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Restricted Algorithms System Sets Sets Your Constructive

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Abstract:- In doing so it shows how to process some functions or systems of functional equations using systems-kits is expressed as units / SETS due to building restrictions as sets. The processing systems determinants of different interactions between elements of sets, is basically the projection geometrically different planes, sometimes simplifying dimensional global different expressions.

I. INTRODUCTION

- The first one shows the SDS (standard systems) we can find common solutions in points cyclical tangential curves generated by these systems.
- The second SDS generate "minimal symmetric polynomials" in the cosine and the formulas of four arguments!
- Third SDS provides us with formulas hyperbolic functions. All eight second-line systems have identical!
- The fourth SDS: SETFUNCTIONALE have forefront identity complex features a number of complex argument.
- Fifth SDS uses SEMIRING LOG operations defined as an application to build a neural network.
- Sixth SDS shows the algorithm described fractalisation 3D.
- The seventh and eighth SDS shows a phenomenon of nucleation tangential (tangent points can be considered "pores").
- Ninth SDS shows STABILIZATION obtained by iteration arguments (4 arguments).
- Tenth SDS shows COMPACTION obtained by iteration arguments (three arguments) partial parametric equations of the curves cyclical.

First, all systems are identical in cosine forefront.
Secondly all systems are identical in sinus forefront.

P1=[cos(u+v) cos(u-v); cos(2*u) cos(2*v)];	P3=[cos(u+v) cos(u-v); sin(2*u) sin(2*v)];	P5=[cos(u+v) cos(u-v); cos(2*v) cos(2*u)];	P7=[cos(u+v) cos(u-v); sin(2*v) sin(2*u)];
P2=[sin(u+v) sin(u-v); sin(2*u) sin(2*v)];	P4=[sin(u+v) sin(u-v); cos(2*u) cos(2*v)];	P6=[sin(u+v) sin(u-v); sin(2*v) sin(2*u)];	P8=[sin(u+v) sin(u-v); cos(2*v) cos(2*u)];

Table 1

simplify(det(P1)+det(P2)) ans = 2*sin(u)*sin(v) .
simplify(det(P3)-det(P4)) ans = -2*cos(v)*sin(u) .
simplify(det(P5)-det(P6)) ans = cos(3*u + v) - cos(u + v) .
simplify(det(P7)+det(P8)) ans = sin(3*u + v) - sin(u + v) .
Plotam codul format din ecuatiile parametrice obtinute : (viziune 2D si viziuni 3D)

```
u=[0:0.001:4.*pi]; v=[0:0.001:4.*pi];
x=2*sin(u).*sin(v); y=-2*sin(u).*cos(v); z=cos(3*u+v)-cos(u+v); t=sin(3*u+v)-sin(u+v);
plot(x,y);hold on; plot(z,t);hold off;
```

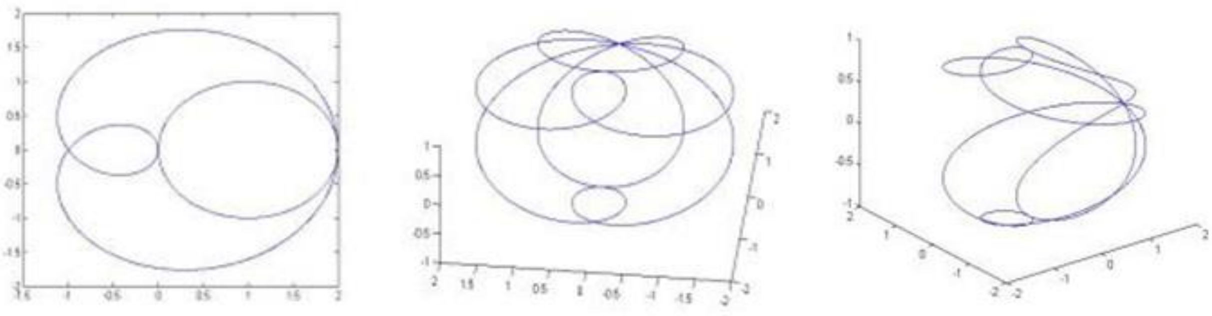

Fig 1

Next SET SYSTEM expressed "minimal symmetric polynomials" in the cosine and the formulas of four arguments!

Kt1=

-i*cos(t1)	i*sin(t1)
sin(t1)	cos(t1)

Kt2=

-i*cos(t2)	i*sin(t2)
sin(t2)	cos(t2)

Kt3=

-i*cos(t3)	i*sin(t3)
sin(t3)	cos(t3)

Kt4=

-i*cos(t4)	i*sin(t4)
sin(t4)	cos(t4)

Table 2

simplify(det(Kt1+Kt2+Kt3+Kt4)) ans = - cos(t1 - t2)*2*i
- cos(t1 - t3)*2*I - cos(t1 - t4)*2*i
- cos(t2 - t3)*2*i - cos(t2 - t4)*2*i
- cos(t3 - t4)*2*I
- 4*I
simplify(det(Kt1*Kt2+Kt3*Kt4)) ans =
- cos(t1 + t2 - t3 - t4) - cos(t1 - t2 - t3 + t4) - 2
simplify(det(Kt1*Kt3+Kt2*Kt4)) ans =
- cos(t1 - t2 + t3 - t4) - cos(t1 - t2 - t3 + t4) - 2

simplify(det(Kt1*Kt4+Kt2*Kt3)) ans =
- cos(t1 - t2 + t3 - t4) - cos(t1 - t2 - t3 + t4) – 2

simplify(det(Kt1*Kt2*Kt3)) ans =i
simplify(det(Kt2*Kt3*Kt1)) ans =i
simplify(det(Kt3*Kt1*Kt2)) ans =i
simplify(det(Kt1*Kt2*Kt3*Kt4)) ans =1

All eight second-line systems have identical!

