Figure 1: timing-pattern

1

Figure 2: timing-n-polymorphic-universes param-1-n 0
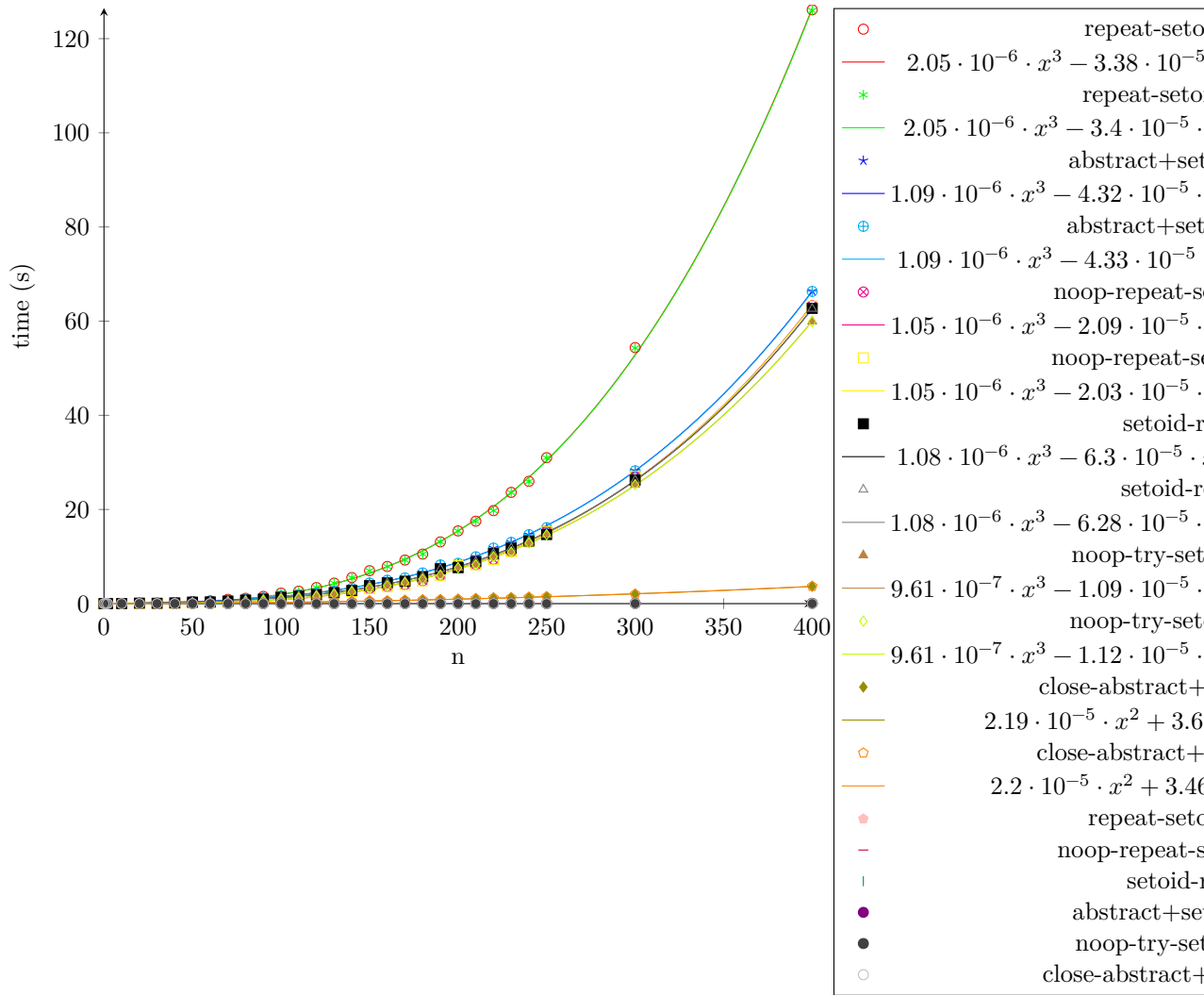
Legend content visible in figure:

- abstract-real
- $1.11 \cdot 10^{-7} \cdot x^2 + 3.15 \cdot 10^{-4} \cdot x$
- abstract-user
- $1.11 \cdot 10^{-7} \cdot x^2 + 3.1 \cdot 10^{-4} \cdot x$
- close-abstract-real
- $1.11 \cdot 10^{-7} \cdot x^2 + 2.33 \cdot 10^{-4} \cdot x$
- close-abstract-user
- $1.11 \cdot 10^{-7} \cdot x^2 + 2.3 \cdot 10^{-4} \cdot x$
- exact-real
- $8.51 \cdot 10^{-5} \cdot x - 7.38 \cdot$
- exact-user
- $8.42 \cdot 10^{-5} \cdot x - 8.09 \cdot$
- abstract-sys
- close-abstract-sys
- exact-sys

