Patents Assigned to
CSI RICERCA & AMBIENTE SRL and SEMEION CENTRO RICERCHE

1. **Twisting Theory (TWT).** A new theory and a new class of Algorithms able to model the global deformations of the space, considering the trajectories of only a little sample of points along the time flow.

Model simulating the evolutionary dynamics of events or processes and method of generating a model simulating the evolutionary dynamics of events or processes

Patent number: 8666707

Abstract: A model simulating the evolutionary dynamics of events or processes includes a non-linear adaptive mathematical system simulating spatial and temporal dynamics by using measured values of parameters describing the evolutionary condition of an event or process at different times. The model enables the definition of a n-dimensional array of points in a n-dimensional reference system having an axis that represents the values of the parameters being measured. The displacements of each of the points are computed as a function of their displacements in the array of points between a first time a second time and as a function of the distance of each of the points of the array from each of the points representing the measured parameters. The evolution of the event and or the model in time is visualized by displaying the points of the array of points at different times.
Type: Grant
Filed: December 16, 2010
Date of Patent: March 4, 2014
Assignees: CSI Ricerca & Ambiente SRL, Semeion Centro Ricerche
Inventor: Paolo Massimo Buscema

2. **Recurrent MST.** A new class of algorithms able to define from a sample of points distributed into 2 or 3 dimensional space the set of the geometrical points implicated from that distribution.

Method of determining implicit hidden features of phenomena which can be represented by a point distribution in a space.

Patent number: 8665270

Abstract: A method of determining implicit hidden features of phenomena, representable by a point distribution in a space, includes the following steps: defining a set of first parameters describing effects of a phenomenon such as an event or process; defining a n-dimensional space, wherein the first parameters are represented by entity points; determining, as a function of measured values of the first parameters, additional geometrical points in the n-dimensional space, which are expected to provide additional characteristic parameters describing the phenomenon or additional locations where the phenomenon will produce its effects; adding the additional parameters or points, in recurrent sequence, to the first parameters or points, to define at each iterative step a shorter minimum spanning tree than at the preceding step; and displaying or printing the n-dimensional space, wherein the additional characteristic parameters or points are shown together with the first parameters and the geometrical point.

3. **Harmonic Center.** A new class of algorithms able to define from a sample of points distributed into 2 or 3 dimensional space the different membership of harmonics of any geometrical point of the surface.

Method of determining features of events or processes having a dynamic evolution in space and/or time.

Patent number: 8665269

Abstract: A method of determining features of events or processes having a dynamic evolution in space and/or time using measurements of parameters that calculate the most probable consequences of the event or process at a certain time includes: defining a set of measurable parameters describing the effects of the event or process, characteristic of the event or process, and measurable at a certain time; defining a n-dimensional space where the parameters describing the event or process are represented by entity points; determining, as a function of the measured values of the characteristic parameters describing the event or process at the certain time, a geometrical point in the n-dimensional space forces accumulate that are generated by the evolution of the event of process in time; and displaying or printing the n-dimensional space where the characteristic parameters are shown as entity points and as a geometrical point.

4. **Active Connection Fusion (ACF).** A new class of Algorithms for Image fusion.
Method of image fusion.

Patent number: 8447137

Abstract: A method of fusing images includes the steps of providing at least two images of the same object, each image being a digital image or being transformed in a digital image formed by an array of pixels or voxels, and of combining together the pixels or voxels of the at least two images being combined to obtain a new image formed by the combined pixels or voxels.