Wavelet Methods For Pointwise Regularity And Local Oscillations Of Functions

Wavelet Methods for Pointwise Regularity and Local Oscillations of Functions Wavelet Methods for Pointwise Regularity and Local Oscillations of Functions Wavelet Methods for Pointwise Regularity and Local Oscillations of Functions Wavelet Methods in Mathematical Analysis and Engineering Wavelet Analysis and Applications Numerical Methods in Fluid Mechanics Analysis, Applications, and Computations Computation and Applied Mathematics Fractal Geometry and Stochastics V Oscillating Patterns in Image Processing and Nonlinear Evolution Equations Multifractional Stochastic Fields: Wavelet Strategies In Multifractional Frameworks Coherent States, Wavelets, and Their Generalizations Fractal Geometry and Applications: A Jubilee of Benoit Mandelbrot Mathematical Image Processing 150 Years of Mathematics at Washington University in St. Louis A Wavelet Tour of Signal Processing Spline Functions and the Theory of Wavelets Scaling, Fractals and Wavelets Science and Art Symposium 2000 Wandering Vectors for Unitary Systems and Orthogonal Wavelets

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Multifractional Brownian Motions in Geosciences: Promising tool for characterizing heterogeneitiesThe World's Best Mathematician (*) - Numberphile Terry Tao, Ph.D. Small and Large Gaps Between the Primes Terence Tao, genius mathematician Terence Tao: 2015 Breakthrough Prize in Mathematics Symposium The Most Beautiful Equation in Math

How to Select/Find/Write the Research Topic || Complete Steps || Dr. Rizwana | ڈاکٹر رضوانہ The Hilbert transform Interview at Cirm: Terence TAO JPEG DCT, Discrete Cosine Transform (JPEG Pt2)- Computerphile 2015 Math Panel with Donaldson, Kontsevich, Lurie, Tao, Taylor, Milner

On the dyadic Hilbert transform Stefanie Petermichl ICM2018 Terence Tao, Failure of the pointwise ergodic theorem on the free group at the L1 endpoint Stéphane Mallat: \"Scattering Invariant Deep Networks for Classification, Pt. 1\" \"Some recent progress in predictive inference\" - Emmanuel Candes (Stanford) @ MAD+ Terence Tao's Analysis I and Analysis II Book Review Yann LeCun - Graph Embedding, Content Understanding, and Self-Supervised Learning Geometric Deep Learning on Graphs and Manifolds - #NIPS2017 Terrence Tao on Yves Meyer's work on wavelets Wavelet Methods For Pointwise Regularity

Wavelet Methods for Pointwise Regularity and Local Oscillations of Functions Share this page St(i)ephane Jaffard; Yves Meyer. Currently, new trends in mathematics are emerging from the fruitful interaction between signal processing, image processing, and classical analysis.

Wavelet Methods for Pointwise Regularity and Local ...
The idea is based on a wavelet characterization of pointwise Hölder regularity. Characterizations of other types of local regularity can be used to capture different local behavior [25, 26]. As ...

Wavelet techniques for pointwise regularity | Request PDF
Keywords Pointwise Ho¨lder regularity, Wavelets, Spectrum of singularities, Multifractal formalism. Mathematics Subject Classiıcation 26A16, 42C40. 1 Introduction The concept of Ho¨lderian regularity has been introduced to study nowhere dif-ferentiable functions (several examples are given in [33, 44]). An archetype of

Wavelets techniques for pointwise anti-Holderian irregularity
So that if 0 < a < 1 and \b xq\ > 1, these functions vanish in a neighborhood of 63 Wavelet Methods for Pointwise Regularity Xq when, for instance, e 1/2; (4.12) is thus a consequence of f (x) /o .Too W (^ b) ha,b) (x) % (/ * <Pa) (x). But W (a,b)^ {a)b) (x)db = (f*Oa) (x) = -a (f*ipa) (x).