Figure 3: timing-repeat-setoid-rewrite-under-binders

The chart legend contains the following entries:

- repeat-seto...
- $2.05 \cdot 10^{-6} \cdot x^3 - 3.38 \cdot 10^{-5}$
- repeat-seto...
- $2.05 \cdot 10^{-6} \cdot x^3 - 3.4 \cdot 10^{-5}$
- abstract+set...
- $1.09 \cdot 10^{-6} \cdot x^3 - 4.32 \cdot 10^{-5}$
- abstract+set...
- $1.09 \cdot 10^{-6} \cdot x^3 - 4.33 \cdot 10^{-5}$
- noop-repeat-s...
- $1.05 \cdot 10^{-6} \cdot x^3 - 2.09 \cdot 10^{-5}$
- noop-repeat-s...
- $1.05 \cdot 10^{-6} \cdot x^3 - 2.03 \cdot 10^{-5}$
- setoid-r...
- $1.08 \cdot 10^{-6} \cdot x^3 - 6.3 \cdot 10^{-5}$
- setoid-r...
- $1.08 \cdot 10^{-6} \cdot x^3 - 6.28 \cdot 10^{-5}$
- noop-try-set...
- $9.61 \cdot 10^{-7} \cdot x^3 - 1.09 \cdot 10^{-5}$
- noop-try-set...
- $9.61 \cdot 10^{-7} \cdot x^3 - 1.12 \cdot 10^{-5}$
- close-abstract+
- $2.19 \cdot 10^{-5} \cdot x^2 + 3.6$
- close-abstract+
- $2.2 \cdot 10^{-5} \cdot x^2 + 3.46$
- repeat-seto...
- noop-repeat-s...
- setoid-r...
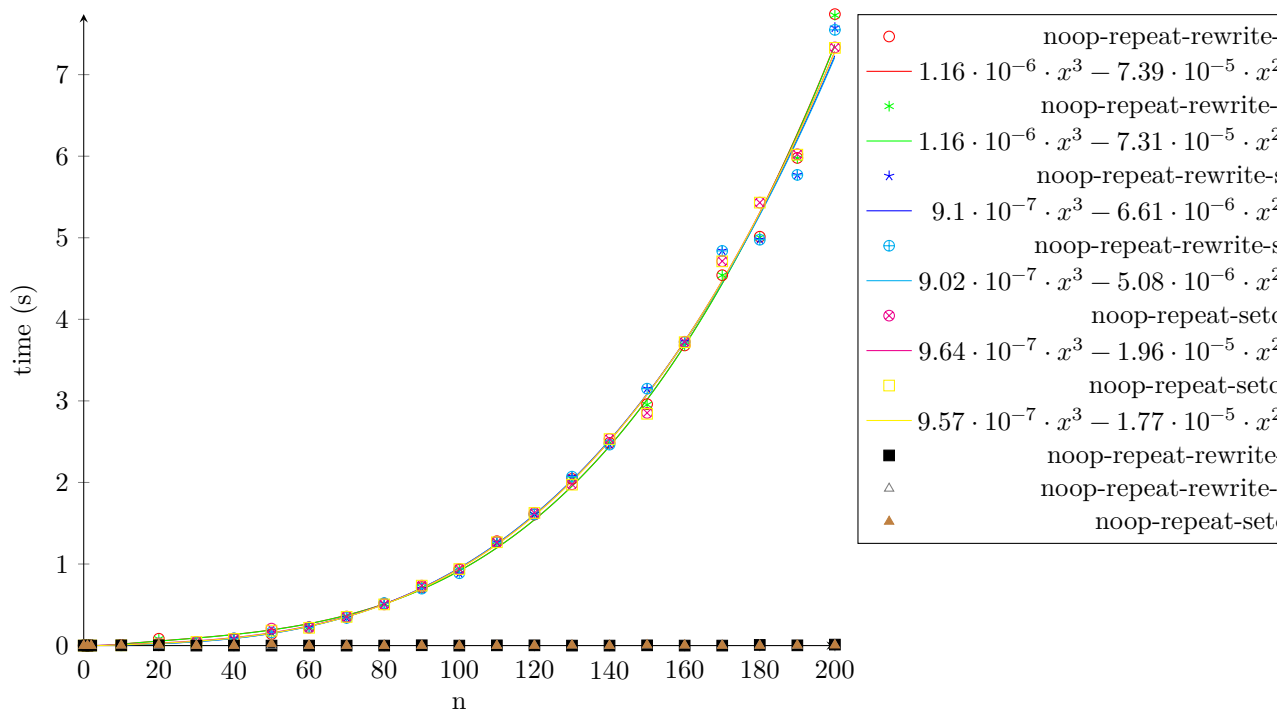- abstract+set...
- noop-try-set...
- close-abstract+

