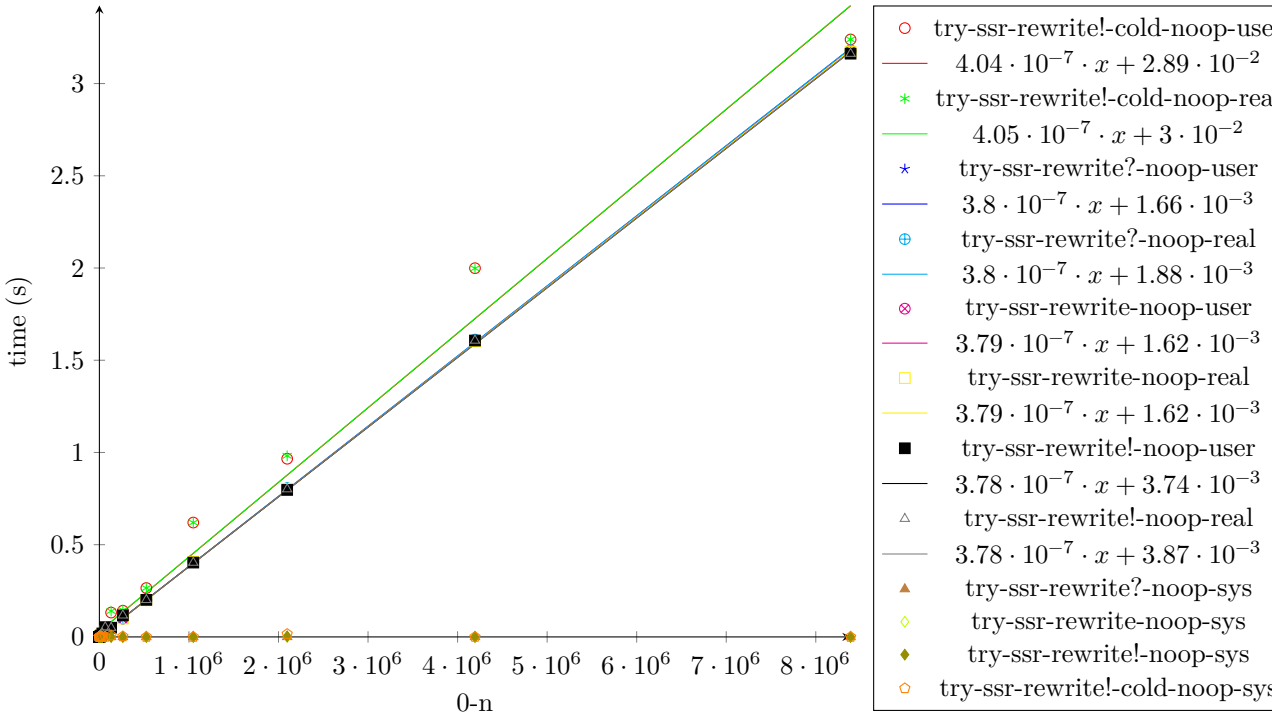


Figure 24: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1

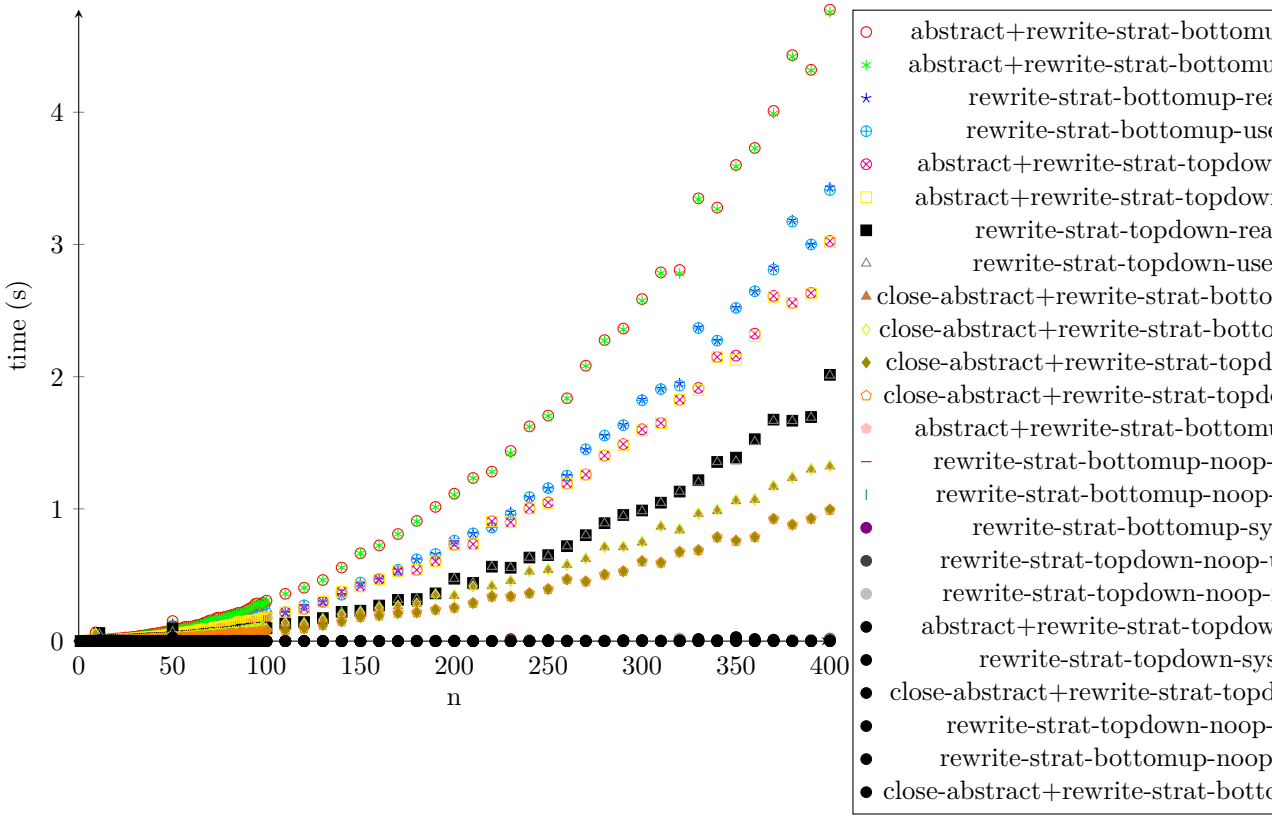


Figure 25: timing-rewrite-repeated-app-rewrite-strat

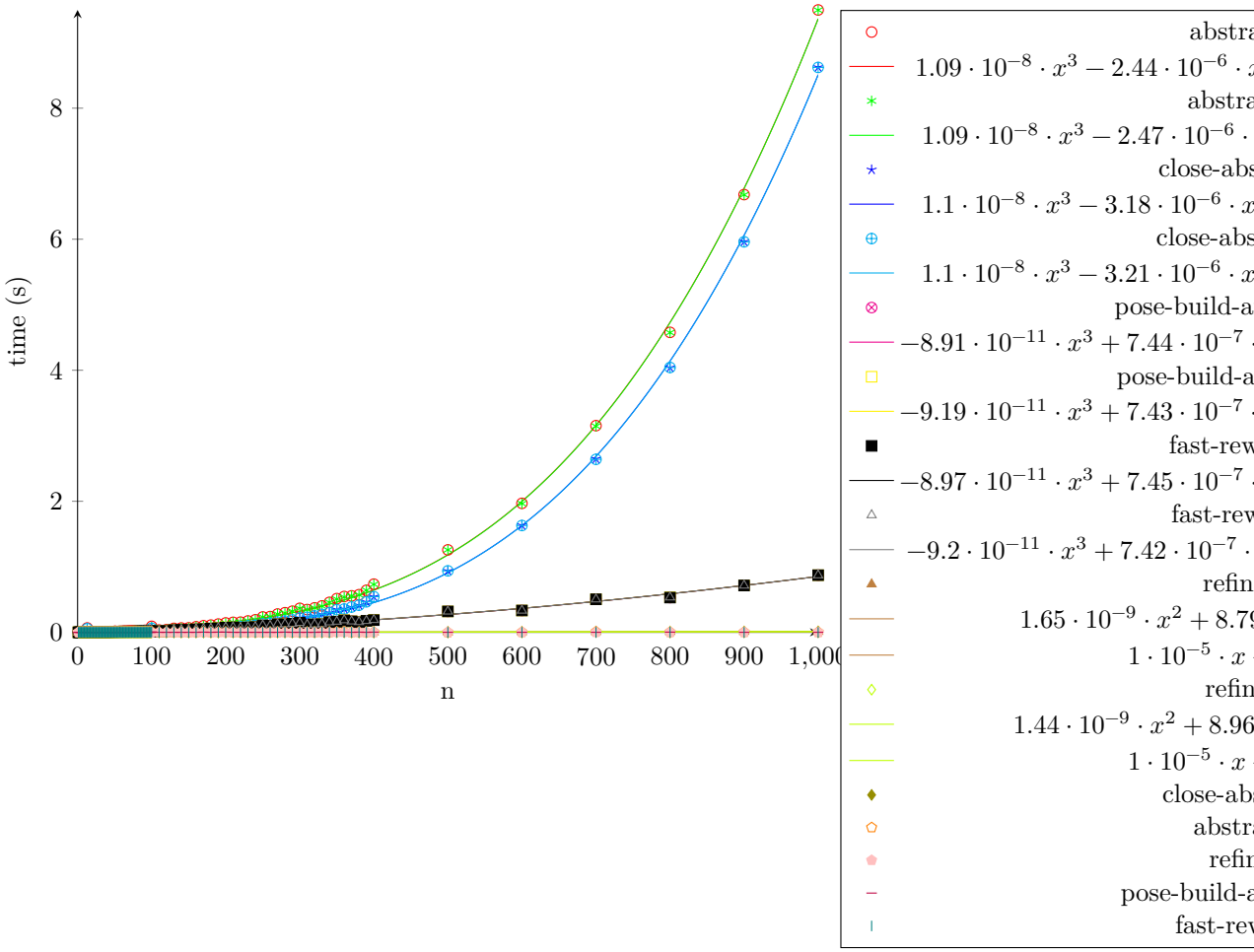
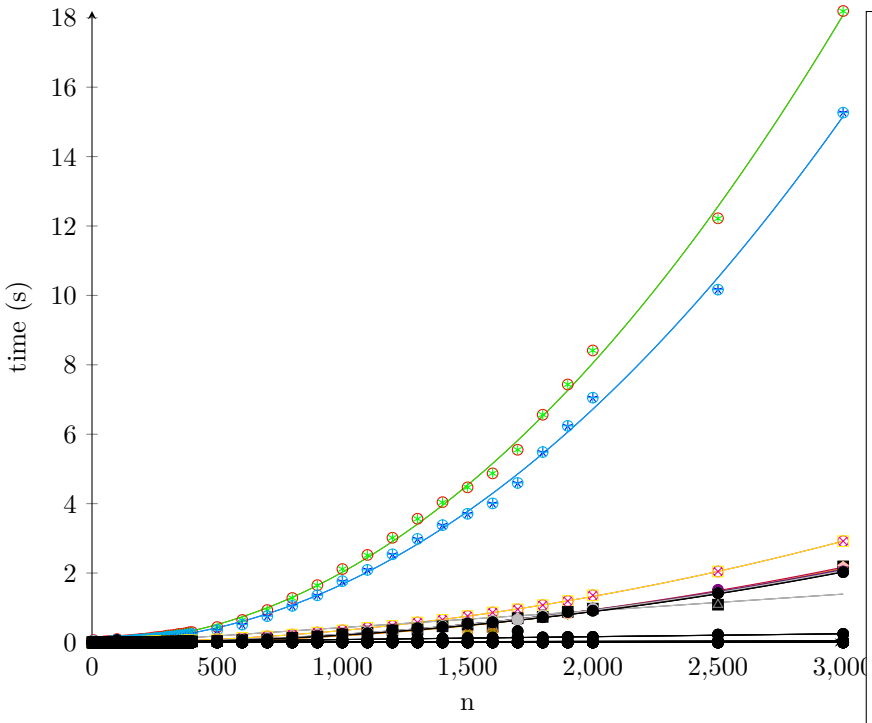


