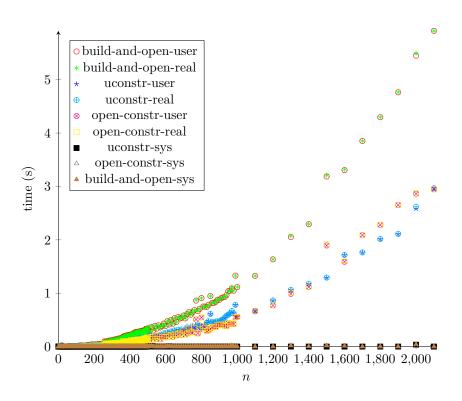
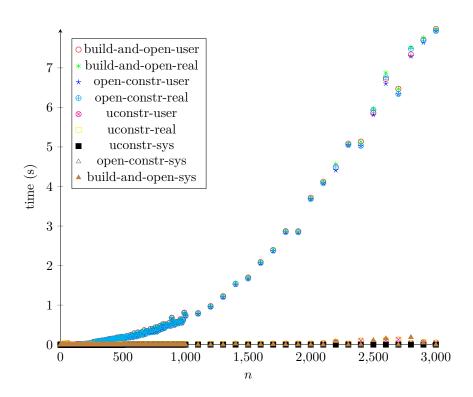


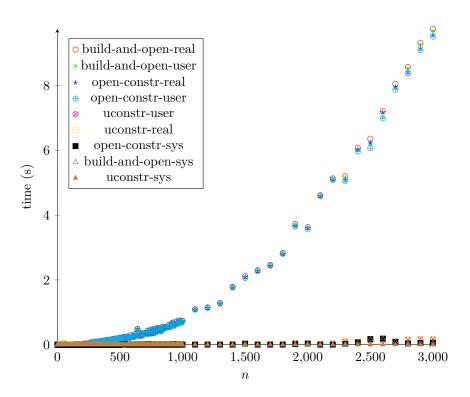
 $\label{eq:Figure 1: timing-do-n-open-constr-True} Figure \ 1: \ timing-do-n-open-constr-True$ 



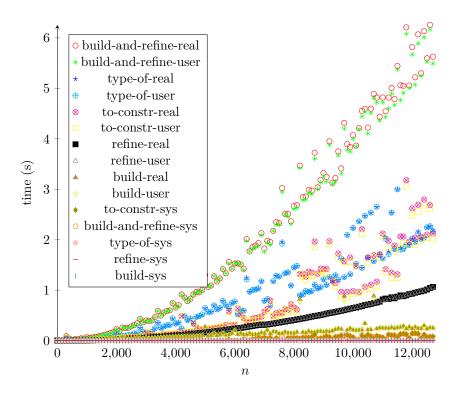
 $\label{prop:constr-n-lambda-no-types-different-names} Figure~2:~timing-open-constr-n-lambda-no-types-different-names$ 