3

Figure 4: timing-repeat-setoid-rewrite-under-binders-noop
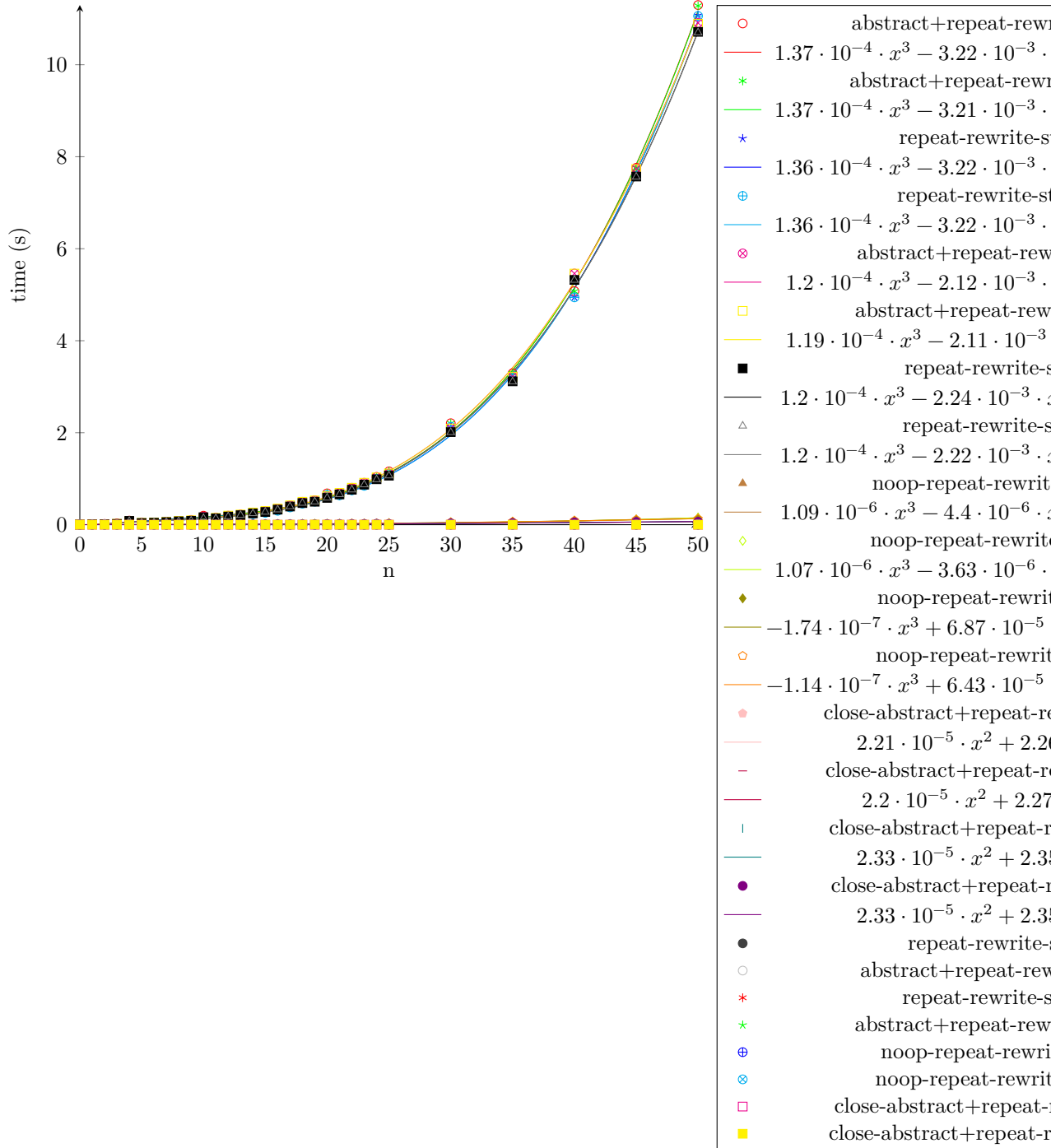
Figure 5: timing-rewrite-strat-under-binders