Figure 26: timing-rewrite-repeated-app-fast-rewrite


time (s)
n
0
2
4
6
8
10
12
14
16
18
0
500
1,000
1,500
2,000
2,500
3,000

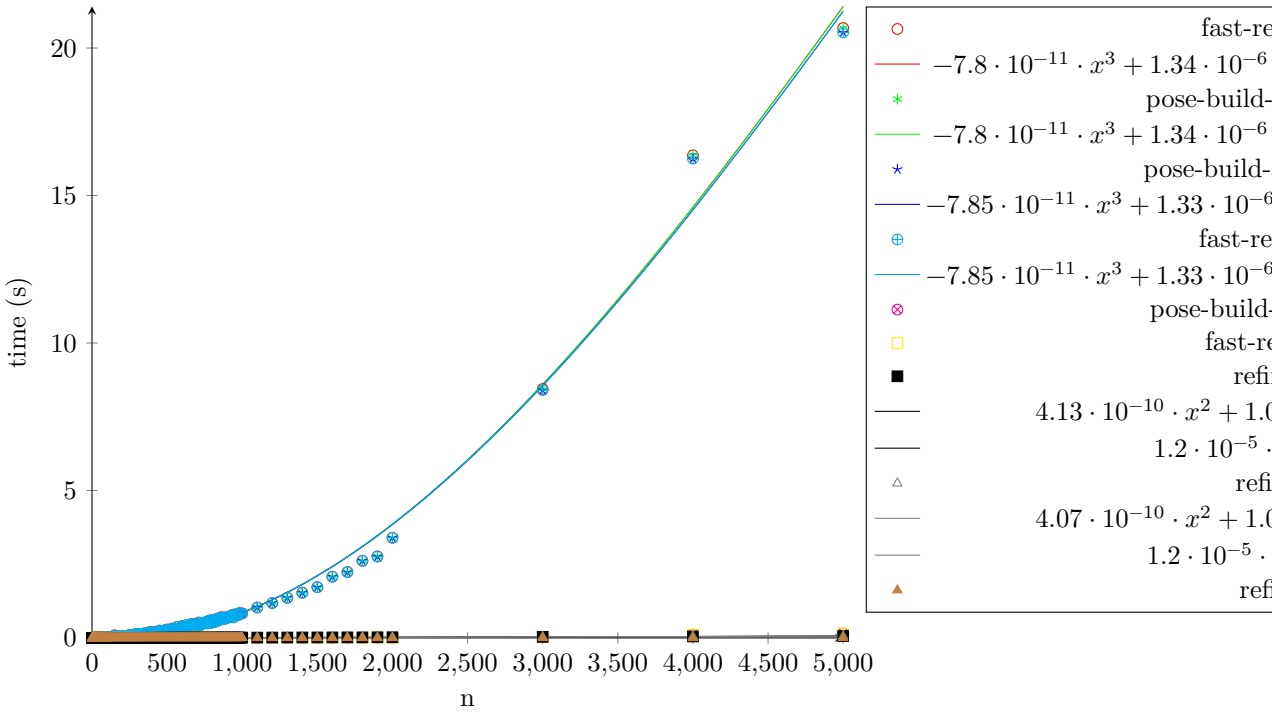


Figure 28: timing-rewrite-repeated-app-fast-rewrite-no-abstract

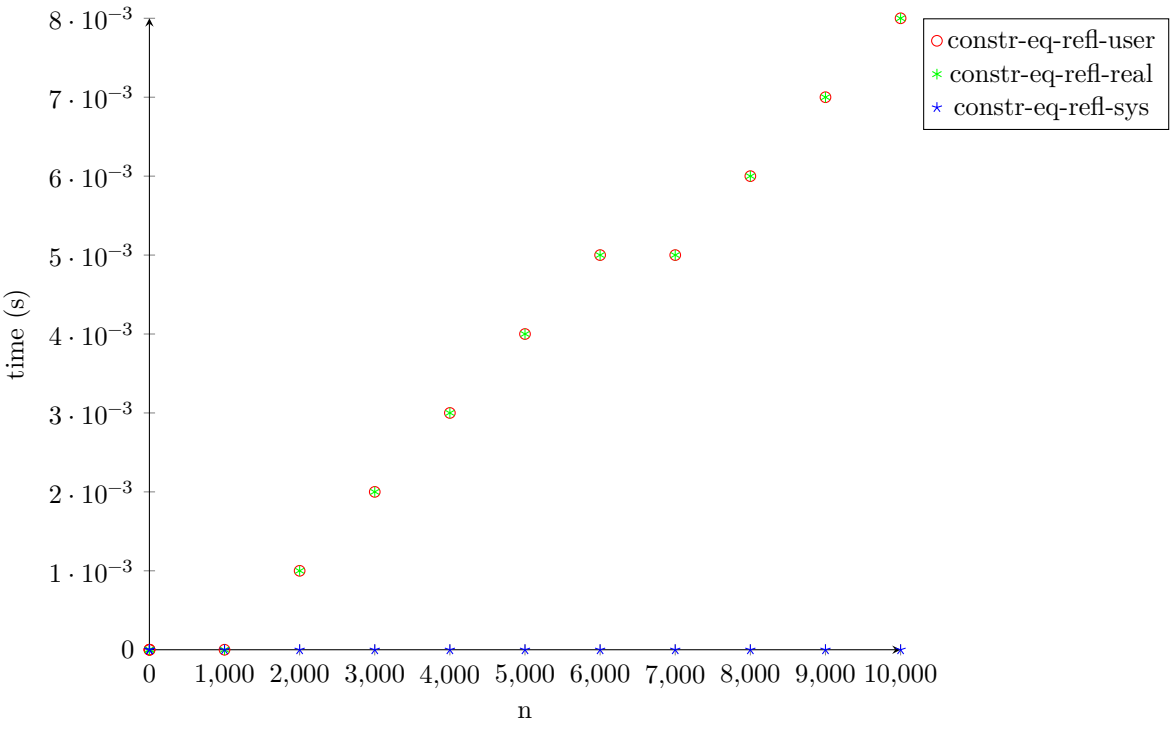