Figure~3:~timing-open-constr-n-lambda-no-types-no-names



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



 $Figure \ 5: \ timing-app-n-uconstr$ 

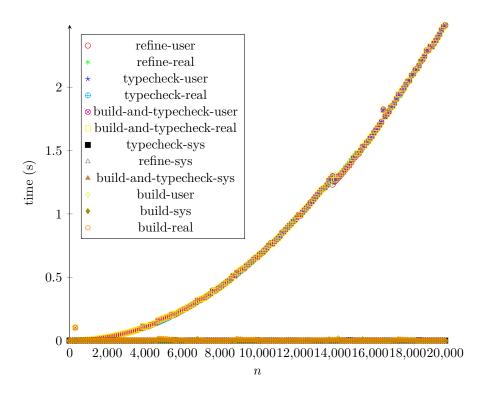


Figure 6: timing-app-n-ltac2  $\,$ 

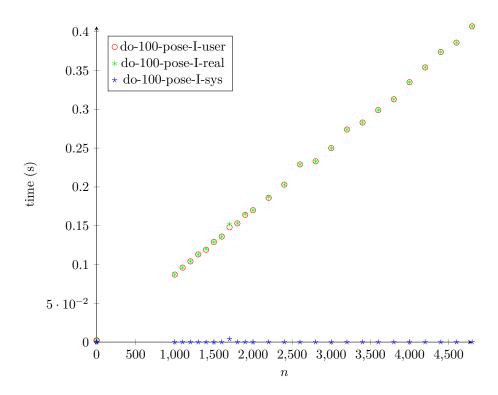


Figure 7: timing-do-n-pose

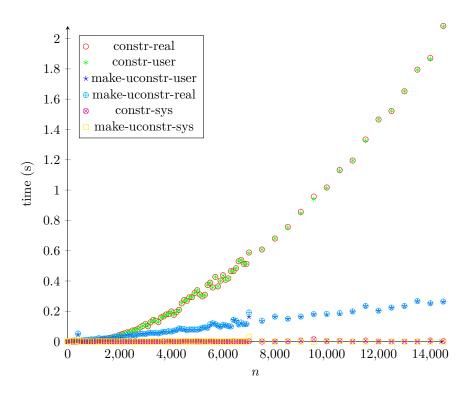


Figure 8: timing-let-n-uconstr

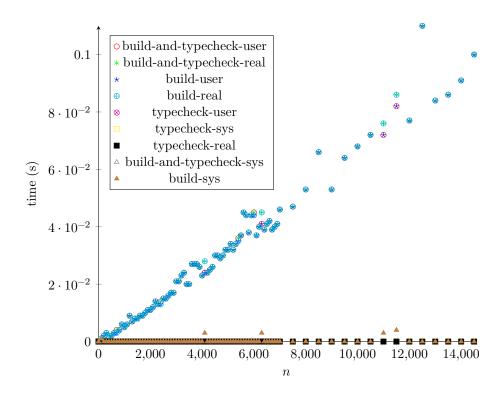


Figure 9: timing-let-n-ltac2

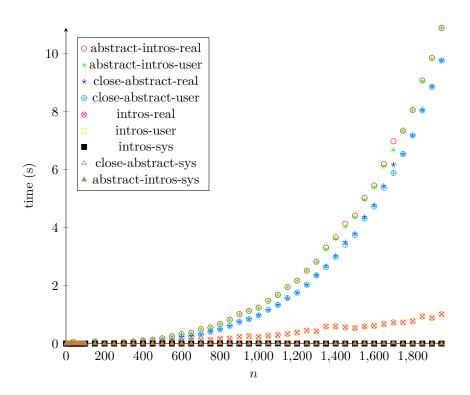


Figure 10: timing-intros-n-let