Wavelet Methods for Pointwise Regularity and Local ...
Wavelet methods for pointwise regularity and local oscillations of functions. [Stéphane Jaffard; Yves Meyer] -- We investigate several topics related to the local behavior of functions: pointwise Hölder regularity, local scaling invariance and very oscillatory "chirp-like" behaviors.

Wavelet methods for pointwise regularity and local ...
Wavelet Methods for Pointwise Regularity and Local Oscillations of Functions . Ondersteuning. Adobe DRM. Currently, new trends in mathematics are emerging from the fruitful interaction between signal processing, image processing, and classical analysis. One example is given by "wavelets", which incorporate both the know-how of the Calderon ...

Wavelet Methods for Pointwise Regularity and Local ...
To our knowledge, the natural definition of pointwise anisotropic regularity which allows for an anisotropic wavelet characterization was first introduced by Ben Slimane [7] in order to ...

Pointwise and directional regularity of nonharmonic ...
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Wavelet Methods For Pointwise Regularity And Local ...
Hölder regularity is the most widely used notion of pointwise regularity , . We give a review of the definition: Let 0 and x 0 R and a locally bounded function f : R d R . We say that f C (x 0) if there exists a constant C > 0 and a polynomial P with degree d e g (P) < such as: | f (x) P (x x 0) | | C | x x 0 | in the neighbourhood of the point x 0 .

Wavelet Leaders: A new method to estimate the multifractal ...
We study different characterizations of the pointwise Hölder spacesC s (x 0), including rate of approximation by smooth functions and iterated differences.As an application of our results we study the class of functions that are Hölder exponents and prove that the Hölder exponent of a continuous function is the limit inferior of a sequence of continuous functions, thereby improving a ...

Characterization of Pointwise Hölder Regularity ...
Multivariate processes with long-range memory properties can be encountered in many applications fields. Two fundamentals characteristics in such frameworks are the long-memory pa

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Scaling, Fractals and Wavelets
The Fourier transform analyses the global regularity of a function. The wavelet transform makes it possible to analyze the pointwise regularity of a function. A signal is regular if it can be locally approximated by a polynomial.

Regularity Analysis
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S. Jaffard, Y. Meyer, Wavelet Methods for Pointwise Regularity and Local Oscillations of Functions, Memoirs of the A.M.S. Vol. 123 N. 587 (1996) [11] Applications of multifractal analysis in physics P. Abry, S. G. Roux, S. Jaffard, Detecting oscillating singularities in multifractal analysis: application to hydrodynamic turbulence, preprint ...

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Lahdelma, S., Kotila, V.: Real order derivatives—new signal processing method. Kunnossapito, 17, No. 8, 39–42 (2003) (Finnish). Google Scholar

Wavelet-Based Hölder Regularity Analysis in Condition ...
The main goal of our article is to show that this is not the case: the latter Hölder exponents can also be expressed as lower limits of sequences of continuous functions. Our proof mainly relies on a ``wavelet-leader'' reformulation of a nice characterization of pointwise Hölder regularity due to P. Anderson.

Ayache , Jaffard : Hölder exponents of arbitrary functions
Wavelet Methods for Multifractal Analysis of Functions 99 3.2. General points regarding multifractal functions 3.2.1. Important definitions Multifractal functions help in modeling signals whose regularity varies from one point to another. Thus, the first problem is to mathematicallydefineafunction's regularity at every point.

Wavelet MethodsforMultifractal AnalysisofFunctions
Spectral methods such as the continuous wavelet transform (CWT; frequently named wavelet analysis) and the fast Fourier transform have a special appeal for climate and paleoclimate research because they can be used to detect periodicities in time series.

Artificial Detection of Lower-Frequency Periodicity in ...
Our method, which we term the iterated amplitude adjusted wavelet transform can be used to generate bootstrapped versions of multifractal data, and because it preserves the pointwise Hölder regularity but not the local Hölder regularity, it can be used to test hypotheses concerning the presence of oscillating singularities in a time series, an important feature of turbulence and econophysics data.