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**SISTEM INTELIGENT, BAZAT PE CALCUL CU ATRACTORI STRANII,  
PENTRU MONITORIZARE SI CONTROL**

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Propunem dezvoltarea unui sistem multimodal, bazat pe calcul cu atractori stranii (calculator cu atractori), capabil sa raspunda unui numar mare de stimuli, precum stimuli tactili (de presiune, de forta), termici, vizuali etc. Sistemul foloseste o structura bazata pe inteligenta artificiala incorporata si este asemanator cu sistemele naturale senzitive de tip neuronal din organele de simt. Functionarea este bazata pe o dinamica multiparametrica haotica sensibila la marimi externe. Se foloseste o proprietate specifica a proceselor haotice: sensibilitatea ridicata a procesului fata de variatia parametrilor. Sistemul este capabil nu doar de masurari inteligente, ci si, simultan, de recunoastere de forme, monitorizare si control. Prin dinamici neliniare, Frieman (USA), Tsuda (Japonia) si altii, explica functionarea sistemelor naturale senzoriale si de procesare/recunoastere de informatie. Teodorescu a introdus si brevetat o modalitate de utilizare a acestor principii la sisteme de tip interfata multimodala, capabila sa raspunda inteligent la mai multe tipuri de intrari. Acest tip de interfata si-a dovedit utilitatea in determinarea cu mare sensibilitate a unui mare numar de parametri, realizarea de fuziune a datelor (data fusing), recunoastere automata de forme (pattern-uri), precum si generarea de raspunsuri complexe, utilizabile in controlul neliniar. Acestea se realizeaza prin procese de tip "calcul cu atractori", similare celor din sistemele biologice. Atat urmarirea evolutiei valorilor parametrilor, cat si echilibrarea lor e continua in timp

We propose to develop a multimodal system, based on calculus with strange attractors (computer with attractors), able to respond to a large number of stimulus, like tactile (pressure, force), thermal, visual etc. The system uses a structure based on incorporated artificial intelligence and it is similar to natural neural sensitive systems from the sense organs. The system's functioning it is based on a sensitive chaotic multiparametric dynamic to external factors. A property peculiar to chaotic processes: the high sensitivity of the process with the variations of the parameters. The system is able not just to measure intelligent, but also, at the same time, is able to recognize patterns, monitoring and control. By nonlinear dynamics, Frieman (USA), Tsuda (Japan) and others explains the functioning of natural sensitive systems and processing/pattern recognition of the information. Teodorescu has introduced and patented a method of using these principles on systems multimodal interface type, capable to respond intelligent to many types of inputs. This type of interface has proved its utility in determining with high sensitivity a large number of parameters, data fusing, automatic pattern recognition, and in generating complex reactions, useful in nonlinear control. These are achieved by processes based on computing with attractors, similar to biological systems. Tracing the evolutions of parameters values and maintaining them in certain ranges it is done continuous in time.