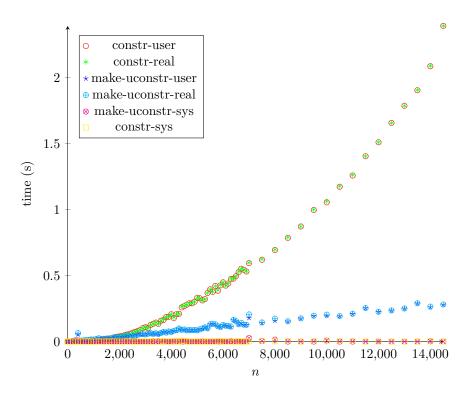


Figure 11: timing-fun-n-uconstr

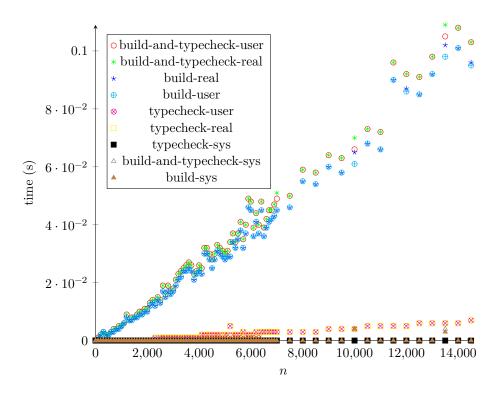


Figure 12: timing-fun-n-ltac2  $\,$ 

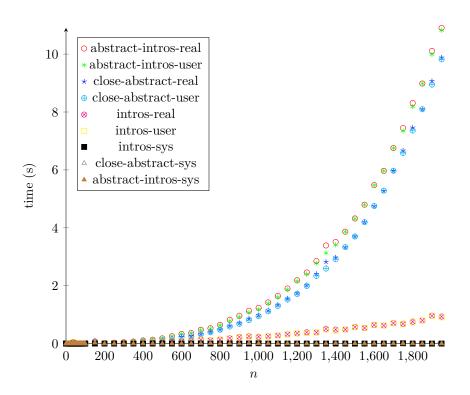
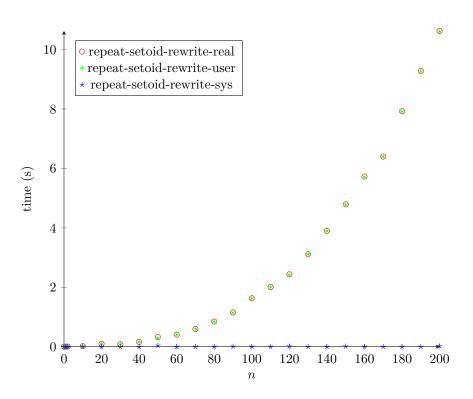
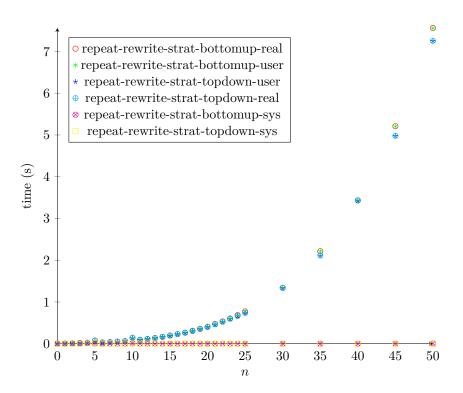


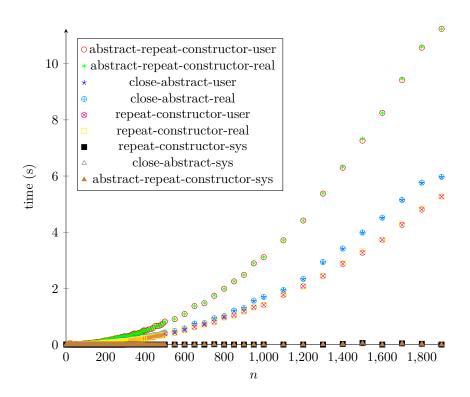
Figure 13: timing-intros-n-fun



 $Figure \ 14: \ timing-repeat-setoid-rewrite-under-binders$ 



Figure~15:~timing-rewrite-strat-under-binders



 ${\bf Figure~16:~timing\hbox{-}conj\hbox{-}True\hbox{-}repeat\hbox{-}constructor}$ 