Y1		**Y2**		**Y3**		**Y4**	
Exp(z)	1	Exp(z)	-1	1	Exp(-z)	1	-Exp(-z)
Exp(-z)	1	Exp(-z)	1	Exp(-z)	1	Exp(-z)	1
Y5		**Y6**		**Y7**		**Y8**	
1	Exp(z)	1	-Exp(z)	Exp(-z)	1	Exp-z)	-1
Exp(-z)	1	Exp(-z)	1	Exp(-z)	1	Exp(-z)	1

Table 3

simplify(det(Y1)) ans =exp(z) - exp(-z)
simplify(det(Y2)) ans =exp(-z) + exp(z)
simplify(det(Y3)) ans =1 - exp(-2*z)
simplify(det(Y4)) ans =exp(-2*z) + 1
simplify(det(Y5)) ans =0
simplify(det(Y6)) ans =2
simplify(det(Y7)) ans =0
simplify(det(Y8)) ans =2*exp(-z)

det(Y1)/2=sinh(z) **det(Y2)/2=cosh(z)**
det(Y3)/det(Y4)=tanh(z) **det(Y4)/det(Y3)=-coth(z)**

SETFUNCTIONALE: The following SET SYSTEM receiving identical lines:

Pc=

cos(exp(i*t))	i*(sin(exp(i*t))
cos(exp(-i*t))	-i*sin(exp(-i*t))

Pd=

cos(exp(i*t))	i*sin(exp(i*t))
cos(exp(-i*t))	i*sin(exp(-i*t))

Qc=

cos(exp(i*t))	i*(sin(exp(i*t))
-i*sin(exp(-i*t))	cos(exp(-i*t))

Qd=

cos(exp(i*t))	i*(sin(exp(i*t))
i*sin(exp(-i*t))	cos(exp(-i*t))

Table 4

simplify(det(Pd)*det(Qc)+det(Pc)*det(Qd))
ans =-sin(2*cos(t) + sin(t)*2*i)*i

simplify(det(Pc)*det(Pd)+det(Qc)*det(Qd))
ans =cos(2*cos(t) + sin(t)*2*i)

“ETA”=cos{2*[cos(t) + i*sin(t)**]}-i*sin{2*[**cos(t) + i*sin(t)**]}**

“ETA” because the Greek letter designating return here working with exponential power.

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We start from systems-kits:

<table>
<tr><td>M1=<table><tr><td>cos(t)</td><td>0</td></tr><tr><td>0</td><td>sin(t)</td></tr></table></td><td>M2=<table><tr><td>0</td><td>-cos(t)</td></tr><tr><td>sin(t)</td><td>0</td></tr></table></td></tr>
<tr><td>E1=<table><tr><td>exp(t)</td><td>exp(-t)</td></tr><tr><td>1</td><td>1</td></tr></table></td><td>E2=<table><tr><td>exp(t)</td><td>-exp(-t)</td></tr><tr><td>1</td><td>1</td></tr></table></td></tr>
</table>

Table 5

The operations of addition and multiplication using the LOG SEMIRING, applied

M1’=log(det(M1));	M2’=log(det(M2));
E1’=log(det(E1));	E2’=log(det(E2));

Table 6

$\otimes$ $\oplus$ LOG operations defined in SEMIRING.

M1’ $\oplus$ M2’ = log(sin(2*t));

:=x1

M1’ $\otimes$ M2’= 2*(log(sin(2*t))-log(2));

:=y1

E1’ $\oplus$ E2’ = t + log(2);

:=x2

E1’ $\otimes$ E2’ = 8*sinh(2*t);

:=y2

(log := logarithm natural)

We believe that z = t FUNCTIONS constant CYLINDRICAL! !

Plot:

```
plot3(x1,y1,z);hold on;
plot3(x1,y1,-z);hold on;
plot3(x1,-y1,z);hold on;
plot3(-x1,y1,z);hold on;
plot3(x1,-y1,-z);hold on;
plot3(-x1,y1,-z);hold on;
plot3(-x1,-y1,z);hold on;
plot3(x2,y2,z);hold on;
plot3(x2,y2,-z);hold on;
plot3(x2,-y2,z);hold on;
plot3(-x2,y2,z);hold on;
plot3(x2,-y2,-z);hold on;
plot3(-x2,y2,-z);hold on;
plot3(-x2,-y2,z);hold on;
plot3(-x2,-y2,-z);hold on;
```

