

המחלקה למתמטיקה, בן-גוריון

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## קולוקוויום

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ביום שלישי, 28 בדצמבר, 2021

בשעה 14:30 – 15:30

בMath-101

ההרצאה

### **analyzing for theory new a Wavelet-Plancherel: methods wavelet-based processing and**

חינתן על-ידי

(LMU) Levie Ron

**תקציר:** Continuous wavelet transforms are mappings that embed isometrically a signal space to a coefficient space over a locally compact group, so-called wavelet transform. For example, the 1D wavelet transform is called the affine time-scale over functions to signals time maps useful often is it processing, signal for transforms wavelet using When group. example, For spaces. coefficient the and signal the with interchangeably work to to equivalent is domain signal the in operation what know to like would we natural is view of point a such While space. coefficient the in multiplication frequency to equivalent is convolution “time (i.e., analysis Fourier classical in transforms wavelet since analysis, wavelet with compatible not is it multiplication”), theory wavelet-Plancherel the present will I talk, this In surjective. not are

is transform wavelet the which in theory wavelet classical of extension an –  
formulating allows theory new The isomorphism. isometric an to extended canonically  
with operations, domain signal as operations domain coefficient of variety a  
to able are we formulas, pull-back so-called these Using formulas. form closed  
processing signal wavelet-based some of complexity computational the reduce  
analysis. wavelet in theorems proving for useful also is theory The methods.  
wavelet to principle uncertainty Heisenberg the of extension an present will I  
wavelet- the using minimizers uncertainty of existence the prove and transforms  
theory. Plancherel