Figure 29: timing-constr-eq-alpha

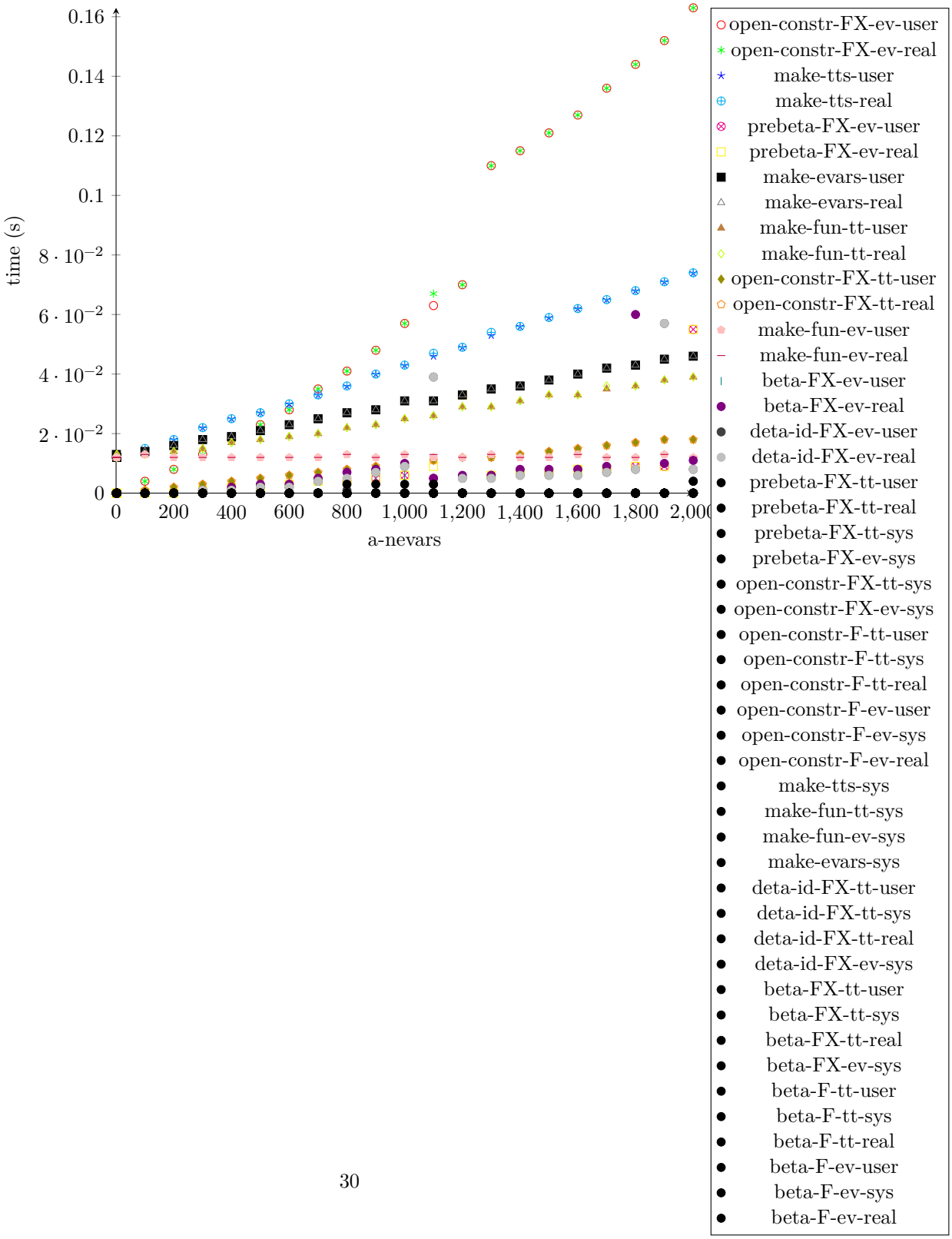


Figure 30: timing-lift-identity-evar-subst-nevars param-ctx-size 0, 1, param-extra-binders 0, 1

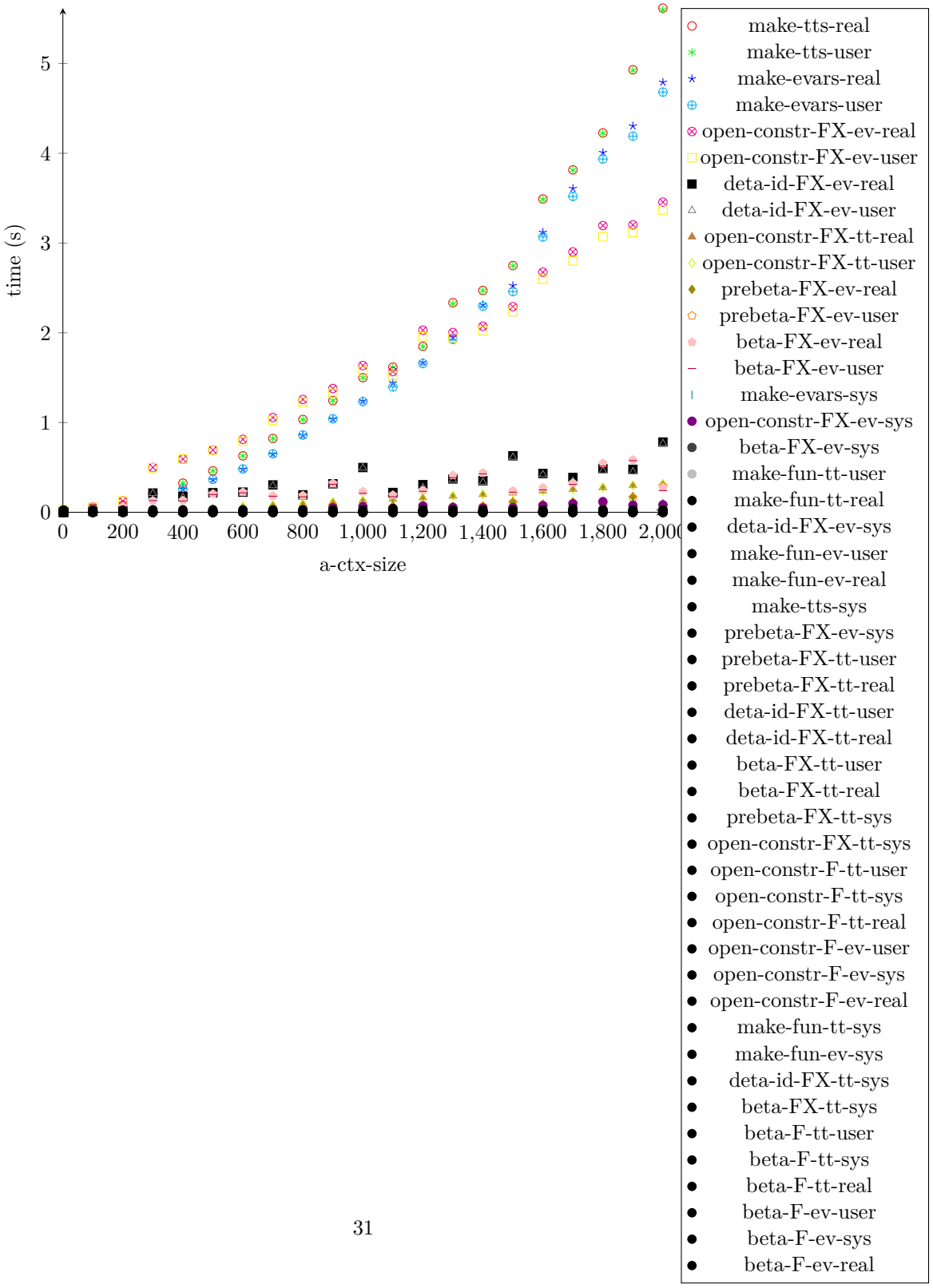


Figure 31: timing-lift-identity-evar-subst-ctx param-extra-binders 0, 1, param-nevars 0, 1