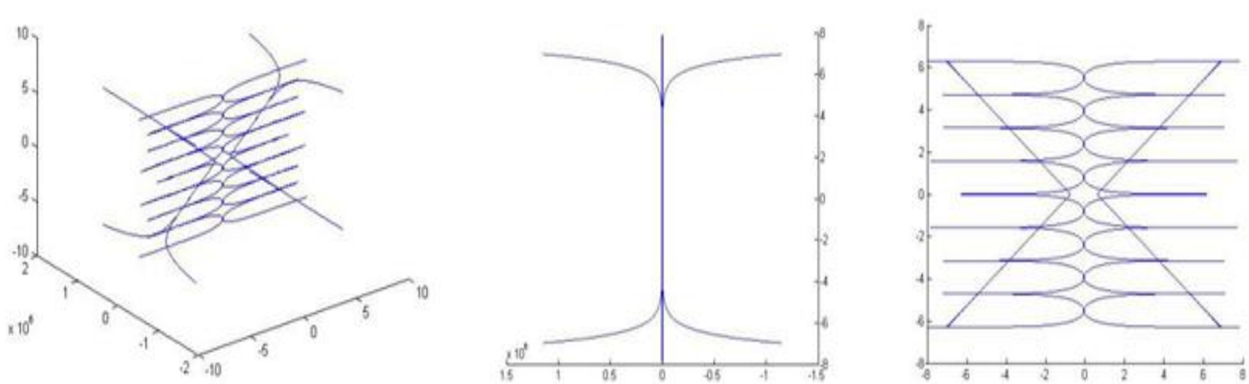

Fig 2

Starting from;

A=

exp(t)	-exp(u)	-exp(v)
-exp(-v)	exp(-t)	-exp(-u)
-exp(-u)	-exp(-v)	exp(-t)

B=

-exp(t)	-exp(u)	exp(v)
exp(-v)	-exp(-t)	-exp(-u)
-exp(-u)	exp(-v)	-exp(-t)

C=

-exp(t)	exp(u)	-exp(v)
-exp(-v)	-exp(-t)	exp(-u)
exp(-u)	-exp(-v)	-exp(-t)

Table 7

- *Building*:

A1=[exp(t) -exp(u) -exp(v); -exp(-v) exp(-t) -exp(-u); -exp(-u) -exp(-v) exp(-t)];	A2=[exp(v) -exp(t) -exp(u); -exp(-u) exp(-v) -exp(-t); -exp(-t) -exp(-u) exp(-v)];	A3=[exp(u) -exp(v) -exp(t); -exp(-t) exp(-u) -exp(-v); -exp(-v) -exp(-t) exp(-u)];
B1=[-exp(t) -exp(u) exp(v); exp(-v) -exp(-t) -exp(-u); -exp(-u) exp(-v) -exp(-t)];	B2=[-exp(v) -exp(t) exp(u); exp(-u) -exp(-v) -exp(-t); -exp(-t) exp(-u) -exp(-v)];	B3=[-exp(u) -exp(v) exp(t); exp(-t) -exp(-u) -exp(-v); -exp(-v) exp(-t) -exp(-u)];
C1=[-exp(t) exp(u) -exp(v); -exp(-v) -exp(-t) exp(-u); exp(-u) -exp(-v) -exp(-t)];	C2=[-exp(v) exp(t) -exp(u); -exp(-u) -exp(-v) exp(-t); exp(-t) -exp(-u) -exp(-v)];	C3=[-exp(u) exp(v) -exp(t); -exp(-t) -exp(-u) exp(-v); exp(-v) -exp(-t) -exp(-u)];

Table 8

```
r=[0:0.1:2*pi]; s=[0:0.1:2*pi]; t=cos(r).*sin(s);
u=sin(r).*sin(s); v=cos(s).*sin(r);
plot3(A1+B1+C1,A2+B2+C2,A3+B3+C3);hold on;
plot3(A1+B2+C3,A2+B3+C1,A3+B1+C2);hold on;
plot3(A1+B3+C2,A2+B1+C3,A3+B2+C1);hold off;
```

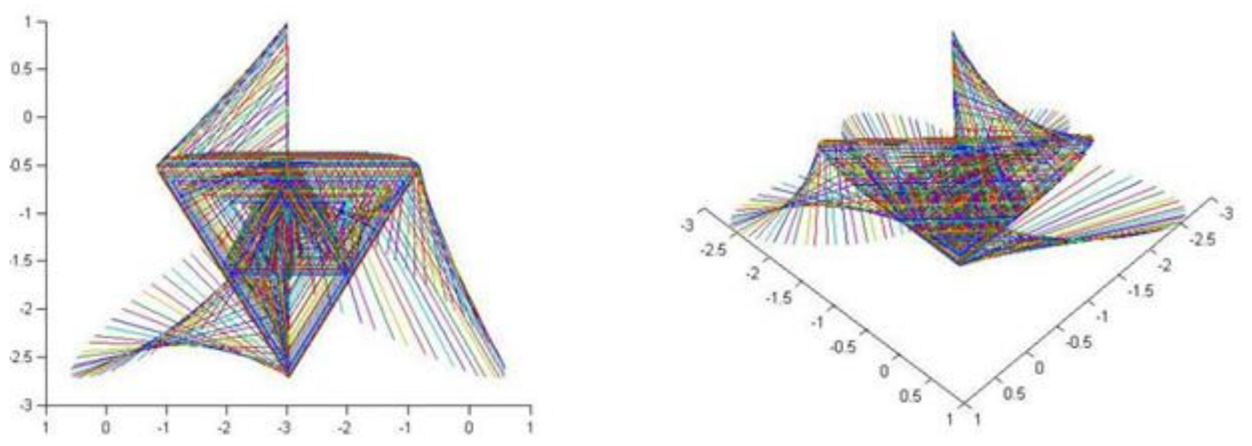

Fig 3

r=[0:0.5:pi/2]; s=[0:0.5:pi/2]; t=log(cos(r).*sin(s)); u=log(cos(s).*sin(r)); v=log(sin(r).*sin(s));

det(DA)=	det(DB)=	det(DC)=
=-det(A1+B1+C1)	=-det(A2+B2+C2)	=-det(A3+B3+C3)
=-1/4det(A1+B2+C3)	=-1/4det(A2+B3+C1)	=-1/4det(A3+B1+C2)
det(A1+B3+C2)=0	**det(A2+B1+C3)=0**	**det(A3+B2+C1)=0**