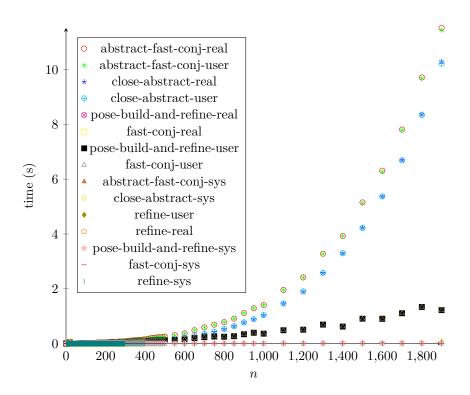


Figure 17: timing-conj-True-fast-conj

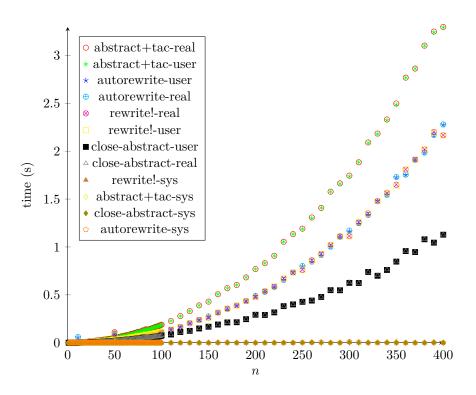


Figure 18: timing-rewrite-repeated-app-autorewrite

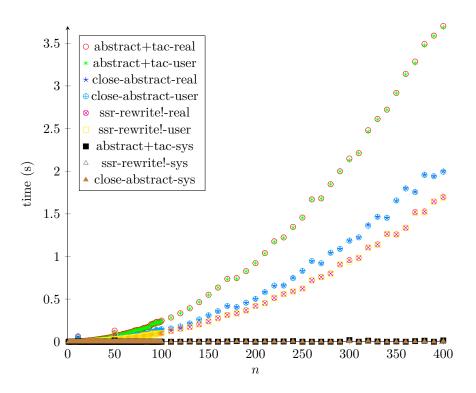
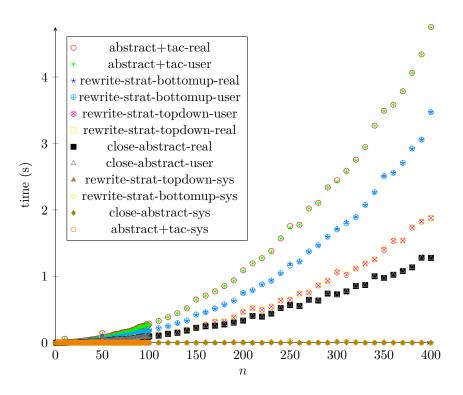


Figure 19: timing-rewrite-repeated-app-ssrrewrite



 $Figure\ 20:\ timing-rewrite-repeated-app-rewrite-strat$ 

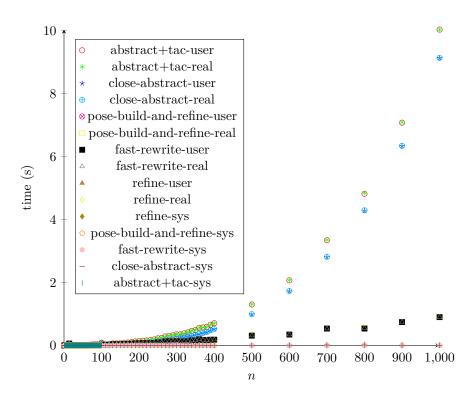


Figure 21: timing-rewrite-repeated-app-fast-rewrite

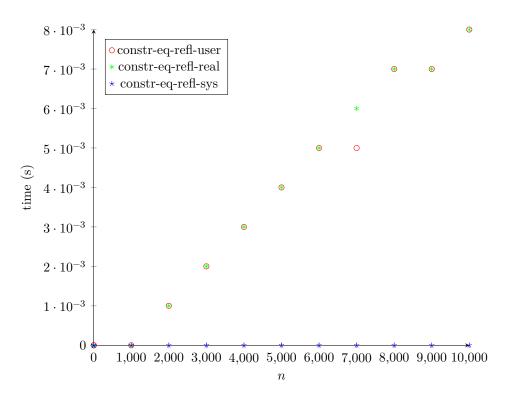


Figure 22: timing-constr-eq-alpha

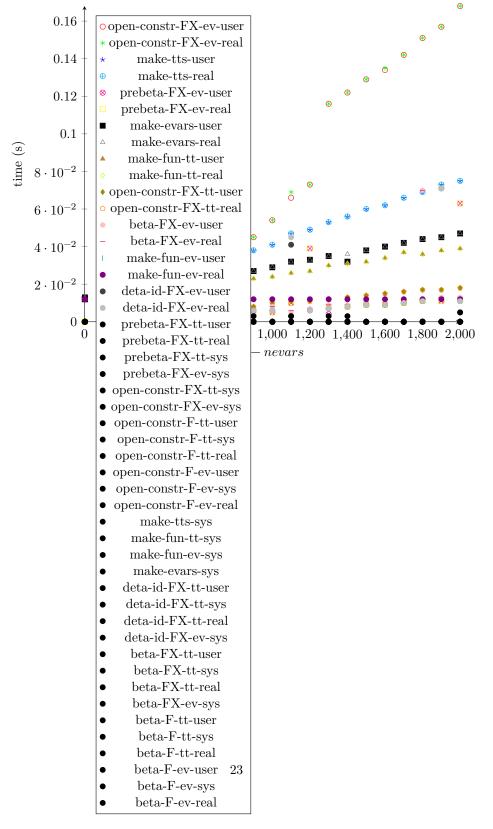


Figure 23: timing-lift-identity-evar-subst-nevar sparam-ctx-size  $\ 0,\ 1,\$ param-extra-binders  $\ 0,\ 1$ 