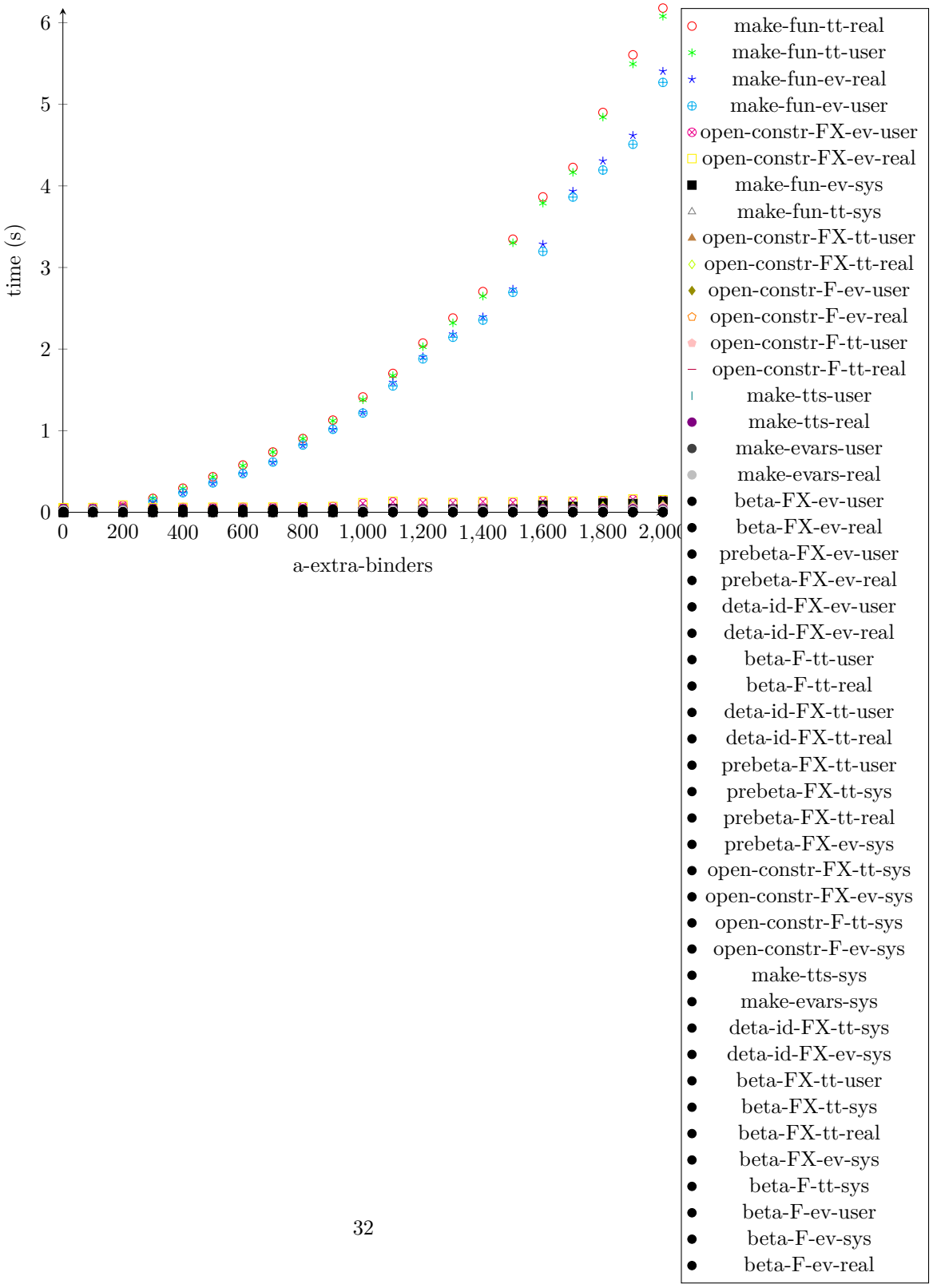


Figure 32: timing-lift-identity-evar-subst-binders param-ctx-size 0, 1, param-nevars 0, 1

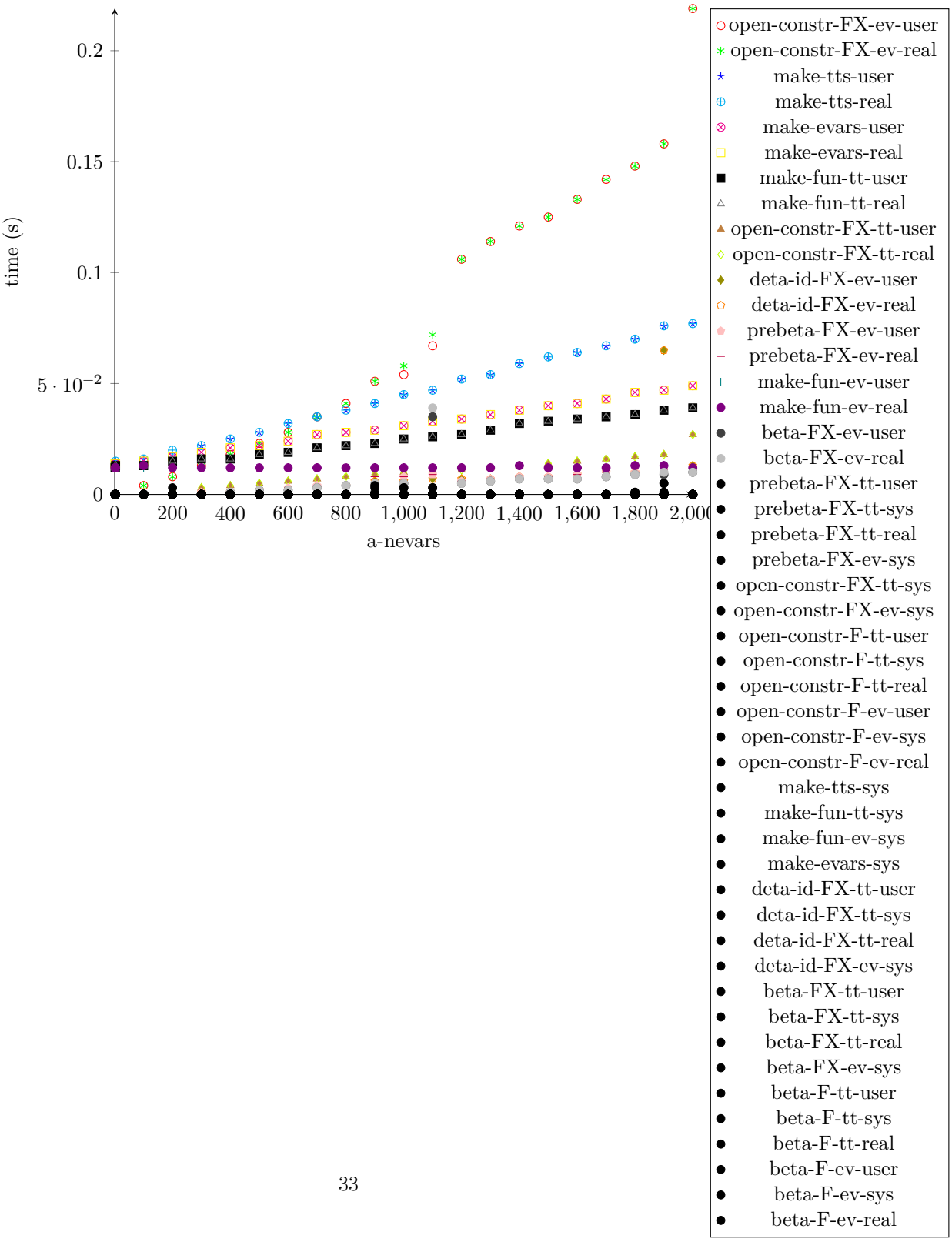


Figure 33: timing-lift-non-identity-evar-subst-nevars param-ctx-size 0, 1, param-extra-binders 0, 1

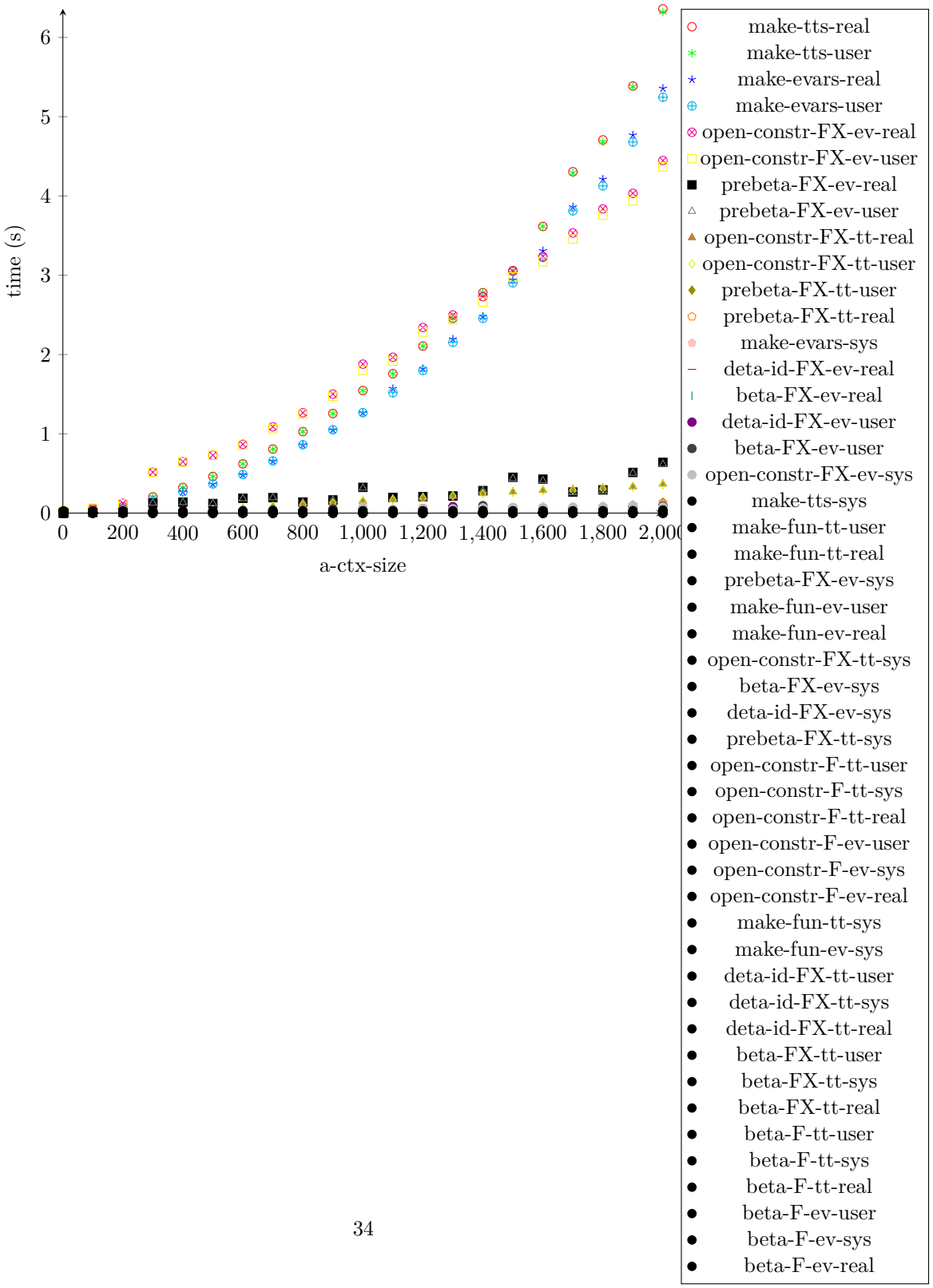


Figure 34: timing-lift-non-identity-evar-subst-ctx param-extra-binders 0, 1, param-nevars 0, 1