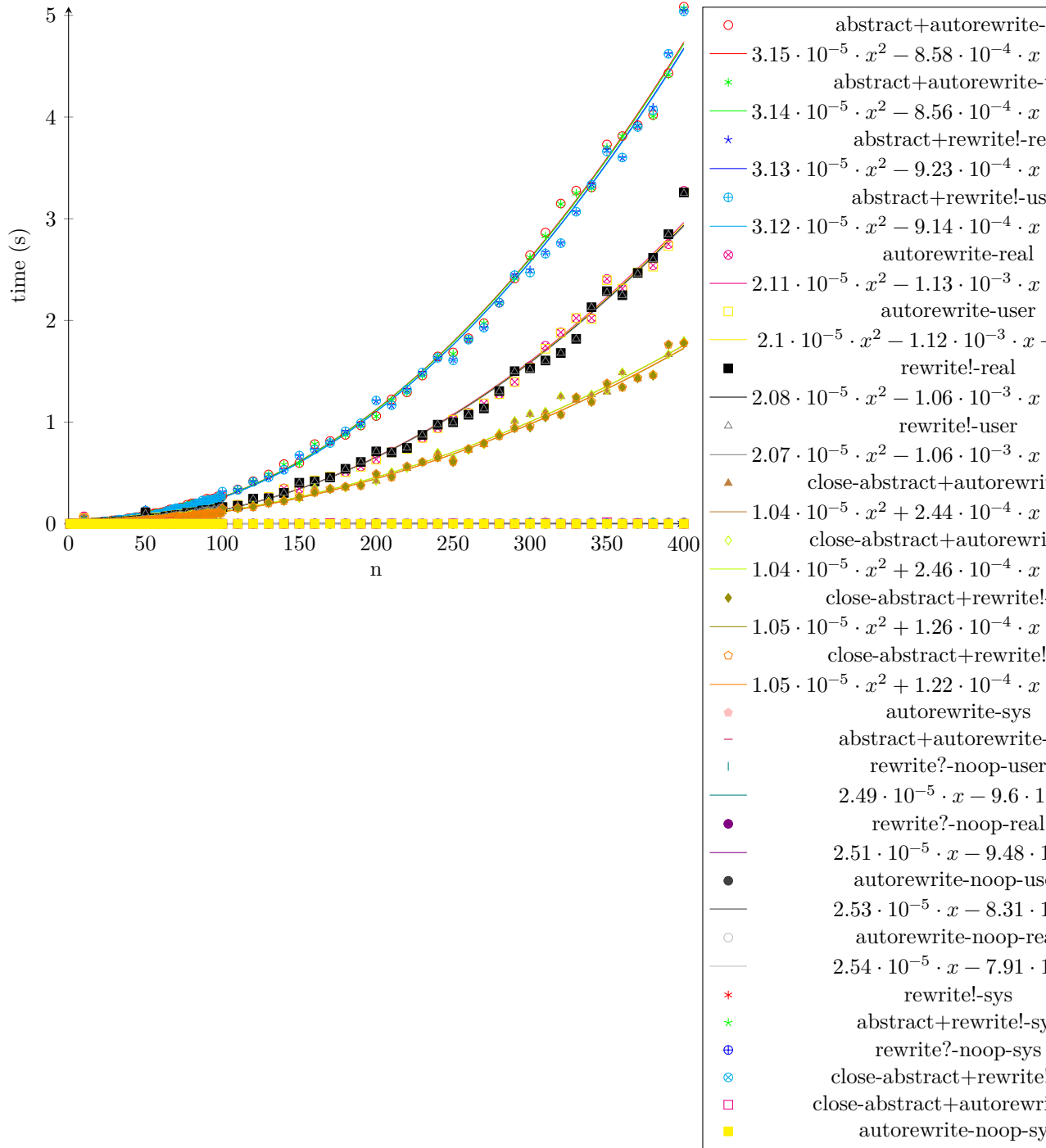
Figure 6: timing-rewrite-repeated-app-autorewrite
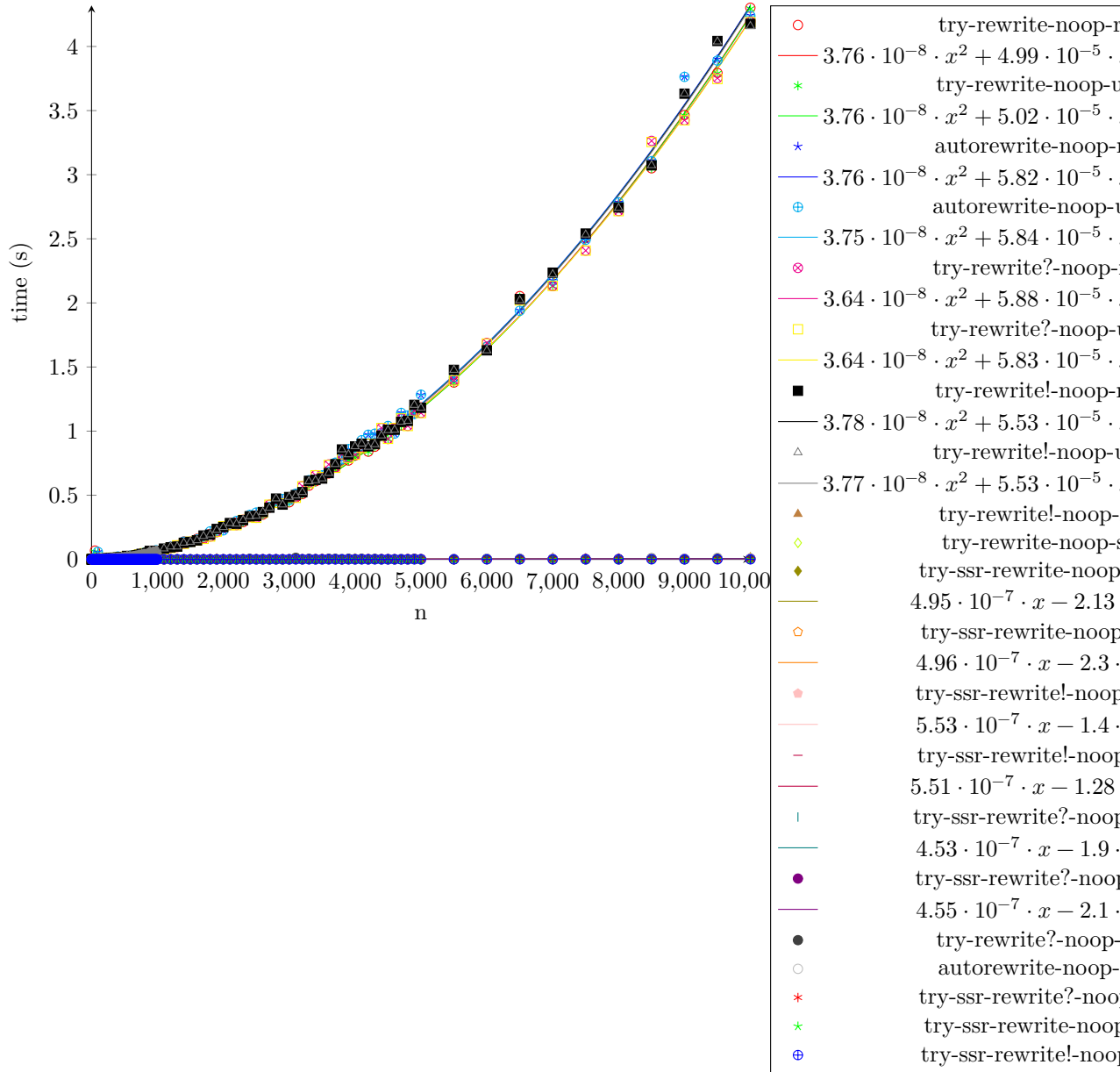
time (s)

