

ILLINOIS DATA SCIENCE INITIATIVE

INTRODUCTION TO LARGE SCALE GRAPH BASED METHODS

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Introduction to Large Scale Graph Based Methods

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<https://github.com/lcdm-uiuc>

INTRODUCTION

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EXAMPLES OF ARTICLE COMPONENTS

The sections below show examples of different article components.

FIGURES AND TABLES

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Sample Figure

Figure ?? shows an example figure.

Fig. 1. False-color image, where each pixel is assigned to one of seven reference spectra.

Sample Table

Table ?? shows an example table.

Table 1. Shape Functions for Quadratic Line Elements

local node	$\{N\}_m$	$\{\Phi_i\}_m$ ($i = x, y, z$)
$m = 1$	$L_1(2L_1 - 1)$	Φ_{i1}
$m = 2$	$L_2(2L_2 - 1)$	Φ_{i2}
$m = 3$	$L_3 = 4L_1L_2$	Φ_{i3}

SAMPLE EQUATION

Let X_1, X_2, \dots, X_n be a sequence of independent and identically distributed random variables with $E[X_i] = \mu$ and $\text{Var}[X_i] = \sigma^2 < \infty$, and let

$$S_n = \frac{X_1 + X_2 + \dots + X_n}{n} = \frac{1}{n} \sum_{i=1}^n X_i \quad (1)$$

denote their mean. Then as n approaches infinity, the random variables $\sqrt{n}(S_n - \mu)$ converge in distribution to a normal $\mathcal{N}(0, \sigma^2)$.

SAMPLE ALGORITHM

Algorithms can be included using the commands as shown in algorithm ??.

Algorithm 1. Euclid’s algorithm

```

1: procedure EUCLID( $a, b$ )                                ▷ The g.c.d. of  $a$  and  $b$ 
2:    $r \leftarrow a \bmod b$ 
3:   while  $r \neq 0$  do                                     ▷ We have the answer if  $r$  is 0
4:      $a \leftarrow b$ 
5:      $b \leftarrow r$ 
6:      $r \leftarrow a \bmod b$ 
7:   return  $b$                                              ▷ The gcd is  $b$ 
```

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