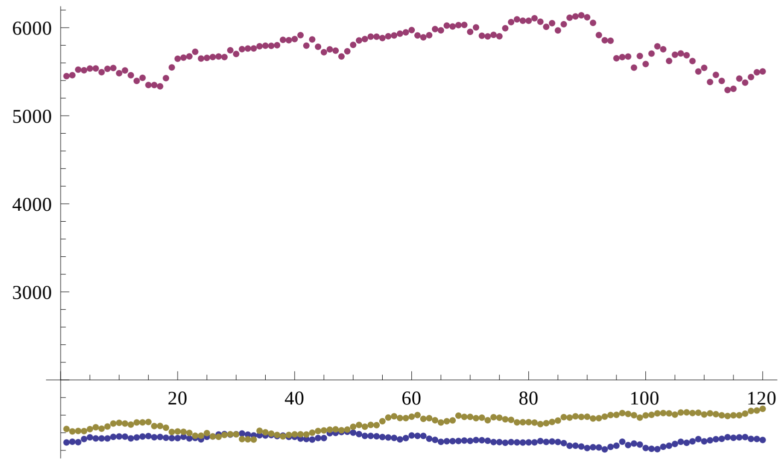
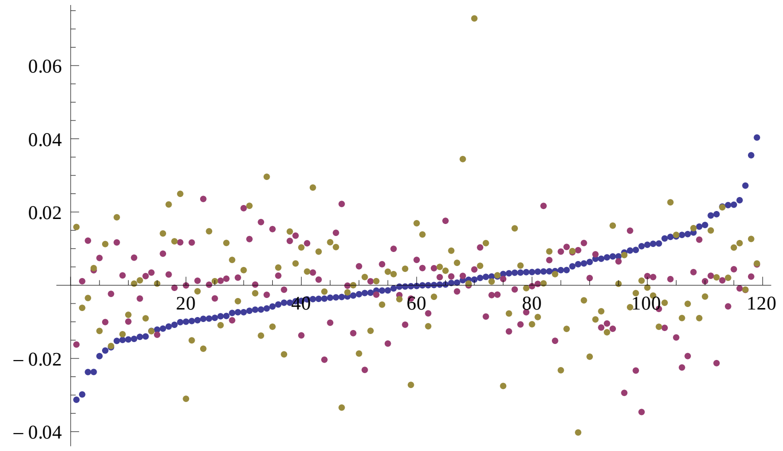
```
{hedge, dax, d2} = Transpose[Import["c:\\kurse.dat", "Table"]];
ListPlot[{hedge, dax, d2}]
```

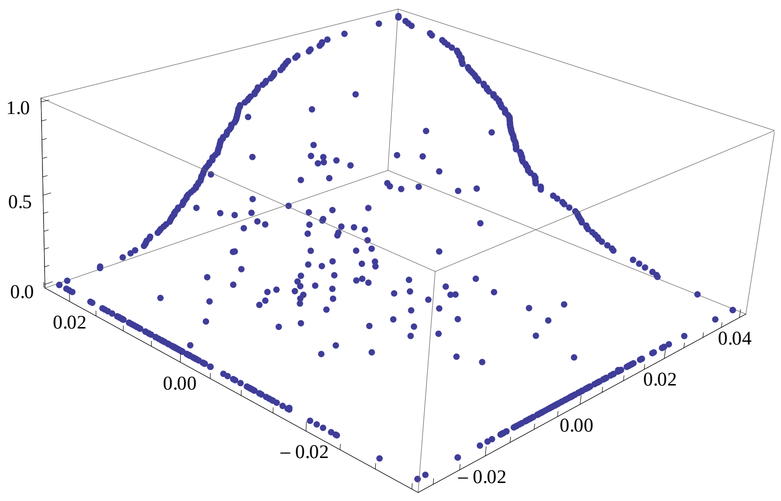


```
hedge = Log[hedge]; dax = Log[dax]; d2 = Log[d2];

hedge = Differences[hedge];

dax = Differences[dax]; d2 = Differences[d2];

w = Transpose[{hedge, dax, d2}];

w = Sort[w, #1[[1]] < #2[[1]] &];

hedge = Transpose[w][[1]];
dax = Transpose[w][[2]];
d2 = Transpose[w][[3]];

ListPlot[Transpose[w][[1 ;; 3]], PlotRange → All]
```



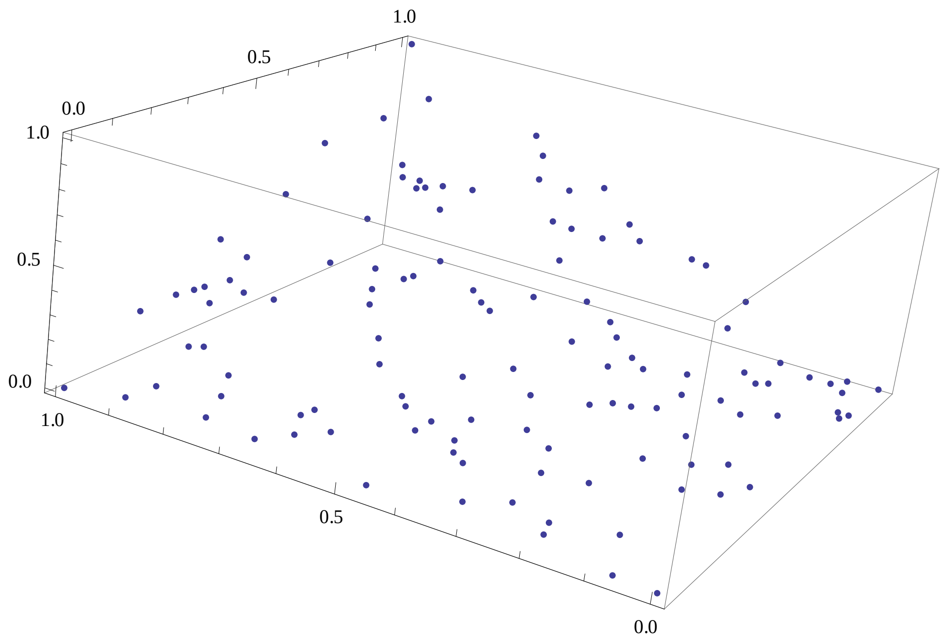
```
min0 = Min[Transpose[w][[1]]]; wN = Length[hedge]; nn = wN;
max0 = Max[Transpose[w][[1]]];
min1 = Min[Transpose[w][[2]]];
max1 = Max[Transpose[w][[2]]];
```

```
U = {}; sdax = Sort[dax]; AppendTo[U, {max0, max1, 1}];

For[i = 1, i ≤ nn, i++,
 AppendTo[U, {hedge[[i]], max1, (i - 1) / nn}];
 AppendTo[U, {max0, sdax[[i]], (i - 1) / nn}];
 AppendTo[U, {hedge[[i]], min1, 0}];
 AppendTo[U, {min0, sdax[[i]], 0}];
]

F = {}; For[i = 1, i ≤ wN, i++,
 AppendTo[F, {w[[i, 1]], w[[i, 2]],
    Length[Select[w, #[[1]] <= w[[i, 1]]  && #[[2]] <= w[[i, 2]] &]] / wN}];
]

W = Join[F, U];

ListPointPlot3D[W]
```

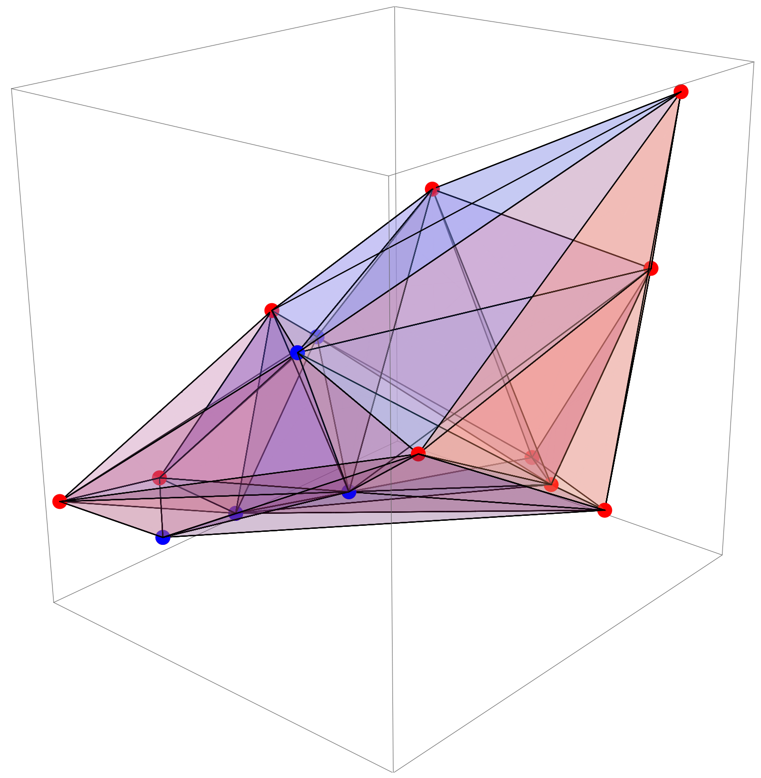


```
hedgeI = Table[{hedge[[i]], (i - 1) / (nn - 1)}, {i, nn}];
