

## Scalable String and Suffix Sorting

This dissertation focuses on two fundamental sorting problems: string sorting and suffix sorting. The first part considers parallel string sorting on sharedmemory multi-core machines, the second part external memory suffix sorting using the induced sorting principle, and the third part distributed external memory suffix sorting with a new distributed algorithmic big data framework named Thrill.

```
- a l p h a 0
- a r c a d e 0
- a r r a y 0
\bullet k a y a k 0
\bullet-> k
O}->\mp@code{l l e r r r n
-H k
--> \
\bullet-> k
|}->\mp@code{|
```

| $\perp$ | \$ |
| :---: | :---: |
| 0 | a \$ |
| 1 | a c b a \$ |
| 4 | $\mathrm{a} \subset \mathrm{b} a \mathrm{c}$ ba \$ |
| 0 | b a \$ |
| 2 |  |
| 5 | $b a c b a c b a \$$ |
| 0 | c b a \$ |
| 3 | c b a c b a \$ |

Algorithms, Techniques, and Tools

Timo Bingmann