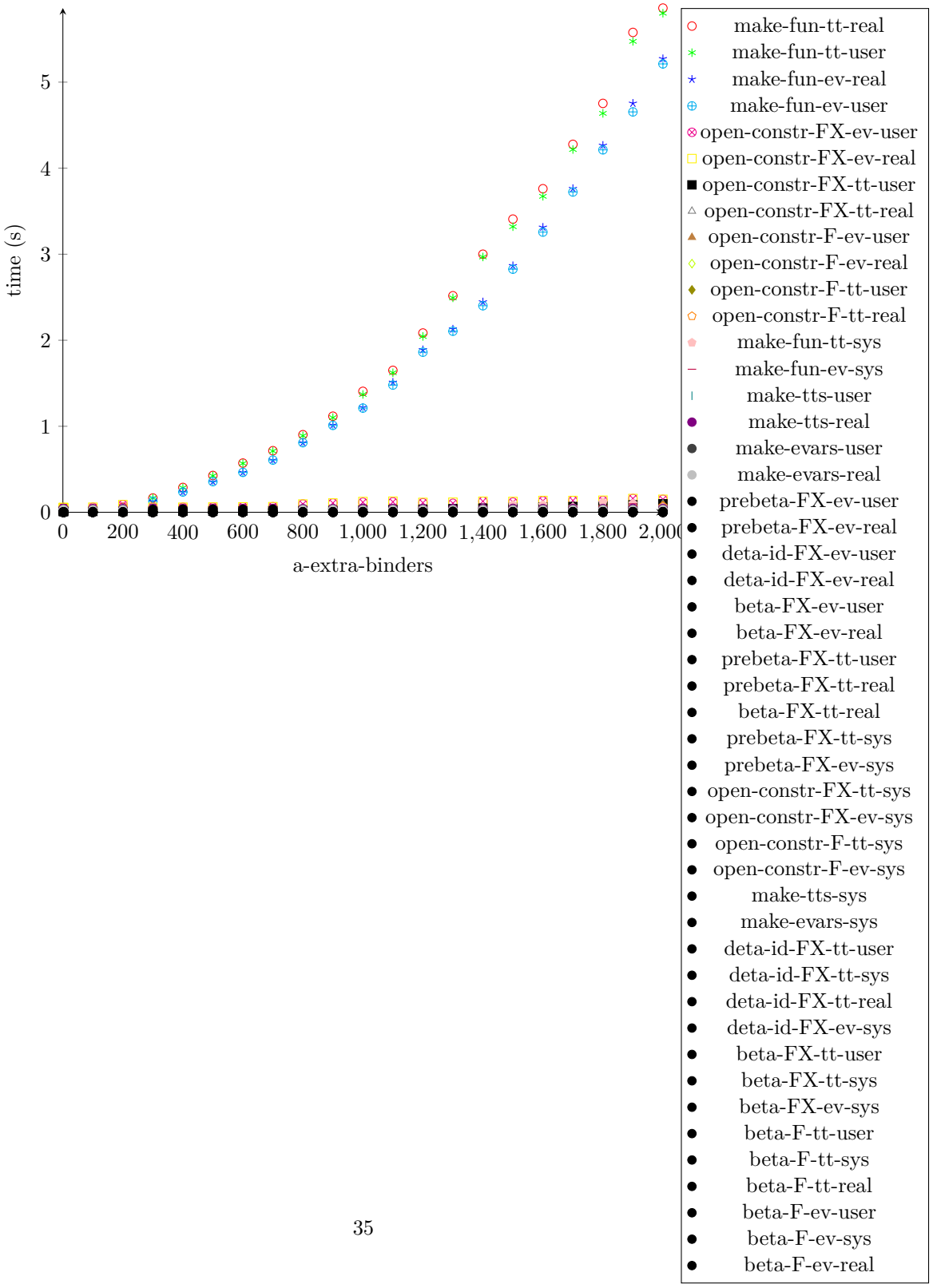
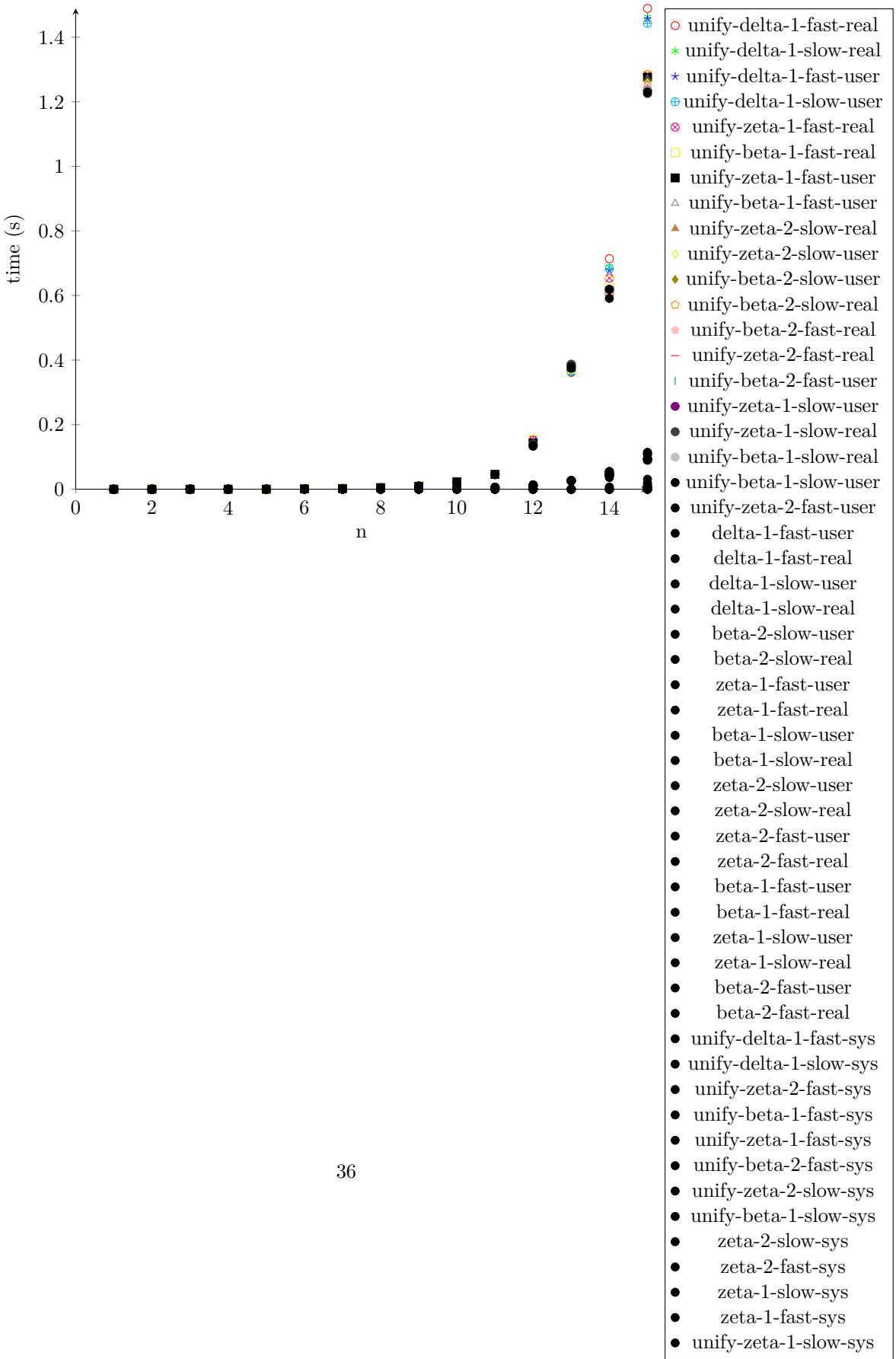
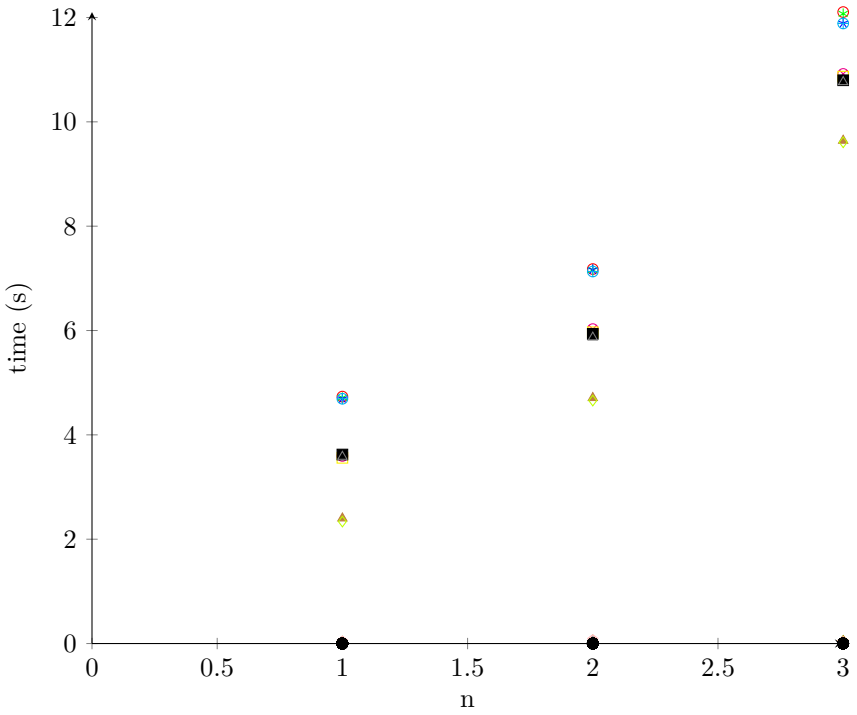


