




$$F(a, b) = \frac{1}{\sqrt{a}} \int_{-\infty}^{+\infty} f(t) \psi^* \left(\frac{t-b}{a} \right) dt$$

Discrete Wavelet Properties

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Objective

- glance over quickly some import DWT properties

1. Print a summary of Wavelet properties

```
In [16]: import pywt
```

```
In [17]: wavelet = pywt.Wavelet('db5')
```

```
In [18]: print(wavelet)
```

```
Wavelet db5
Family name: Daubechies
Short name: db
Filters length: 10
Orthogonal: True
Biorthogonal: True
Symmetry: asymmetric
DWT: True
CWT: False
```

2. Show Single Property

- name
- short_family_name

- **family_name**
- **orthogonal**
- **biorthogonal**
- **Symmetry**

(1) Names

```
In [20]: print(wavelet.name)
print(wavelet.short_family_name)
print(wavelet.family_name)
```

```
db5
db
Daubechies
```

(2) Orthogonality (orthogonal) and biorthogonality (biorthogonal):

```
In [21]: print(wavelet.orthogonal)
print(wavelet.biorthogonal)
```

```
True
True
```

(3) Symmetry (asymmetry):

```
In [22]: print(wavelet.symmetry)
```

```
asymmetric
```