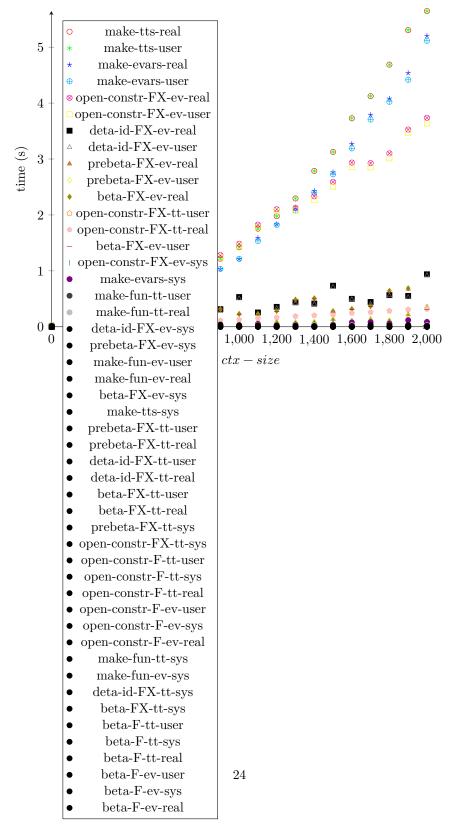


Figure 24: timing-lift-identity-evar-subst-ctxparam-extra-binders 0, 1, paramnevars 0, 1

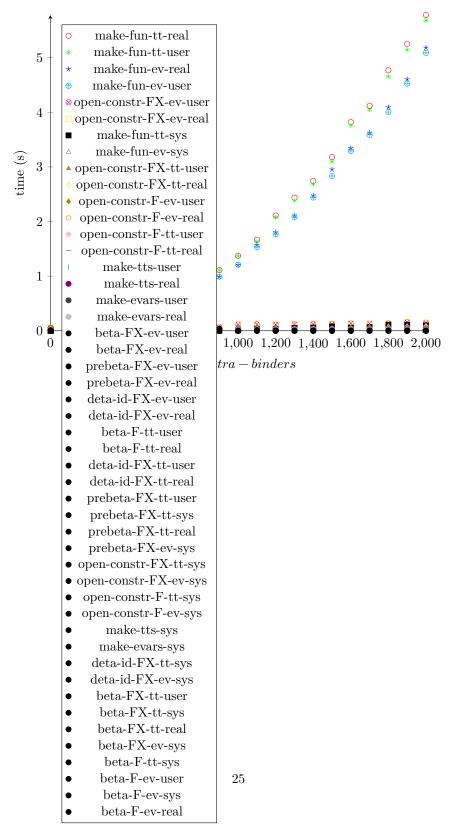


Figure 25: timing-lift-identity-evar-subst-binder sparam-ctx-size  $\ 0,\ 1,\$ param-nevars  $\ 0,\ 1$ 

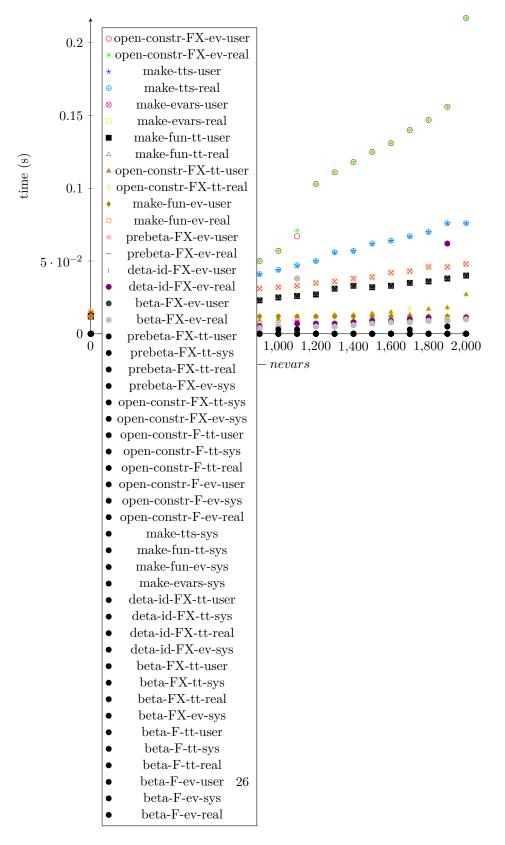


Figure 26: timing-lift-non-identity-evar-subst-nevarsparam-ctx-size 0, param-extra-binders 0, 1