4

3.5

3

2.5

2

1.5

1

0.5

0

0   1,000   2,000   3,000   4,000   5,000   6,000   7,000   8,000   9,000   10,00

n

try-rewrite-noop-r
$3.76 \cdot 10^{-8} \cdot x^2 + 4.99 \cdot 10^{-5} \cdot$
try-rewrite-noop-u
$3.76 \cdot 10^{-8} \cdot x^2 + 5.02 \cdot 10^{-5} \cdot$
autorewrite-noop-r
$3.76 \cdot 10^{-8} \cdot x^2 + 5.82 \cdot 10^{-5} \cdot$
autorewrite-noop-u
$3.75 \cdot 10^{-8} \cdot x^2 + 5.84 \cdot 10^{-5} \cdot$
try-rewrite?-noop-
$3.64 \cdot 10^{-8} \cdot x^2 + 5.88 \cdot 10^{-5} \cdot$
try-rewrite?-noop-u
$3.64 \cdot 10^{-8} \cdot x^2 + 5.83 \cdot 10^{-5} \cdot$
try-rewrite!-noop-
$3.78 \cdot 10^{-8} \cdot x^2 + 5.53 \cdot 10^{-5} \cdot$
try-rewrite!-noop-u
$3.77 \cdot 10^{-8} \cdot x^2 + 5.53 \cdot 10^{-5} \cdot$
try-rewrite!-noop-
try-rewrite-noop-s
try-ssr-rewrite-noop
$4.95 \cdot 10^{-7} \cdot x - 2.13$
try-ssr-rewrite-noop
$4.96 \cdot 10^{-7} \cdot x - 2.3 \cdot$
try-ssr-rewrite!-noop
$5.53 \cdot 10^{-7} \cdot x - 1.4 \cdot$
try-ssr-rewrite!-noop
$5.51 \cdot 10^{-7} \cdot x - 1.28$
try-ssr-rewrite?-noop
$4.53 \cdot 10^{-7} \cdot x - 1.9 \cdot$
try-ssr-rewrite?-noop
$4.55 \cdot 10^{-7} \cdot x - 2.1 \cdot$
try-rewrite?-noop-
autorewrite-noop-
try-ssr-rewrite?-noop
try-ssr-rewrite-noop
try-ssr-rewrite!-noop