Table 9

r=[0:0.5:pi/2]; s=[0:0.5:pi/2]; t=log(cos(r).*sin(s)); u=log(cos(s).*sin(r)); v=log(sin(r).*sin(s));

DA=[exp(t) exp(u) exp(v);
exp(-v) exp(-t) exp(-u);
exp(-u) exp(-v) exp(-t)];
	DB=[exp(v) exp(t) exp(u);
	exp(-u) exp(-v) exp(-t);
	exp(-t) exp(-u) exp(-v)];
		DC=[exp(u) exp(v) exp(t);
		exp(-t) exp(-u) exp(-v);
		exp(-v) exp(-t) exp(-u)];

Table 10

plot3(DA,DB,DC);

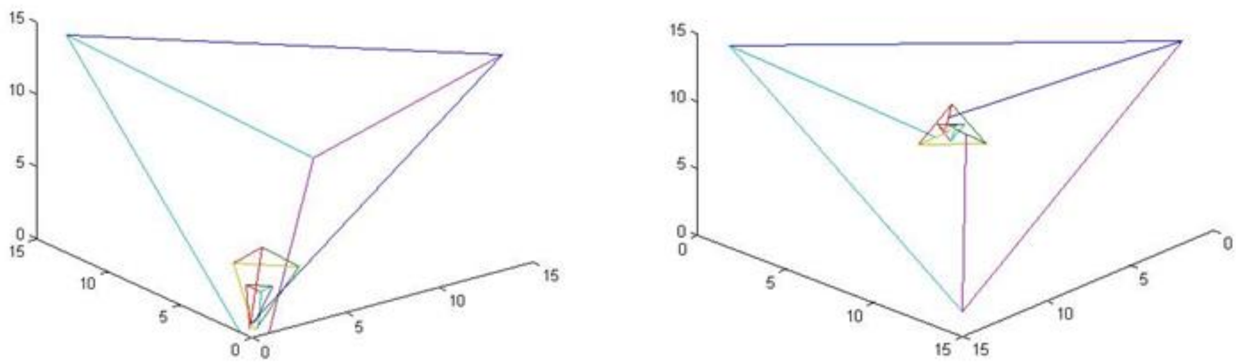

Fig 4

Starting from:

M1=[cos(p) 1 sin(p); 1 cos(q) sin(q); 1 1 1];	E1=[exp(p) 1 exp(-p); 1 exp(q) exp(-q); 1 1 1];	H1=[cosh(p) 1 sinh(p); 1 cosh(q) sinh(q); 1 1 1];
M2=[sin(p) 1 cos(p); 1 sin(q) cos(q); 1 1 1];	E2=[exp(-p) 1 exp(p); 1 exp(-q) exp(q); 1 1 1];	H2=[sinh(p) 1 cosh(p); 1 sinh(q cosh(q); 1 1 1];

Table 11

simplify(det(M1)-det(M2)) ans = **M**=cos(p + q) - cos(p) - cos(q) + sin(p) + sin(q);
simplify(det(E1)-det(E2)) ans =**E**=exp(-p) + exp(-q) - exp(p) - exp(q) + exp(p)*exp(q) - exp(-p)*exp(-q);
simplify(det(H1)-det(H2)) ans =**H**=cosh(p - q) - cosh(p) - cosh(q) + sinh(p) + sinh(q);
plot3(M,E,H);hold on; plot3(H,M,E);hold on; plot3(E,H,M);hold on; plot3(-M,E,H);hold on; plot3(M,-E,H);hold on; plot3(M,E,-H);hold on; plot3(-H,M,E);hold on; plot3(H,-M,E);hold on; plot3(H,M,-E);hold on; plot3(-E,H,M);hold on; plot3(E,-H,M);hold on; plot3(E,H,-M);hold on; plot3(-M,-E,H);hold on; plot3(M,-E,-H);hold on; plot3(-M,E,-H);hold on; plot3(-H,-M,E);hold on; plot3(H,-M,-E);hold on; plot3(-H,M,-E);hold on; plot3(-E,-H,M);hold on; plot3(E,-H,-M);hold on; plot3(-E,H,-M);hold on; plot3(-M,-E,-H);hold on; plot3(-H,-M,-E);hold on; plot3(-E,-H,-M);hold on;