daxI = Table[{sdax[[i]], (i - 1) / (nn - 1)}, {i, nn}]; W = F;
Co = Table[{Select[hedgeI, #[[1]] == W[[i, 1]] &][[1, 2]],
   Select[daxI, #[[1]] == W[[i, 2]] &][[1, 2]], W[[i, 3]]}, {i, Length[W]}];
AppendTo[Co, {1, 0, 0}]; AppendTo[Co, {0, 1, 0}]; AppendTo[Co, {0, 0, 0}];
AppendTo[Co, {1, 1, 1}];
```

```
ListPointPlot3D[Co]
```



```
h = Import["C:\\delaunay.txt", "Table"];
c = Drop[Import["c:\\empcopula.dat", "Table"], 1];
g = Import["c:\\copulasample.txt", "Table"];
cc = Drop[Import["c:\\empcopula.dat", "Table"], 1];
cc = Transpose[Transpose[cc][[1 ;; 3]]];
hh = Table[Subsets[h[[i]], {3}], {i, Length[h]}][[1 ;; Length[h]]];
Graphics3D[{{PointSize[Large], Red, Table[Point[cc[[i]]], {i, Length[cc]}]},
  {PointSize[Large], Blue, Point[#] & /@ {cc[[1]], cc[[2]], cc[[3]], cc[[5]], cc[[4]]}},
  {Opacity[0.1], Table[Polygon[cc[[# + 1]] & /@ hh[[j]]], {j, Length[hh]}]}}]
```



```
n = 15; Export["c:\\empCopula.dat",
 Join[RandomInteger[n, {n, 4}], {{0, 0, 0, 0}, {1, 1, 1, 1}, {0, 0, 1, 0},
   {0, 1, 0, 0}, {1, 0, 0, 0}, {1, 1, 0, 0}, {1, 0, 1, 0}, {0, 1, 1, 0}}]]

c:\empCopula.dat
```

```
i = 22; ab = Inverse[{#[[1]], #[[2]], #[[3]], 1} & /@ (cc[[# + 1]] & /@ h[[i]])].
  (#[[4]] & /@ (c[[# + 1]] & /@ h[[i]])); h[[i]]
ab // N
t[u_] := ab.Append[u, 1]; t[cc[[# + 1]]] - c[[# + 1, 4]] & /@ h[[i]]

