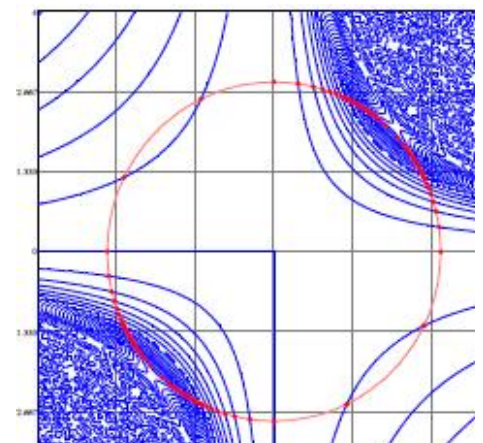
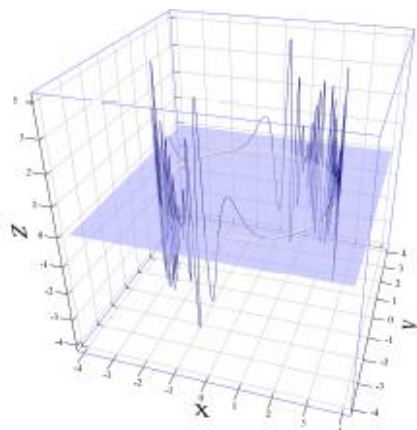


```
NameVec(n, _V):=
| V:=0
| for i∈1..n
|   V_i:=-V_i
| V
```

```
Draghilev(F(1), X0, t_1, t_2, N):=
| (D:=0 n:=rows(eval(F(X0))) J:=matrix(n, n)
| X:=NameVec(2·n+1, _X)
| X1:=submatrix(X, 1, n, 1, 1)
| X2:=submatrix(X, n+2, 2·n+1, 1, 1)
| for i∈1..2·n+1
|   if i≤(n+1)
|     E:=X1
|     if i<(n+1)
|       E_i:=-X_{n+1}
|     else
|       0
|     for ii∈1..n
|       for jj∈1..n
|         J_{ii jj}:=\frac{d}{d\begin{matrix} -X:=E_{jj} \\ -X \end{matrix}}(F(X1)_{ii}-X_{n+1}·F(X2)_{ii})
|       D_i:=|J|
|     else
|       D_i:=0
| D_{n+1}:=-D_{n+1}
| D(t, _X):=-D
| r:=rkfixed(stack(X0, 1, X0), t_1, t_2, N, D(t, _X))
| (V:=col(r, n+2) DM:=0 i:=1)
| for k∈1..length(V)-1
|   if (V_k>0)^(V_{k+1}<0)^(V_k<0)^(V_{k+1}>0)^(V_k=0)
|     for j∈2..n+1
|       P:=col(r, j)
|       DM_{i j-1}:=P_k-V_k·\frac{P_{k+1}-P_k}{V_{k+1}-V_k}
|       i:=i+1
|     else
|       0
| eval(DM)
```

Draghilev's method. Examples.
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$$F(X):=\begin{pmatrix} x:=X_1 \ y:=X_2 \\ x^2+y^2-8 \\ \sin(x \cdot y) \cdot \sin(\exp(x \cdot y)) \end{pmatrix}$$



```
for m ∈ 1 .. 101
  ⌊ ( A := 2 · √ 2   ω := 2 · π · ( m - 1 ) · 100 ⁻ 1 )
  ⌊ ( xc_m := A · sin ( ω )   yc_m := A · cos ( ω ) )

X0 := stack ( 2.784 , - 0.5 )      tmin := 0      tmax := 15      N := 200
R := Draghilev ( F ( X ) , X0 , tmin , tmax , N )   k := rows ( R )   k = 53   X := col ( R , 1 )   Y := col ( R , 2 )
```