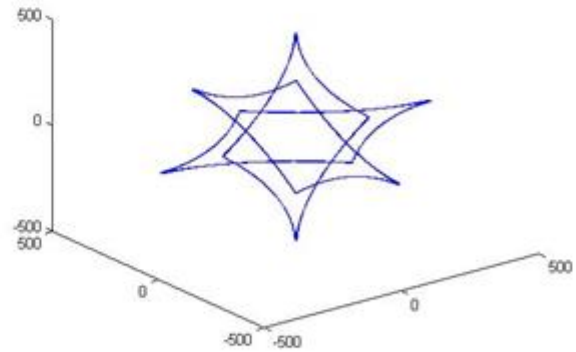

Fig 5

M1=[cos(p) 1 sin(p); 1 cos(q) sin(q); 1 1 1];	E1=[exp(p) 1 exp(-p); 1 exp(q) exp(-q); 1 1 1];	H1=[cosh(p) 1 sinh(p); 1 cosh(q) sinh(q); 1 1 1];
M2=[sin(p) 1 cos(p); 1 sin(q) cos(q); 1 1 1];	E2=[exp(-p) 1 exp(p); 1 exp(-q) exp(q); 1 1 1];	H2=[sinh(p) 1 cosh(p); 1 sinh(q) cosh(q); 1 1 1];
M3=[sin(p) 1 cos(p); sin(q) cos(q) 1; 1 1 1];	E3=[exp(-p) 1 exp(p); exp(-q) exp(q) 1; 1 1 1];	H3=[sinh(p) 1 cosh(p); sinh(q) cosh(q) 1; 1 1 1];
M4=[cos(p) 1 sin(p); cos(q) sin(q) 1; 1 1 1];	E4=[exp(p) 1 exp(-p); exp(q) exp(-q) 1; 1 1 1];	H4=[cosh(p) 1 sinh(p); cosh(q) sinh(q) 1; 1 1 1];
M5=[1 1 1; 1 cos(q) sin(q); cos(p) 1 sin(p)];	E5=[1 1 1; 1 exp(q) exp(-q); exp(p) 1 exp(-p)];	H5=[1 1 1; 1 cosh(q) sinh(q); cosh(p) 1 sinh(p)];
M6=[1 1 1; 1 sin(q) cos(q); sin(p) 1 cos(p)];	E6=[1 1 1; 1 exp(-q) exp(q); exp(-p) 1 exp(p)];	H6=[1 1 1; 1 sinh(q) cosh(q); sinh(p) 1 cosh(p)];

M7=[1 1 1;
sin(q) cos(q) 1;
sin(p) 1 cos(p)];
	E7=[1 1 1;
	exp(-q) exp(q) 1;
	exp(-p) 1 exp(p)];
		H7=[1 1 1;
		sinh(q) cosh(q) 1;
		sinh(p) 1 cosh(p)];

M8=[1 1 1;
cos(q) sin(q) 1;
cos(p) 1 sin(p)];
	E8=[1 1 1;
	exp(q) exp(-q) 1;
	exp(p) 1 exp(-p)];
		H8=[1 1 1;
		cosh(q) sinh(q) 1;
		cosh(p) 1 sinh(p)];

Table 12

```
>> simplify(det(M1)-det(M3)) ans = 2*sin(p) + 2*sin(q) + 2*cos(p)*cos(q) - 2*cos(p)*sin(q) - 2*cos(q)*sin(p) - 2
>> simplify(det(M2)-det(M4)) ans = 2*cos(p) + 2*cos(q) - 2*cos(p)*sin(q) - 2*cos(q)*sin(p) + 2*sin(p)*sin(q) - 2
>> simplify(det(M3)-det(M5)) ans = 0
>> simplify(det(M4)-det(M6)) ans = 0
>> simplify(det(M5)-det(M7)) ans = 2*cos(p)*sin(q) - 2*sin(q) - 2*cos(p)*cos(q) - 2*sin(p) + 2*cos(q)*sin(p) + 2
>> simplify(det(M6)-det(M8)) ans = 2*cos(p)*sin(q) - 2*cos(q) - 2*cos(p) + 2*cos(q)*sin(p) - 2*sin(p)*sin(q) + 2
>> simplify(det(E1)-det(E3)) ans = 2*exp(-p) + 2*exp(-q) + 2*exp(p)*exp(q) - 2*exp(-p)*exp(q) - 2*exp(-q)*exp(p) - 2
>> simplify(det(E2)-det(E4)) ans = 2*exp(p) + 2*exp(q) - 2*exp(-p)*exp(q) - 2*exp(-q)*exp(p) + 2*exp(-p)*exp(-q) - 2
>> simplify(det(E3)-det(E5)) ans = 0
>> simplify(det(E4)-det(E6)) ans = 0
>> simplify(det(E5)-det(E7)) ans = 2*exp(-p)*exp(q) - 2*exp(-q) - 2*exp(p)*exp(q) - 2*exp(-p) + 2*exp(-q)*exp(p) + 2
>> simplify(det(E6)-det(E8)) ans = 2*exp(-p)*exp(q) - 2*exp(q) - 2*exp(p) + 2*exp(-q)*exp(p) - 2*exp(-p)*exp(-q) + 2
>> simplify(det(H1)-det(H3)) ans = 2*sinh(p) + 2*sinh(q) + 2*cosh(p)*cosh(q) - 2*cosh(p)*sinh(q) - 2*cosh(q)*sinh(p) - 2
>> simplify(det(H2)-det(H4)) ans = 2*cosh(p) + 2*cosh(q) - 2*cosh(p)*sinh(q) - 2*cosh(q)*sinh(p) + 2*sinh(p)*sinh(q) - 2
>> simplify(det(H3)-det(H5)) ans = 0
>> simplify(det(H4)-det(H6)) ans = 0
```