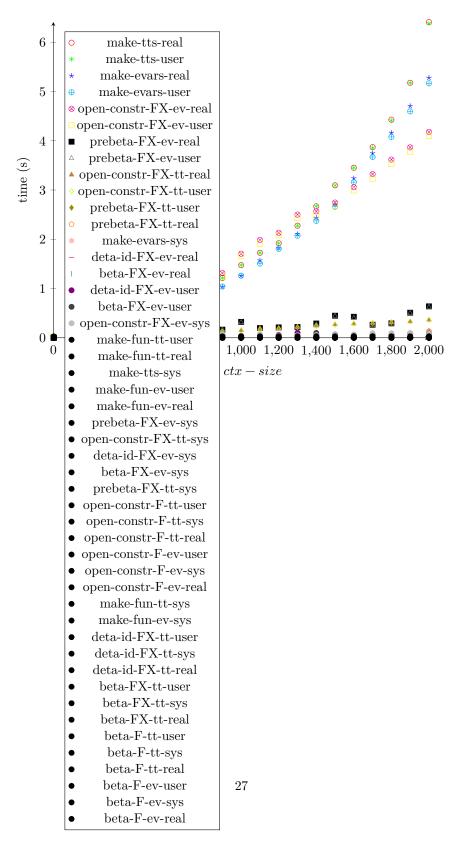


Figure 27: timing-lift-non-identity-evar-subst-ctx param-extra-binders  $0,\ 1,$  param-nevars  $0,\ 1$ 

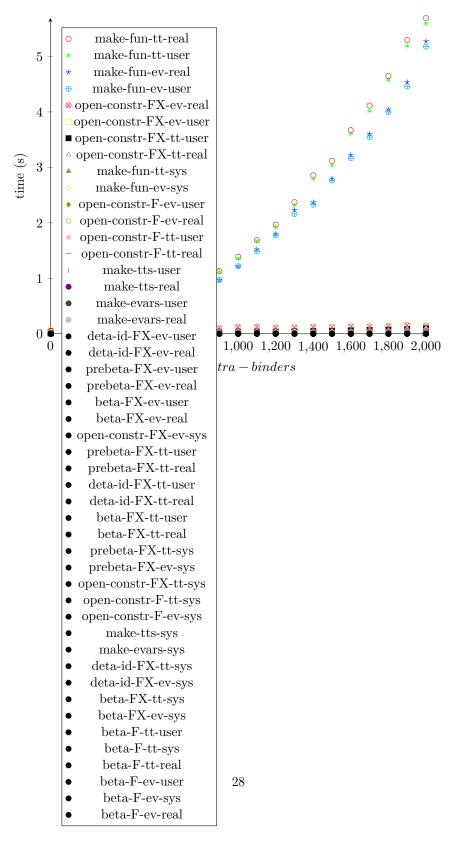
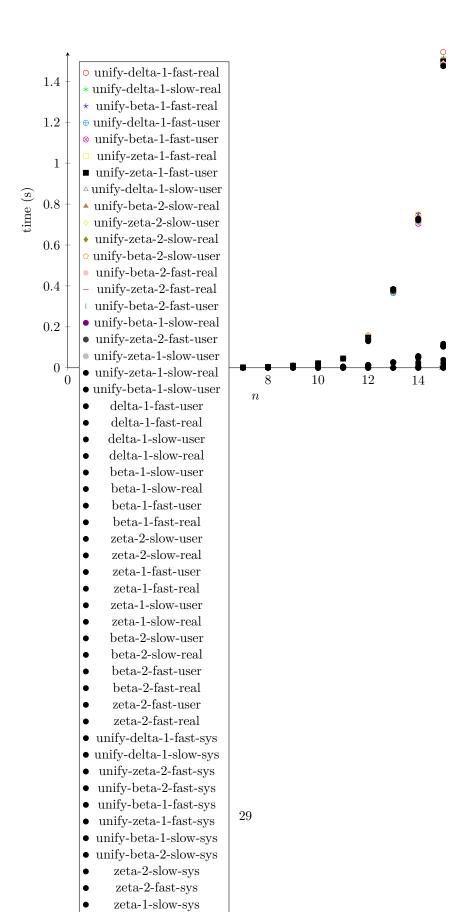
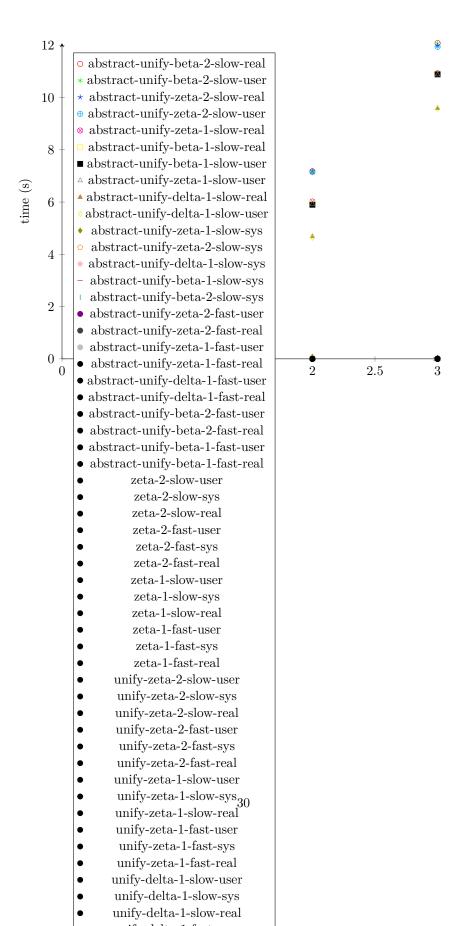