Figure 35: timing-lift-non-identity-evar-subst-binders param-ctx-size 0, 1, param-nevars 0, 1


time (s)
n
0
0.2
0.4
0.6
0.8
1
1.2
1.4
0
2
4
6
8
10
12
14
unify-delta-1-fast-real
unify-delta-1-slow-real
unify-delta-1-fast-user
unify-delta-1-slow-user
unify-zeta-1-fast-real
unify-beta-1-fast-real
unify-zeta-1-fast-user
unify-beta-1-fast-user
unify-zeta-2-slow-real
unify-zeta-2-slow-user
unify-beta-2-slow-user
unify-beta-2-slow-real
unify-beta-2-fast-real
unify-zeta-2-fast-real
unify-beta-2-fast-user
unify-zeta-1-slow-user
unify-zeta-1-slow-real
unify-beta-1-slow-real
unify-beta-1-slow-user
unify-zeta-2-fast-user
delta-1-fast-user
delta-1-fast-real
delta-1-slow-user
delta-1-slow-real
beta-2-slow-user
beta-2-slow-real
zeta-1-fast-user
zeta-1-fast-real
beta-1-slow-user
beta-1-slow-real
zeta-2-slow-user
zeta-2-slow-real
zeta-2-fast-user
zeta-2-fast-real
beta-1-fast-user
beta-1-fast-real
zeta-1-slow-user
zeta-1-slow-real
beta-2-fast-user
beta-2-fast-real
unify-delta-1-fast-sys
unify-delta-1-slow-sys
unify-zeta-2-fast-sys
unify-beta-1-fast-sys
unify-zeta-1-fast-sys
unify-beta-2-fast-sys
unify-zeta-2-slow-sys
unify-beta-1-slow-sys
zeta-2-slow-sys
zeta-2-fast-sys
zeta-1-slow-sys
zeta-1-fast-sys
unify-zeta-1-slow-sys



- abstract-unify-beta-2-slow-real
- abstract-unify-beta-2-slow-user
- abstract-unify-zeta-2-slow-real
- abstract-unify-zeta-2-slow-user
- abstract-unify-zeta-1-slow-real
- abstract-unify-zeta-1-slow-user
- abstract-unify-beta-1-slow-real
- abstract-unify-beta-1-slow-user
- abstract-unify-delta-1-slow-real
- abstract-unify-delta-1-slow-user
- abstract-unify-zeta-1-slow-sys
- abstract-unify-beta-2-slow-sys
- abstract-unify-beta-1-slow-sys
- abstract-unify-delta-1-slow-sys
- abstract-unify-zeta-2-slow-sys
- abstract-unify-zeta-2-fast-user
- abstract-unify-zeta-2-fast-real
- abstract-unify-zeta-1-fast-user
- abstract-unify-zeta-1-fast-real
- abstract-unify-delta-1-fast-user
- abstract-unify-delta-1-fast-real
- abstract-unify-beta-2-fast-user
- abstract-unify-beta-2-fast-real
- abstract-unify-beta-1-fast-user
- abstract-unify-beta-1-fast-real
- zeta-2-slow-user
- zeta-2-slow-sys
- zeta-2-slow-real
- zeta-2-fast-user
- zeta-2-fast-sys
- zeta-2-fast-real
- zeta-1-slow-user
- zeta-1-slow-sys
- zeta-1-slow-real
- zeta-1-fast-user
- zeta-1-fast-sys
- zeta-1-fast-real
- unify-zeta-2-slow-user
- unify-zeta-2-slow-sys
- unify-zeta-2-slow-real
- unify-zeta-2-fast-user
- unify-zeta-2-fast-sys
- unify-zeta-2-fast-real
- unify-zeta-1-slow-user
- unify-zeta-1-slow-sys
- unify-zeta-1-slow-real
- unify-zeta-1-fast-user
- unify-zeta-1-fast-sys
- unify-zeta-1-fast-real
- unify-delta-1-slow-user
- unify-delta-1-slow-sys
- unify-delta-1-slow-real
- unify-delta-1-fast-user

