Sinr Is A Constant

Signal-to-interference-plus-noise ratio

signal-to-interference-plus-noise ratio (SINR) (also known as the signal-to-noise-plus-interference ratio (SNIR)) is a quantity used to give theoretical upper

In information theory and telecommunication engineering, the signal-to-interference-plus-noise ratio (SINR) (also known as the signal-to-noise-plus-interference ratio (SNIR)) is a quantity used to give theoretical upper bounds on channel capacity (or the rate of information transfer) in wireless communication systems such as networks. Analogous to the signal-to-noise ratio (SNR) used often in wired communications systems, the SINR is defined as the power of a certain signal of interest divided by the sum of the interference power (from all the other interfering signals) and the power of some background noise. If the power of noise term is zero, then the SINR reduces to the signal-to-interference ratio (SIR). Conversely, zero interference reduces the SINR to the SNR, which is used less often...

Stochastic geometry models of wireless networks

a path loss function, using a Poisson cellular network model with constant shadowing is equivalent (in terms of SIR, SINR, etc.) to assuming sufficiently

In mathematics and telecommunications, stochastic geometry models of wireless networks refer to mathematical models based on stochastic geometry that are designed to represent aspects of wireless networks. The related research consists of analyzing these models with the aim of better understanding wireless communication networks in order to predict and control various network performance metrics. The models require using techniques from stochastic geometry and related fields including point processes, spatial statistics, geometric probability, percolation theory, as well as methods from more general mathematical disciplines such as geometry, probability theory, stochastic processes, queueing theory, information theory, and Fourier analysis.

In the early 1960s a stochastic geometry model was...

Drive testing

plots of RSRQ, SINR, PUSCH, Coverage plot, Download and Upload throughput is accumulated. Operators use this data to get output which is further utilized

Drive testing is a method of measuring and assessing the coverage, capacity and Quality of Service (QoS) of a mobile radio network.

The technique consists of using a motor vehicle containing mobile radio network air interface measurement equipment that can detect and record a wide variety of the physical and virtual parameters of mobile cellular service in a given geographical area.

By measuring what a wireless network subscriber would experience in any specific area, wireless carriers can make directed changes to their networks that provide better coverage and service to their customers.

Drive testing requires a mobile vehicle outfitted with drive testing measurement equipment. The equipment is usually highly specialized electronic devices that interface to OEM mobile handsets. This ensures...

Signal-to-noise ratio

stands for geometric signal-to-noise ratio. SINR is the signal-to-interference-plus-noise ratio. While SNR is commonly quoted for electrical signals, it

Signal-to-noise ratio (SNR or S/N) is a measure used in science and engineering that compares the level of a desired signal to the level of background noise. SNR is defined as the ratio of signal power to noise power, often expressed in decibels. A ratio higher than 1:1 (greater than 0 dB) indicates more signal than noise.

SNR is an important parameter that affects the performance and quality of systems that process or transmit signals, such as communication systems, audio systems, radar systems, imaging systems, and data acquisition systems. A high SNR means that the signal is clear and easy to detect or interpret, while a low SNR means that the signal is corrupted or obscured by noise and may be difficult to distinguish or recover. SNR can be improved by various methods, such as increasing...

Code-division multiple access

CDMA technology: all users operate in the same frequency range that impacts SINR and, hence, reduces coverage and capacity. Torrieri, Don (2018). Principles

Code-division multiple access (CDMA) is a channel access method used by various radio communication technologies. CDMA is an example of multiple access, where several transmitters can send information simultaneously over a single communication channel. This allows several users to share a band of frequencies (see bandwidth). To permit this without undue interference between the users, CDMA employs spread spectrum technology and a special coding scheme (where each transmitter is assigned a code).

CDMA optimizes the use of available bandwidth as it transmits over the entire frequency range and does not limit the user's frequency range.

It is used as the access method in many mobile phone standards. IS-95, also called "cdmaOne", and its 3G evolution CDMA2000, are often simply referred to as...

Anisotropic diffusion

the diffusion coefficient, instead of being a constant scalar, is a function of image position and assumes a matrix (or tensor) value (see structure tensor)

In image processing and computer vision, anisotropic diffusion, also called Perona–Malik diffusion, is a technique aiming at reducing image noise without removing significant parts of the image content, typically edges, lines or other details that are important for the interpretation of the image. Anisotropic diffusion resembles the process that creates a scale space, where an image generates a parameterized family of successively more and more blurred images based on a diffusion process. Each of the resulting images in this family are given as a convolution between the image and a 2D isotropic Gaussian filter, where the width of the filter increases with the parameter. This diffusion process is a linear and space-invariant transformation of the original image. Anisotropic diffusion is a...

Backpressure routing

ratio (SINR) can be carried out using randomization. Each node randomly decides to transmit every slot t (transmitting a "null" packet if it

In queueing theory, a discipline within the mathematical theory of probability, the backpressure routing algorithm is a method for directing traffic around a queueing network that achieves maximum network throughput, which is established using concepts of Lyapunov drift. Backpressure routing considers the situation where each job can visit multiple service nodes in the network. It is an extension of max-weight scheduling where each job visits only a single service node.

Vendor Neutral Archive

Report (SINR) profile. Since many Acquisition Modalities, mammography CAD systems and quantitative image analysis workstations produce SR objects, a VNA should

A Vendor Neutral Archive (VNA) is a medical imaging technology in which images and documents (and potentially any file of clinical relevance) are stored (archived) in a standard format with a standard interface, such that they can be accessed in a vendor-neutral manner by other systems.

This terminology is used as distinct from a traditional Picture Archiving and Communications Systems (PACS), although there is debate about where the boundary between a VNA and a PACS lies along the continuum of their common features.

Median filter

histogram (typically this is 2 n {\displaystyle 2^{n}} , where n is the number of bits per channel), even though this in turn is a constant. Implementation written

The median filter is a non-linear digital filtering technique, often used to remove noise from an image, signal, and video. Such noise reduction is a typical pre-processing step to improve the results of later processing (for example, edge detection on an image). Median filtering is very widely used in digital image processing because, under certain conditions, it preserves edges while removing noise (but see the discussion below for which kinds of noise), also having applications in signal processing.

Graph coloring

(e.g. by measuring the SINR). This sensing information is sufficient to allow algorithms based on learning automata to find a proper graph coloring with

In graph theory, graph coloring is a methodic assignment of labels traditionally called "colors" to elements of a graph. The assignment is subject to certain constraints, such as that no two adjacent elements have the same color. Graph coloring is a special case of graph labeling. In its simplest form, it is a way of coloring the vertices of a graph such that no two adjacent vertices are of the same color; this is called a vertex coloring. Similarly, an edge coloring assigns a color to each edge so that no two adjacent edges are of the same color, and a face coloring of a planar graph assigns a color to each face (or region) so that no two faces that share a boundary have the same color.

Vertex coloring is often used to introduce graph coloring problems, since other coloring problems can be...