

L<sup>A</sup>T<sub>E</sub>X Example

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# Abstract

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# 1 Introduction

## 1.1 Background

This is a L<sup>A</sup>T<sub>E</sub>Xdocument.

## 1.2 Math

This is an stochastic differential equation:

$$\begin{cases} dX(t) = f(X(t))dt + \sum_{r=1}^m g_r(X(t)) \circ dW_r(t), & t \in [0, T], \\ X(0) = X_0, \end{cases} \quad (1)$$

where  $f(x) \in \mathbb{R}^n$  is called the drift.

Equation 1 is an SDE.

- First .....
- aaaaa
- bbbbbb

- Second .....
- Third ....

1. First .....
2. Second .....

- aaaaaaaa
- bbbbbbbb

3. Third ....

### 1.3 Figure

Figure 1 is a path of an one dimensional Wiener Process.

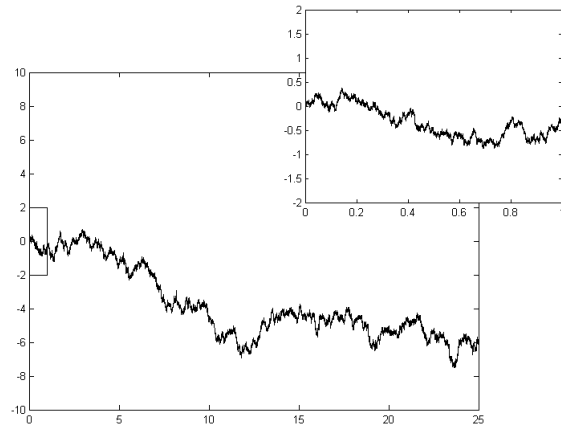


Figure 1: This is the figure caption.

#### 1.3.1 Table

A	B	C	D	E	F
1	2	3	4	5	6
7	8	9	10	11	12

Table 1: This is the table caption.

### 1.4 Citation

This is a citation[1, 2, 3].

### 1.5 Algorithm

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**Algorithm 1** Calculate  $y = x^n$ 

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**Require:**  $n \geq 0 \vee x \neq 0$ **Ensure:**  $y = x^n$ 

```

 $y \leftarrow 1$ 
if  $n < 0$  then
   $X \leftarrow 1/x$ 
   $N \leftarrow -n$ 
else
   $X \leftarrow x$ 
   $N \leftarrow n$ 
end if
while  $N \neq 0$  do
  if  $N$  is even then
     $X \leftarrow X \times X$ 
     $N \leftarrow N/2$ 
  else  $\{N \text{ is odd}\}$ 
     $y \leftarrow y \times X$ 
     $N \leftarrow N - 1$ 
  end if
end while
```

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## References

- [1] D. Silver, A. Huang, C. J. Maddison, A. Guez, and D. Hassabis, “Mastering the game of Go with deep neural networks and tree search,” *Nature*, vol. 529, no. 7587, pp. 484–489, 2016.
- [2] V. Mnih, K. Kavukcuoglu, D. Silver, A. A. Rusu, J. Veness, M. G. Bellemare, A. Graves, M. Riedmiller, A. K. Fidjeland, and G. Ostrovski, “Human-level control through deep reinforcement learning,” *Nature*, vol. 518, no. 7540, p. 529, 2015.
- [3] V. Mnih, A. P. Badia, M. Mirza, A. Graves, T. Lillicrap, T. Harley, D. Silver, and K. Kavukcuoglu, “Asynchronous methods for deep reinforcement learning,” in *Proceedings of The 33rd International Conference on Machine Learning*, ser. Proceedings of Machine Learning Research, M. F. Balcan and K. Q. Weinberger, Eds., vol. 48. New York, New York, USA: PMLR, 20–22 Jun 2016, pp. 1928–1937. [Online]. Available: <http://proceedings.mlr.press/v48/mniha16.html>