{2, 4, 7, 14}

{0.628319, -0.557522, -0.823009, 15.4159}

{0, 0, 0, 0}
```

```
c[[1, 4]]
```

```
14
```

```
cc[[1, 3]]
```

```
5
```

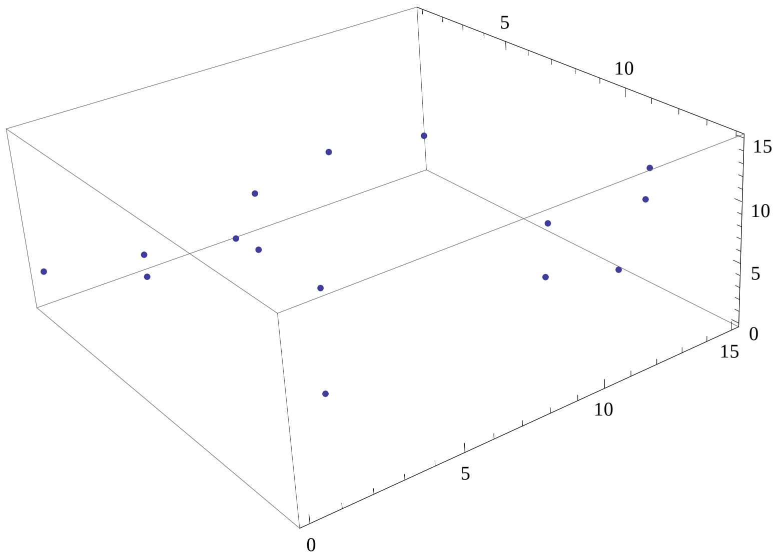
```
h =.; i =.; a =.; c =.;
```

```
f[i_] := {C[[Triangs[[p, i]], e]], C[[Triangs[[p, i]], 1]], C[[Triangs[[p, i]], 2]], 1}
```

```
h[[37]]
```

```
{8, 11, 12, 13}
```

```
ListPointPlot3D[cc]
```



```
CForm[Det[{f[a], f[b], f[c], {A[[e]], A[[1]], A[[2]], 1}}]]
```

```
Part::pspec : Part specification p is neither an integer nor a list of integers. ≫

Part::pspec : Part specification Triangs⟦p, a⟧ is neither an integer nor a list of integers. ≫

Part::pspec : Part specification p is neither an integer nor a list of integers. ≫

General::stop : Further output of Part::pspec will be suppressed during this calculation. ≫

Part::partd : Part specification A⟦1⟧ is longer than depth of object. ≫

Part::partd : Part specification A⟦2⟧ is longer than depth of object. ≫
```

```
A[e]*C[Triangs[p][a]][2]*C[Triangs[p][b]][1] - A[2]*C[Triangs[p][a]][e]*C[Triangs[p][b]][1
   A[e]*C[Triangs[p][a]][1]*C[Triangs[p][b]][2] + A[1]*C[Triangs[p][a]][e]*C[Triangs[p][b]
   A[2]*C[Triangs[p][a]][1]*C[Triangs[p][b]][e] - A[1]*C[Triangs[p][a]][2]*C[Triangs[p][b]
   A[e]*C[Triangs[p][a]][2]*C[Triangs[p][c]][1] + A[2]*C[Triangs[p][a]][e]*C[Triangs[p][c]
