



# Projeto Integrador II

## Título provisório

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### Resumo

No modelo que a Danielle postou não tinha resumo, então confirmem para saber se precisa ou não.

### 1. Introdução

A importância do assunto deve ser destacada resumidamente. Nesta parte eu mostro um exemplo de citação em  $\text{\LaTeX}$ [3].

### 2. Objetivos

Dar uma ideia compacta da metodologia ou forma de abordagem da pesquisa, bem como o projeto foi desenvolvido.

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### 3. Metodologia

Dar uma ideia compacta da metodologia ou forma de abordagem da pesquisa, bem como o projeto foi desenvolvido. Exemplo de equação em  $\text{\LaTeX}$

$$(S_{m_{ij},\alpha}(X))(r) = m_{i,j}(\alpha_r(X) \setminus \alpha_{r+\alpha}(X)). \quad (1)$$

For  $i = 0$  and  $j = 0$  we obtain the standard pattern spectrum. For each  $r$ ,  $(S_{m_{ij},\alpha}(X))(r)$  is just the moment of an image, therefore, derived parameters such as coordinates of the centre of mass, (co-)variances, skewness and kurtosis of the distribution of details at each scale can be computed easily. We can then define pattern mean spectra, pattern (co-)variance spectra, pattern kurtosis spectra, etc. The pattern mean- $x$  and variance- $x$  spectra ( $S_{\bar{x},\alpha}$  and  $S_{\sigma(x),\alpha}$ ) are defined as:

$$S_{\bar{x},\alpha} = \frac{S_{m_{10},\alpha}}{S_{m_{00},\alpha}} \quad (2)$$

$$(3)$$

### 4. Resultados e Discussão

Verificar os principais resultados obtidos de acordo com os objetivos propostos.

Nacken [5] derived an algorithm for computation of pattern spectra for granulometries based on openings by discs of increasing radius for various metrics, using the opening transform. After the opening transform has been computed, it is straightforward to compute the pattern spectrum:

- Set all elements of array  $s$  to zero
- For all  $x \in X$  increment  $s[\Omega_X(x)]$  by one.

To compute the pattern *moment* spectrum, the only thing that needs to be changed is the way  $s[\Omega_X(x)]$  is incremented. As shown in Algorithm 1.

- Set all elements of array  $s$  to zero
- For all  $(x, y) \in X$  increment  $s[\Omega_X(x, y)]$  by  $x^i y^j$ .

**Algorithm 1:** Algorithm for computation of pattern moment spectrum of order  $i, j$ .

This algorithm can readily be adapted to other granulometries, simply by computing the appropriate opening transform.

**Figura 1:** The opening transform using city-block metric: (a) opening transform of Fig. 1(c); (b) pattern spectrum; (c) pattern variance- $x$ ; (d) variance- $y$  spectra.

**Figura 2:** Pattern mean- $x$  (top) and variance- $x$  (bottom) spectra: the three columns show spectra for Fig. 1(a), (b) and (c) from left to right respectively. Unlike the standard pattern spectra, these spatial pattern spectra can distinguish the three images.

### 5. Conclusão

Sitting on a corner all alone, staring from the bottom of his soul, watching the night come in from the window  
It'll all collapse tonight, the fullmoon is here again  
In sickness and in health, understanding so demanding  
It has no name, there's one for every season  
Makes him insane to know  
Running away from it all "I'll be safe in the cornfields",  
he thinks Hunted by his own, again he feels the moon rising on the sky

Find a barn which to sleep in, but can he hide anymore  
Someone's at the door, understanding too demanding  
Can this be wrong, it's love that is not ending  
Makes him insane to know

She should not lock the open door (Run away, run away, run away)  
Fullmoon is on the sky and He's not a man anymore  
sees the change in him but can't (Run away, run away, run away)  
See what became out of her man Fullmoon  
Swimming across the bay, the night is gray, so calm today  
She doesn't wanna wait. "We've gotta make the love complete tonight..."

In the mist of the morning he cannot fight anymore  
Hundred moons or more, he's been howling  
Knock on the door, and scream that is soon ending  
Mess on the floor again

She should not lock the open door (Run away, run away, run away)  
Fullmoon is on the sky and he's not a man anymore  
She sees the changes in him but can't (Run away, run away, run away)  
See what became out of her man

She should not lock the open door (Run away, run away, run away)  
Fullmoon is on the sky and he's not a man anymore  
sees the changes in him but can't (Run away, run away, run away)  
See what became out of her darling man

She should not lock the open door (Run away, run away, run away)  
Fullmoon is on the sky and he's not a man anymore  
See what became out of her man

### Referências

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