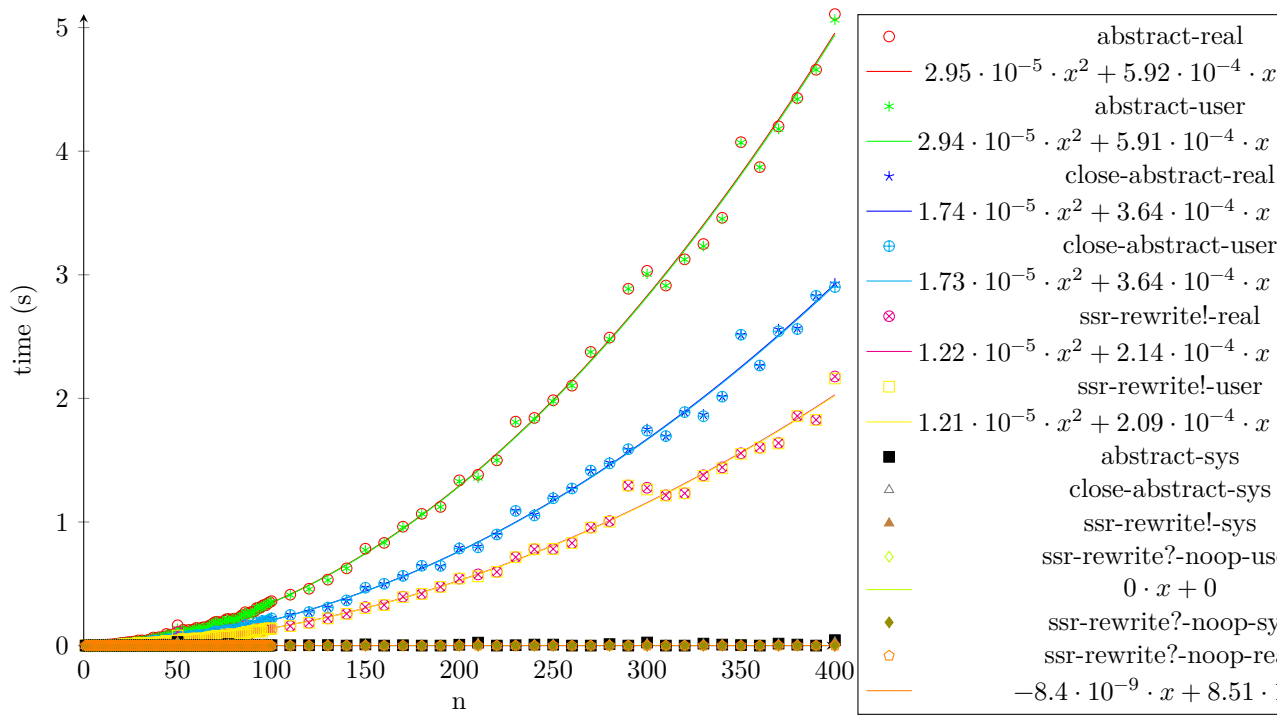Figure 7: timing-rewrite-repeated-app-autorewrite-noop
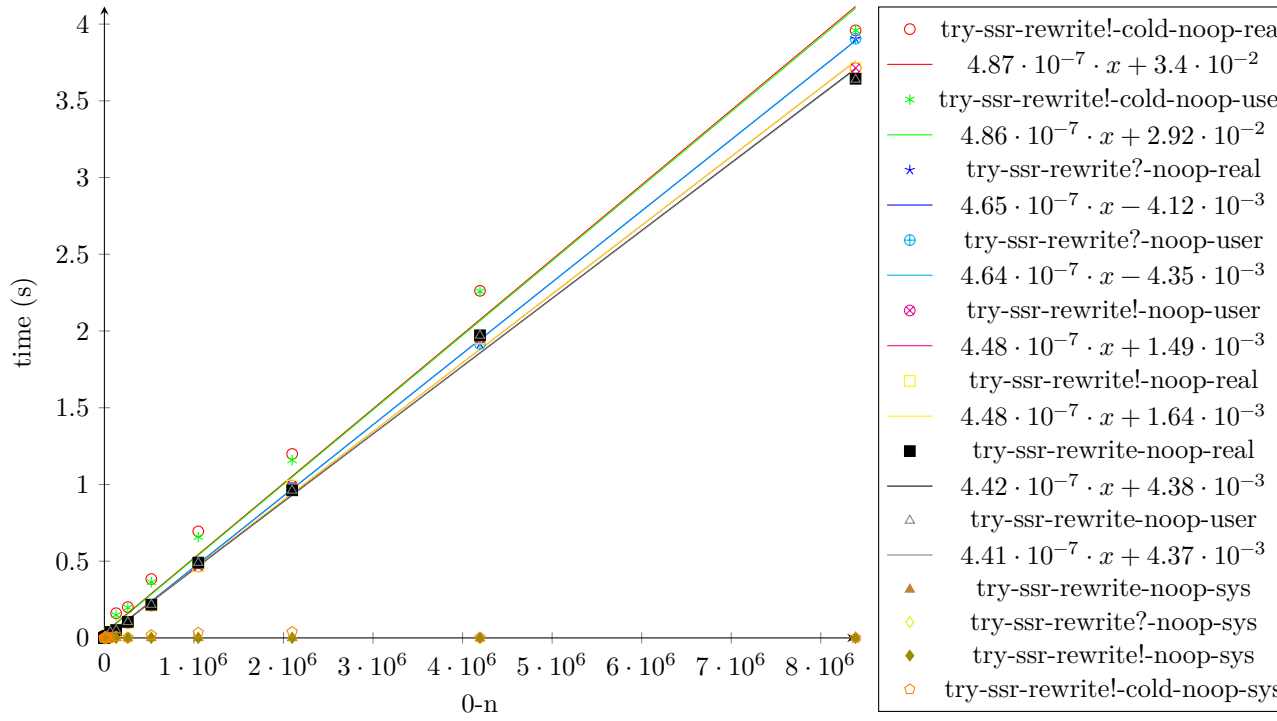
Figure 8: timing-rewrite-repeated-app-ssrrewrite