>> simplify(det(H5)-det(H7)) ans = 2*cosh(p)*sinh(q) - 2*sinh(q) - 2*cosh(p)*cosh(q) - 2*sinh(p) + 2*cosh(q)*sinh(p) + 2
>> simplify(det(H6)-det(H8)) ans = 2*cosh(p)*sinh(q) - 2*cosh(q) - 2*cosh(p) + 2*cosh(q)*sinh(p) - 2*sinh(p)*sinh(q) + 2

M=2*sin(p) + 2*sin(q) + 2*cos(p).*cos(q) - 2*cos(p).*sin(q) - 2*cos(q).*sin(p) - 2+2*cos(p) + 2*cos(q) - 2*cos(p).*sin(q) - 2*cos(q).*sin(p) + 2*sin(p).*sin(q) - 2;

E=2*exp(-p) + 2*exp(-q) + 2*exp(p).*exp(q) - 2*exp(-p).*exp(q) - 2*exp(-q).*exp(p) - 2+2*exp(p) + 2*exp(q) - 2*exp(-p).*exp(q) - 2*exp(-q).*exp(p) + 2*exp(-p).*exp(-q) - 2;

H=2*sinh(p) + 2*sinh(q) + 2*cosh(p).*cosh(q) - 2*cosh(p).*sinh(q) - 2*cosh(q).*sinh(p) - 2+2*cosh(p) + 2*cosh(q) - 2*cosh(p).*sinh(q) - 2*cosh(q).*sinh(p) + 2*sinh(p).*sinh(q) - 2;

plot3(M,E,H);hold on; plot3(H,M,E);hold on; plot3(E,H,M);hold on; plot3(-M,E,H);hold on; plot3(M,-E,H);hold on; plot3(M,E,-H);hold on; plot3(-H,M,E);hold on; plot3(H,-M,E);hold on; plot3(H,M,-E);hold on; plot3(-E,H,M);hold on; plot3(E,-H,M);hold on; plot3(E,H,-M);hold on; plot3(-M,-E,H);hold on; plot3(M,-E,-H);hold on; plot3(-M,E,-H);hold on; plot3(-H,-M,E);hold on; plot3(H,-M,-E);hold on; plot3(-H,M,-E);hold on; plot3(-E,-H,M);hold on; plot3(E,-H,-M);hold on; plot3(-E,H,-M);hold on; plot3(-M,-E,-H);hold on; plot3(-H,-M,-E);hold on; plot3(-E,-H,-M);hold on;

