




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

Continuous Wavelet Properties

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Objective

- show some import properties of continuous wavelets

1. Summary of Continuous Wavelet Properties

```
pywt.ContinuousWavelet(name, dtype=np.float64)
```

Parameters:

- name: Wavelet name
- dtype: numpy.dtype to use for the wavelet, can be numpy.float64 or numpy.float32.

```
In [2]: import pywt

wavelet = pywt.ContinuousWavelet('gaus2')

print(wavelet)
```

```
ContinuousWavelet gaus2
  Family name: Gaussian
  Short name: gaus
  Symmetry: symmetric
  DWT: False
  CWT: True
  Complex CWT: False
```

2. Print Single Property

(1) Continuous Wavelet name.

```
In [3]: print(wavelet.name)
```

```
gaus2
```

(2) Wavelet short family name

```
In [4]: print(wavelet.short_family_name)
```

```
gaus
```

(3) More

family_name :Wavelet family name

orthogonal : Set if wavelet is orthogonal

biorthogonal : Set if wavelet is biorthogonal

complex_cwt : Returns if wavelet is complex

lower_bound : Set the lower bound of the effective support

upper_bound : Set the upper bound of the effective support

center_frequency : Set the center frequency for the shan, fbsp and cmor wavelets

bandwidth_frequency : Set the bandwidth frequency for the shan, fbsp and cmor wavelets

fbsp_order : Set the order for the fbsp wavelet

symmetry : asymmetric, near symmetric, symmetric, anti-symmetric