   A[e]*C[Triangs[p][b]][2]*C[Triangs[p][c]][1] - C[Triangs[p][a]][e]*C[Triangs[p][b]][2]*
   A[2]*C[Triangs[p][b]][e]*C[Triangs[p][c]][1] + C[Triangs[p][a]][2]*C[Triangs[p][b]][e]*
   A[e]*C[Triangs[p][a]][1]*C[Triangs[p][c]][2] - A[1]*C[Triangs[p][a]][e]*C[Triangs[p][c]
   A[e]*C[Triangs[p][b]][1]*C[Triangs[p][c]][2] + C[Triangs[p][a]][e]*C[Triangs[p][b]][1]*
   A[1]*C[Triangs[p][b]][e]*C[Triangs[p][c]][2] - C[Triangs[p][a]][1]*C[Triangs[p][b]][e]*
   A[2]*C[Triangs[p][a]][1]*C[Triangs[p][c]][e] + A[1]*C[Triangs[p][a]][2]*C[Triangs[p][c]
   A[2]*C[Triangs[p][b]][1]*C[Triangs[p][c]][e] - C[Triangs[p][a]][2]*C[Triangs[p][b]][1]*
   A[1]*C[Triangs[p][b]][2]*C[Triangs[p][c]][e] + C[Triangs[p][a]][1]*C[Triangs[p][b]][2]*
```

```
j =.

f[j]
```

```
Part::pspec : Part specification j is neither an integer nor a list of integers. ≫

Part::partd : Part specification C⟦1, 1⟧ is longer than depth of object. ≫

Part::partd : Part specification C⟦2, 2⟧ is longer than depth of object. ≫

Part::partd : Part specification C⟦3, 3⟧ is longer than depth of object. ≫

General::stop : Further output of Part::partd will be suppressed during this calculation. ≫

Part::pspec : Part specification j is neither an integer nor a list of integers. ≫
```

```
{C⟦j, e⟧, C⟦1, 1⟧, C⟦2, 2⟧, C⟦3, 3⟧}
```