Figure 9: timing-rewrite-repeated-app-ssrrewrite-noop param-1-lgn 1
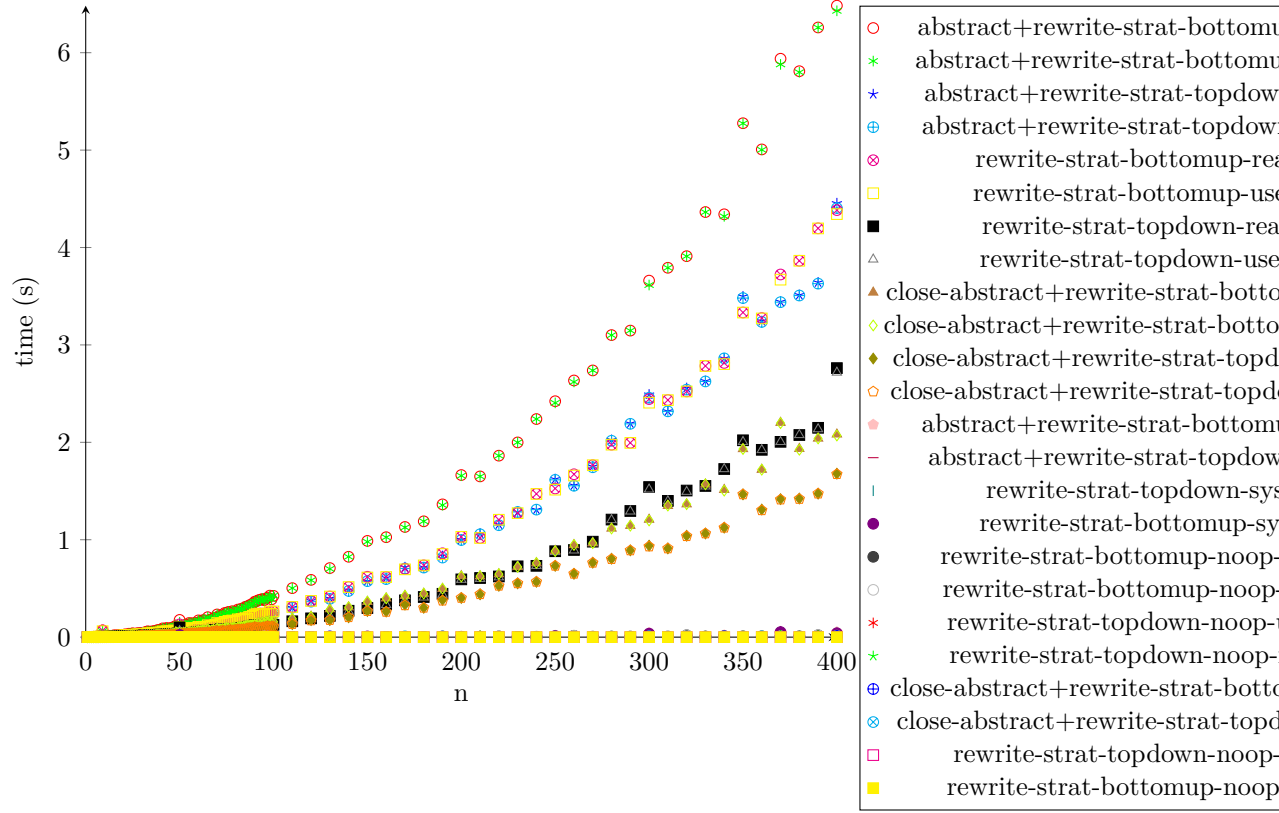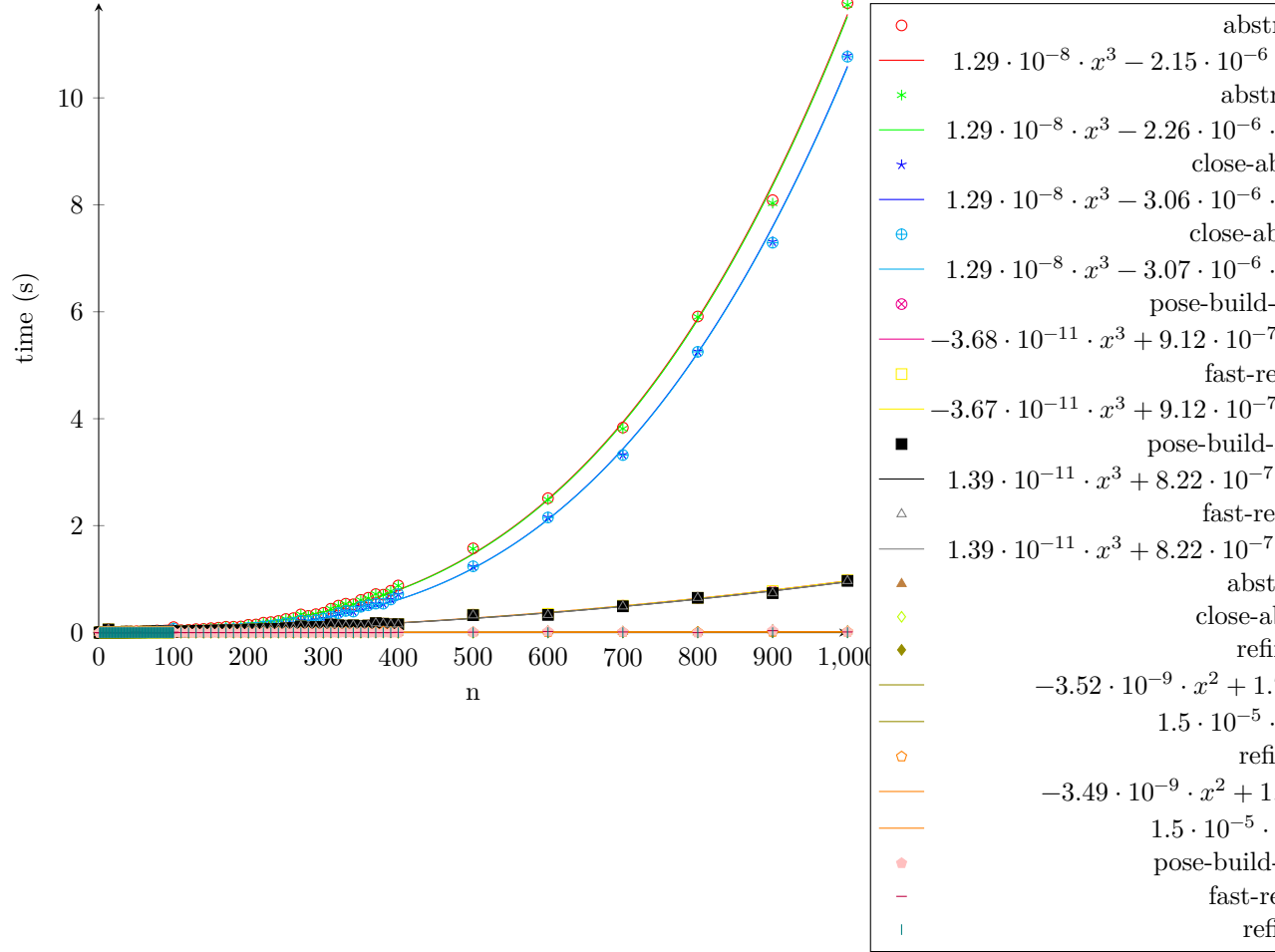
Figure 10: timing-rewrite-repeated-app-rewrite-strat

Figure 11: timing-rewrite-repeated-app-fast-rewrite

Figure 12: timing-rewrite-repeated-app-fast-rewrite-no-abstract