1 Algorithm Type 1

Algorithm 1 ***Surrogate-Assisted Search (SAS)***

(1) Initialization: Choose initial experiment points and evaluate the corresponding function values.
(2) Repeat until the effective points are found.
(2.1) Update the surrogate surface.
(2.2) Determine next possible experiment points
(2.3) Perform function evaluations.

2 Algorithm Type 2

Reference:

- `http://en.wikibooks.org/wiki/LaTeX/Algorithms_and_Pseudocode`
- `http://developer.berlios.de/docman/display_doc.php?docid=800&group_id=3442`

Algorithm 1 Calculate $y = x^n$

Require: $n \geq 0 \vee x \neq 0$
Ensure: $y = x^n$
1: $y \Leftarrow 1$
2: **if** $n < 0$ **then**
3: $X \Leftarrow 1/x$
4: $N \Leftarrow -n$
5: **else**
6: $X \Leftarrow x$
7: $N \Leftarrow n$
8: **end if**
9: **while** $N \neq 0$ **do**
10: **if** N is even **then**
11: $X \Leftarrow X \times X$
12: $N \Leftarrow N/2$
13: **else** $\{N$ is odd$\}$
14: $y \Leftarrow y \times X$
15: $N \Leftarrow N - 1$
16: **end if**
17: **end while**