Figure 28: timing-lift-non-identity-evar-subst-binders param-ctx-size 0, param-nevars 0, 1



zeta-1-fast-sys



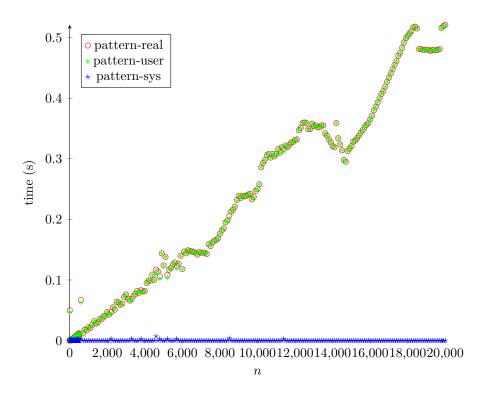


Figure 31: timing-pattern

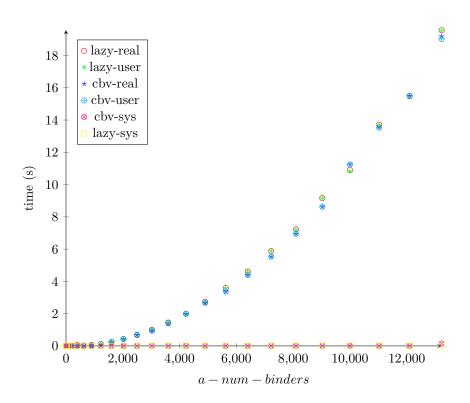


Figure 32: timing-quadratic-cbv-lazy-PHOAS param-n  $\,0\,$ 

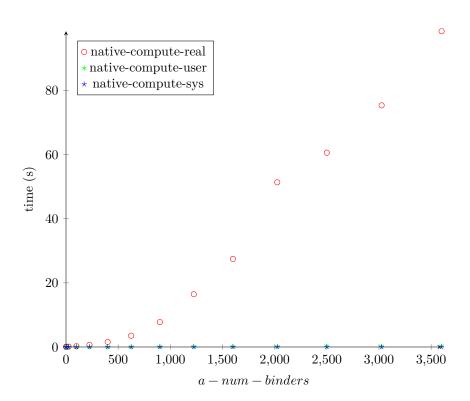


Figure 33: timing-quadratic-native-PHOAS param-n  $\,\,0\,\,$ 

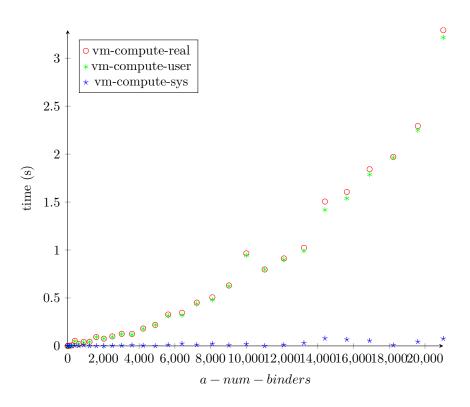


Figure 34: timing-quadratic-vm-PHOAS param-n  $\,0\,$