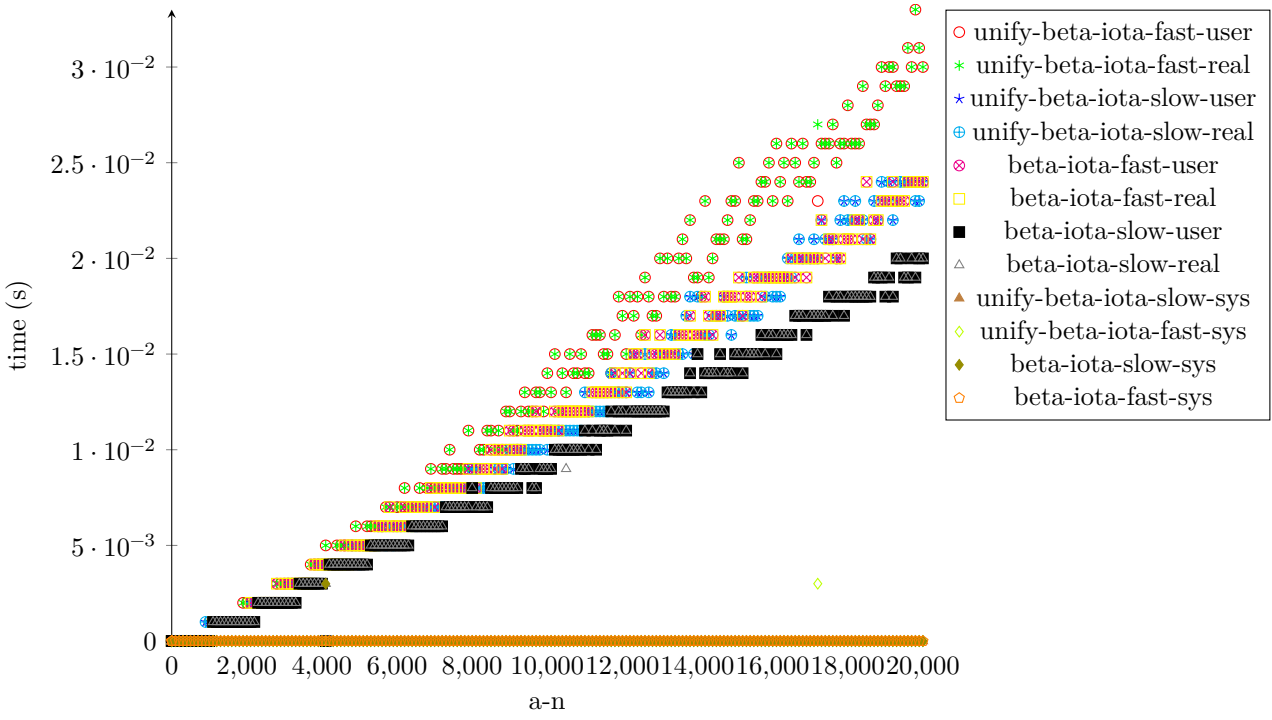


Figure 38: timing-iota-reduction-fact8 param-fact-n 8

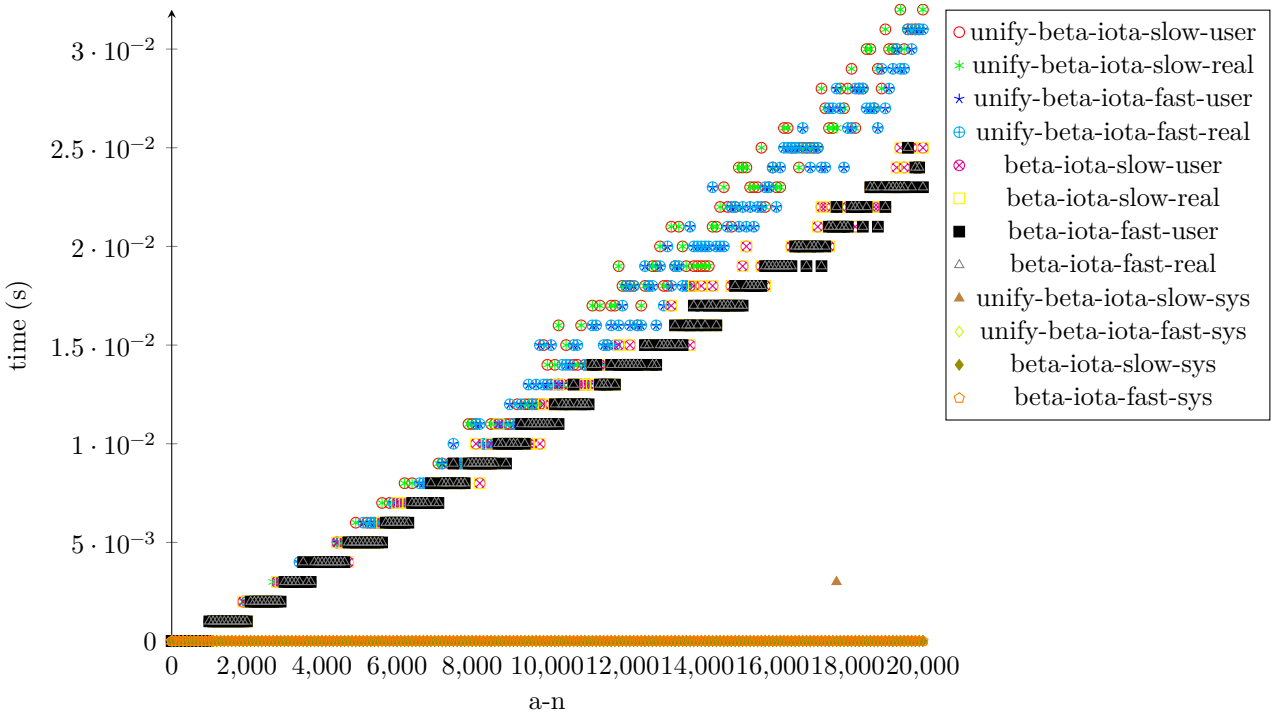


Figure 39: timing-iota-reduction-fact9 param-fact-n 9

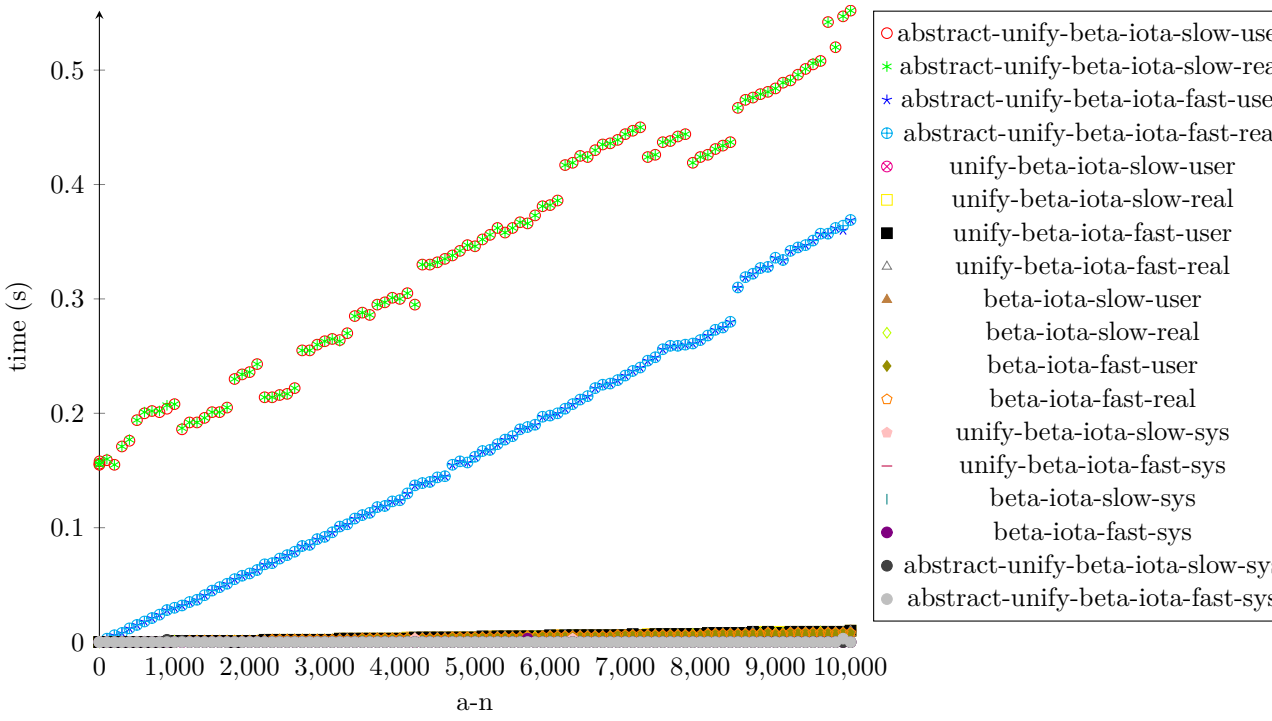


Figure 40: timing-iota-reduction-with-abstract-fact8 param-fact-n 8

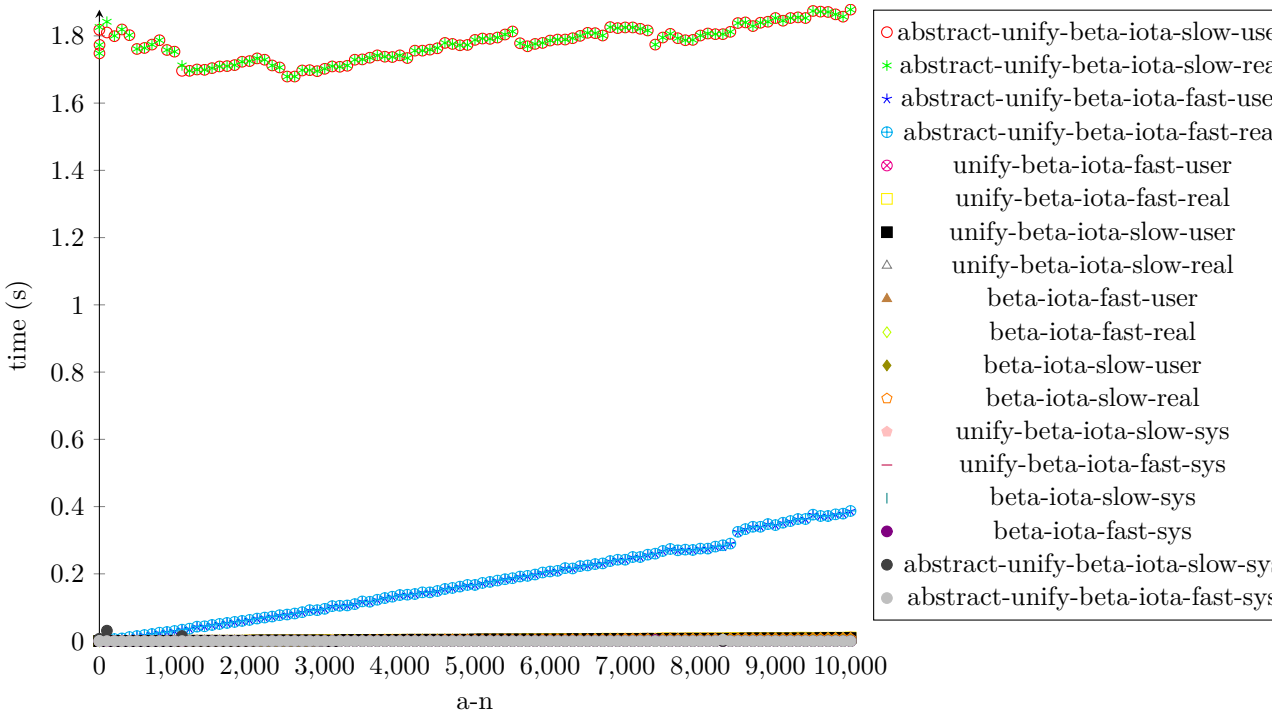