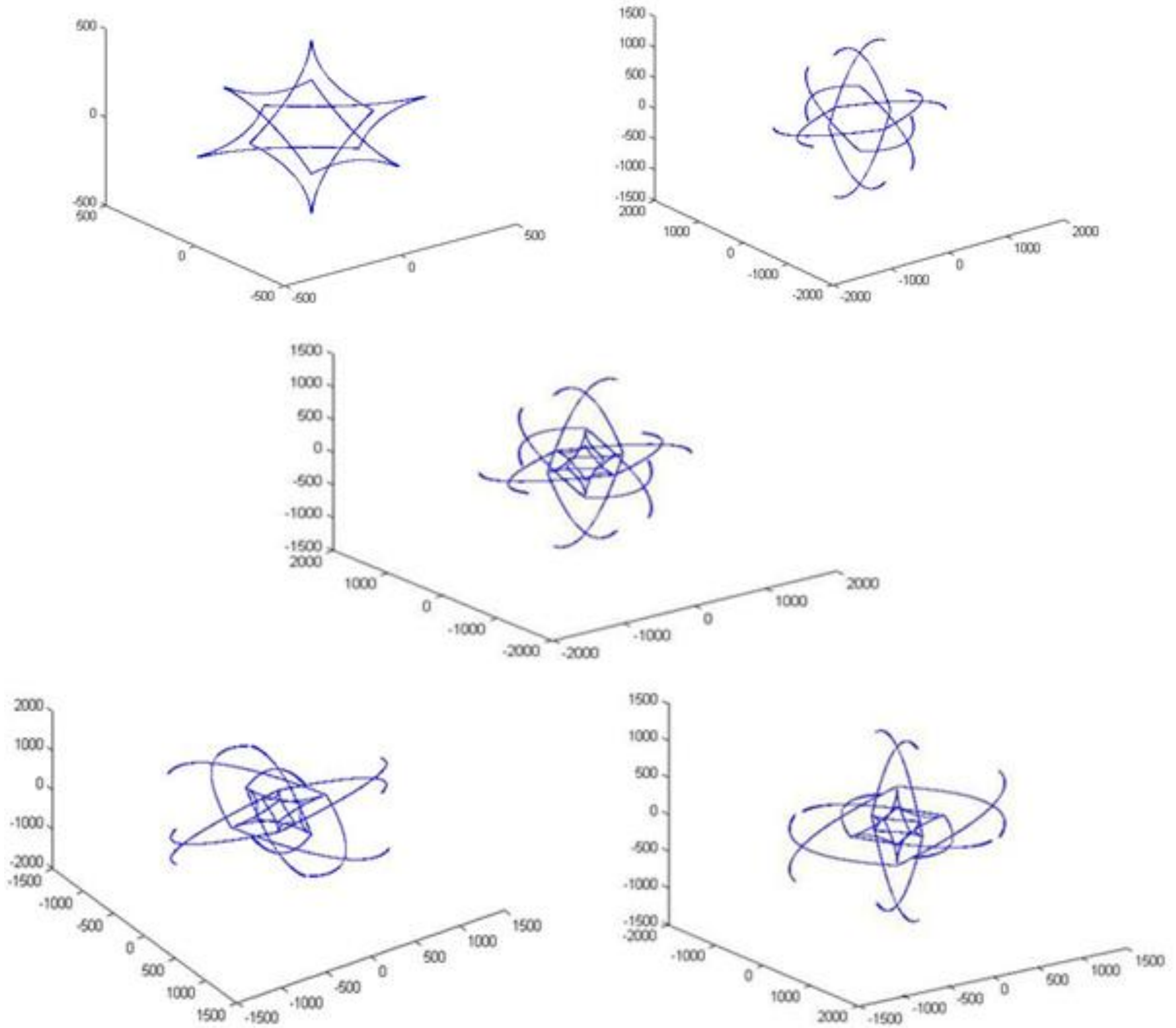

Fig 6

The next two observers EXAMPLES OF STABILIZATION AND compaction closed loop SYSTEMS SUCH AS REACTION. We are 4 * 4.

➢ *Stabilization:*

>> P1=[1 sin(l) sin(m) 1;
sin(l-o+n) 0 0 sin(m-n+o);
sin(l-n+o) 0 0 sin(m-o+n);
1 sin(n) sin(o) 1];
	>> P2=[1 sin(l) sin(n) 1;
	sin(l-m+o) 0 0 sin(n-o+m);
	sin(l-o+m) 0 0 sin(n-m+o);
	1 sin(o) sin(m) 1];
		>> P3=[1 sin(l) sin(o) 1;
		sin(l-n+m) 0 0 sin(o-m+n);
		sin(l-m+n) 0 0 sin(o-n+m);
		1 sin(m) sin(n) 1];

Table 13

```
>> simplify(det(P1)) ans =
P1=(cos(l + m - 2*n + 2*o)/2 - cos(l + m + 2*n - 2*o)/2)*(sin(l)*sin(o) - sin(m)*sin(n))
>> simplify(det(P2)) ans =
P2=-(cos(l - 2*m + n + 2*o)/2 - cos(l + 2*m + n - 2*o)/2)*(sin(l)*sin(m) - sin(n)*sin(o))
>> simplify(det(P3))ans =
P3=(cos(l - 2*m + 2*n + o)/2 - cos(l + 2*m - 2*n + o)/2)*(sin(l)*sin(n) – sin(m)*sin(o))
```

PLOT:

```
l=[0:0.001:2*pi]; m=-l; n=-m; o=-0.05*n;
P1=(cos(l + m - 2*n + 2*o)/2 - cos(l + m + 2*n - 2*o)/2).*(sin(l).*sin(o) - sin(m).*sin(n));
P2=-(cos(l - 2*m + n + 2*o)/2 - cos(l + 2*m + n - 2*o)/2).*(sin(l).*sin(m) - sin(n).*sin(o));
P3=(cos(l - 2*m + 2*n + o)/2 - cos(l + 2*m - 2*n + o)/2).*(sin(l).*sin(n) - sin(m).*sin(o));
plot3(P1,P2,P3);
l=[0:0.001:2*pi]; m=-l; n=-m; o=-0.005*n;
P1=(cos(l + m - 2*n + 2*o)/2 - cos(l + m + 2*n - 2*o)/2).*(sin(l).*sin(o) - sin(m).*sin(n));
P2=-(cos(l - 2*m + n + 2*o)/2 - cos(l + 2*m + n - 2*o)/2).*(sin(l).*sin(m) - sin(n).*sin(o));
P3=(cos(l - 2*m + 2*n + o)/2 - cos(l + 2*m - 2*n + o)/2).*(sin(l).*sin(n) - sin(m).*sin(o));
plot3(P1,P2,P3);
l=[0:0.001:2*pi]; m=-l; n=-m; o=-0.0005*n;
P1=(cos(l + m - 2*n + 2*o)/2 - cos(l + m + 2*n - 2*o)/2).*(sin(l).*sin(o) - sin(m).*sin(n));
P2=-(cos(l - 2*m + n + 2*o)/2 - cos(l + 2*m + n - 2*o)/2).*(sin(l).*sin(m) - sin(n).*sin(o));
P3=(cos(l - 2*m + 2*n + o)/2 - cos(l + 2*m - 2*n + o)/2).*(sin(l).*sin(n) - sin(m).*sin(o));
plot3(P1,P2,P3);
```

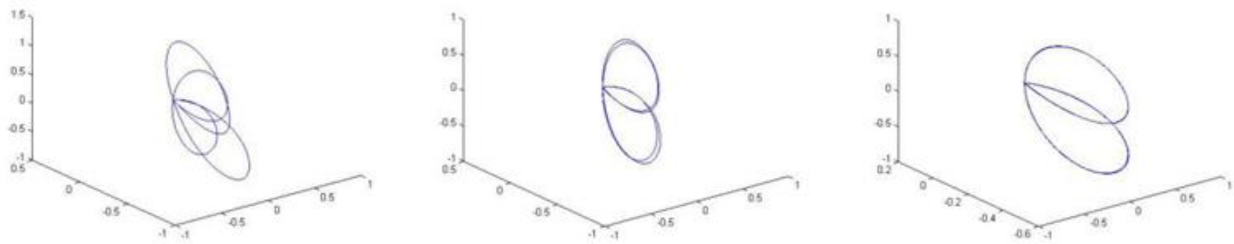

Fig 7

➢ *Compaction*:

T1=[0 cos(t) cos(u) cos(v); -cos(t) 0 -sin(t) sin(u); -cos(u) sin(t) 0 -sin(v); -cos(v) -sin(u) sin(v) 0];	T2=[0 cos(t) cos(u) cos(v); -cos(t) 0 -sin(v) sin(t); -cos(u) sin(v) 0 -sin(u); -cos(v) -sin(t) sin(u) 0];	T3=[0 cos(t) cos(u) cos(v); -cos(t) 0 -sin(u) sin(v); -cos(u) sin(u) 0 -sin(t); -cos(v) -sin(v) sin(t) 0];

Table 14

```
>> simplify(det(T1)) ans =
T1=cos(t - 2*u + v)/2 - cos(2*t + 2*v)/2 - cos(4*u)/8 - cos(t + 2*u + v)/2 + 5/8
>> simplify(det(T2)) ans =
T2=cos(t + u - 2*v)/2 - cos(2*t + 2*u)/2 - cos(4*v)/8 - cos(t + u + 2*v)/2 + 5/8
>> simplify(det(T3)) ans =
T3=cos(2*t - u - v)/2 - cos(4*t)/8 - cos(2*u + 2*v)/2 - cos(2*t + u + v)/2 + 5/8
```

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t=[0**:0.001**:pi/16]; u=cos(t)-cos(**16***t); v=sin(t)-sin**(16***t);
T1=cos(t - 2*u + v)/2 - cos(2*t + 2*v)/2 - cos(4*u)/8 - cos(t + 2*u + v)/2 + 5/8;
T2=cos(t + u - 2*v)/2 - cos(2*t + 2*u)/2 - cos(4*v)/8 - cos(t + u + 2*v)/2 + 5/8;
T3=cos(2*t - u - v)/2 - cos(4*t)/8 - cos(2*u + 2*v)/2 - cos(2*t + u + v)/2 + 5/8;
plot3(T1,T2,T3);
t=[0**:0.001**:pi/16]; u=cos(t)-cos(**32***t); v=sin(t)-sin(**32***t);
T1=cos(t - 2*u + v)/2 - cos(2*t + 2*v)/2 - cos(4*u)/8 - cos(t + 2*u + v)/2 + 5/8;
T2=cos(t + u - 2*v)/2 - cos(2*t + 2*u)/2 - cos(4*v)/8 - cos(t + u + 2*v)/2 + 5/8;
T3=cos(2*t - u - v)/2 - cos(4*t)/8 - cos(2*u + 2*v)/2 - cos(2*t + u + v)/2 + 5/8;
plot3(T1,T2,T3);
…
t=[0**:0.0001**:pi/16]; u=cos(t)-cos(**1024***t); v=sin(t)-sin**(1024***t);
T1=cos(t - 2*u + v)/2 - cos(2*t + 2*v)/2 - cos(4*u)/8 - cos(t + 2*u + v)/2 + 5/8;
T2=cos(t + u - 2*v)/2 - cos(2*t + 2*u)/2 - cos(4*v)/8 - cos(t + u + 2*v)/2 + 5/8;
T3=cos(2*t - u - v)/2 - cos(4*t)/8 - cos(2*u + 2*v)/2 - cos(2*t + u + v)/2 + 5/8;
plot3(T1,T2,T3);

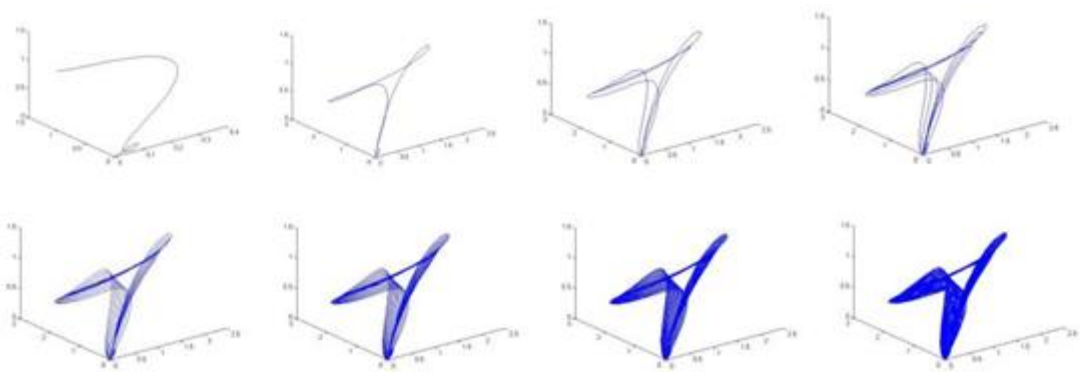

Fig 8

II. CONCLUSION

Impose building restrictions that generates SDS can decompose complex phenomena or processes in systems element may be more tractable for further optimization.

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