Figure 41: timing-iota-reduction-with-abstract-fact9 param-fact-n 9

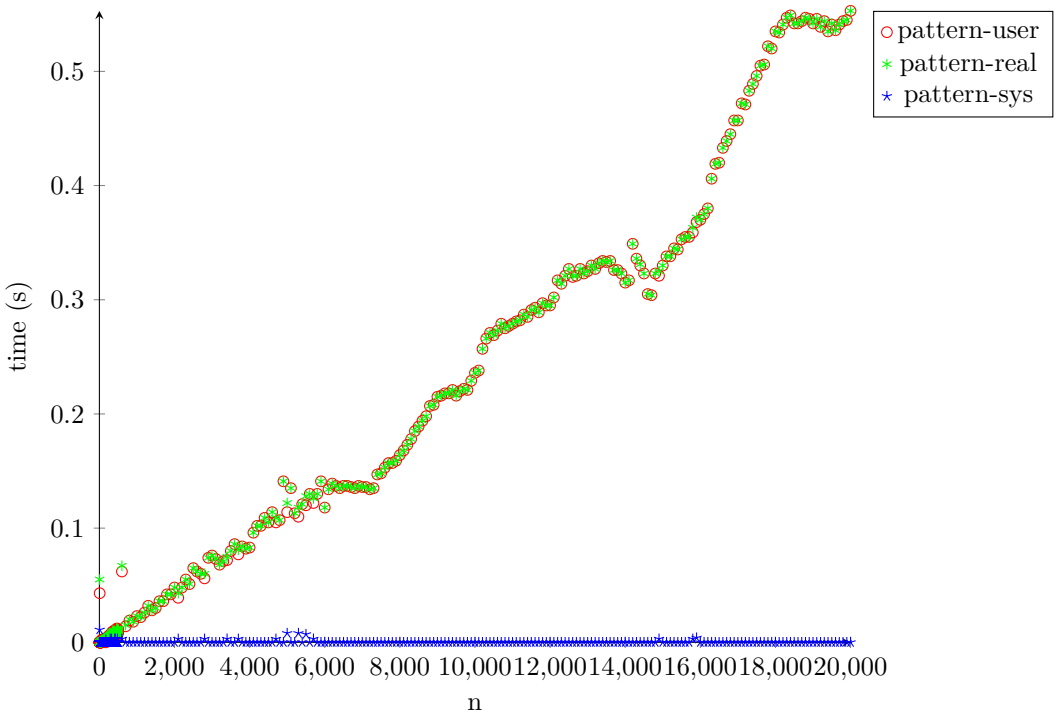


Figure 42: timing-pattern

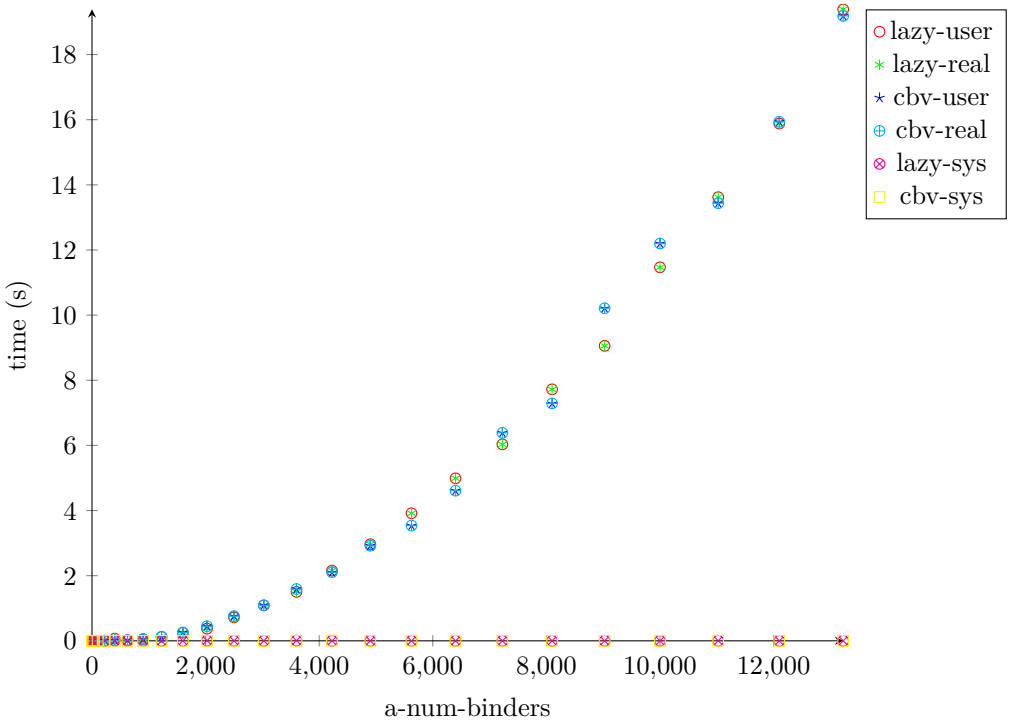


Figure 43: timing-quadratic-cbv-lazy-PHOAS param-n 0

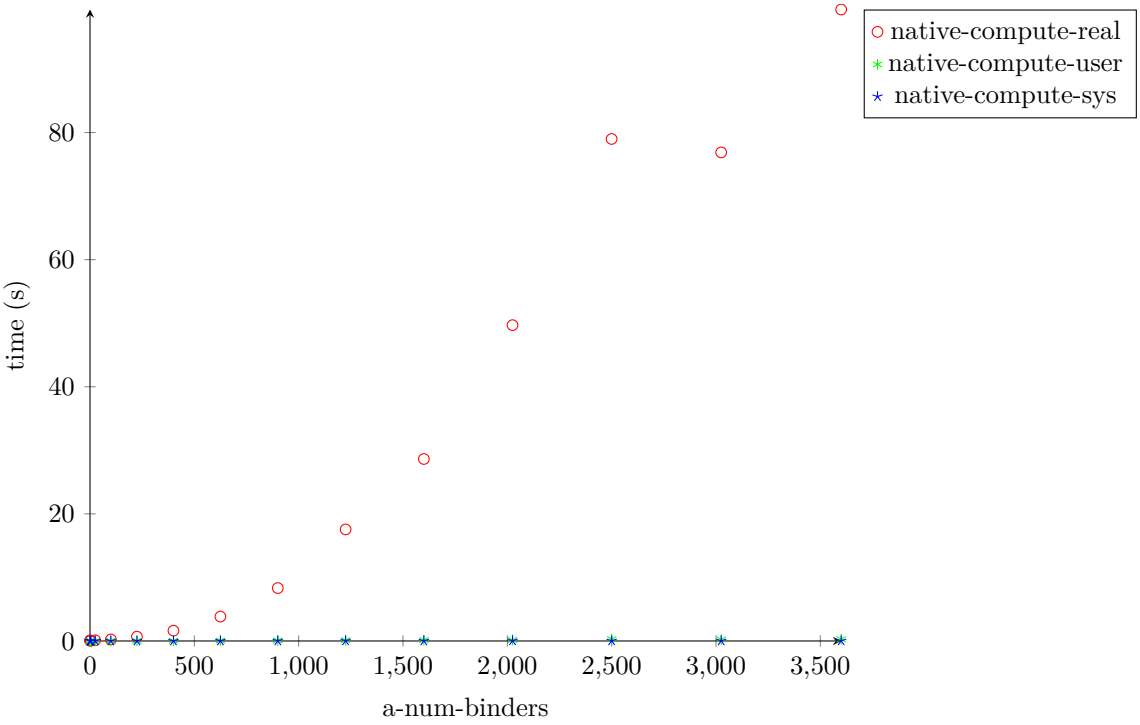


Figure 44: timing-quadratic-native-PHOAS param-n 0

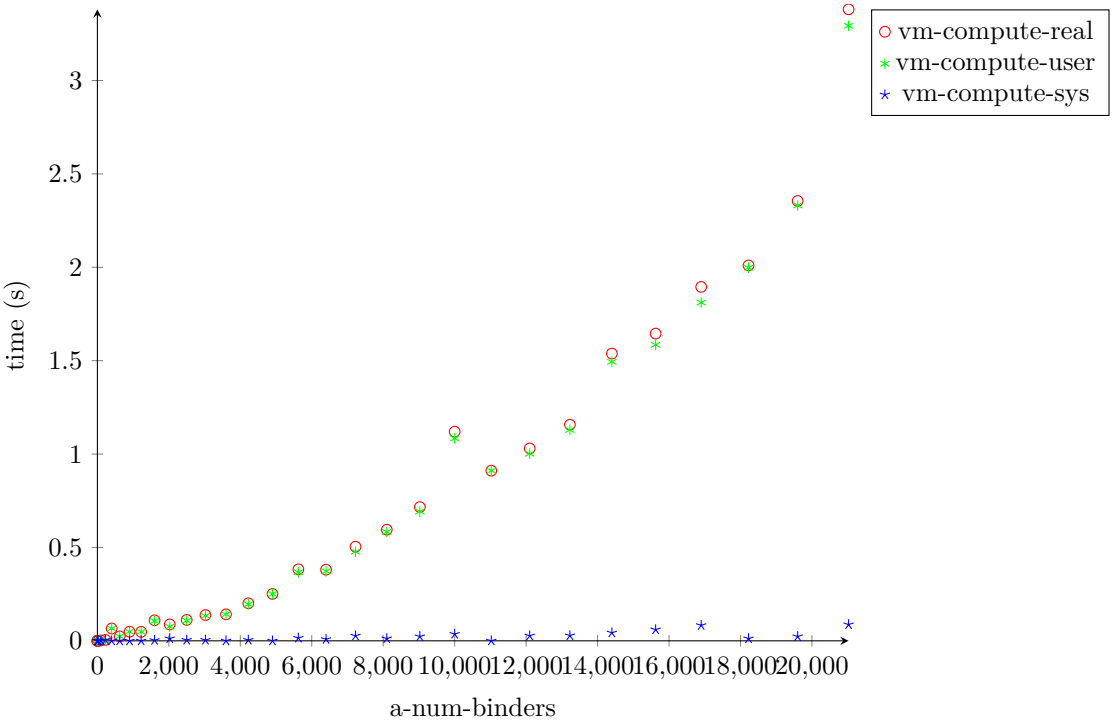


Figure 45: timing-quadratic-vm-PHOAS param-n 0