

```

In[ ]:= Clear["Global`*"];
ŠtejTakePiksleOkol[slikapiksli_, baarva_, ε_, sred_, polm_] := {
  resx = Length[slikapiksli[[1]] ];
  resy = Length[slikapiksli];
  Δnašteti = 0;
  Δvsotatakih = {0, 0, 0};
  Δvsotakord = {0, 0};
  (*koordinate pikslov na kvadratnici*)

  levo = If[polm ≥ sred[[2]], 1, sred[[2]] - polm ];
  desno = If[sred[[2]] + polm > resx, resx, sred[[2]] + polm ];
  gor = If[polm ≥ sred[[1]], 1, sred[[1]] - polm];
  dol = If[sred[[1]] + polm > resy, resy, sred[[1]] + polm];
  kpnk = If[polm == 0,
    {sred},
    Flatten[
      {
        Table[
          {dol, x},
          {x, levo, desno - 1}],
        Table[
          {y, desno},
          {y, gor + 1, dol}],
        Table[
          {gor, x},
          {x, levo + 1, desno}],
        Table[
          {y, levo},
          {y, gor, dol - 1}]
      ],
      1]
  ];
  Do[
    {i1, i2} = kpnk[[i]];
    If[
      Normalize[baarva].Normalize[slikapiksli[[i1, i2]] ] > 1 - ε,
      (*Total[slikapiksli[[i1,i2]]]<2.1*)

      Δnašteti++;
      Δvsotatakih += slikapiksli[[i1, i2]];
      Δvsotakord += {i1, i2};
      (*zadnji tak piksel*)
      ztp = {i1, i2};
    ],
    {i, Length[kpnk]}};
  Δnašteti
}[[1]];
Novosred[slikapiksli_, baarva_, ε_, sred_] := {
  Clear[ztp];
  polmer = 0;

```

```

While[Not[ListQ[ztp]],
  ŠtejTakePiksleOkol[slikapiksli, baarva, €, sred, polmer];
  polmer++
];
ztp
}[[1]];
TežPike[slikapiksli_, baarva_, €, sred_] := {
  polmer = 0;
  ΔnaštetiH = 1000000000;
  naštetiH = 0;
  vsotatakih = {0, 0, 0};
  vsotakord = {0, 0}; (*kordinat pikslov*)
  While[ΔnaštetiH ≠ 0,
    Δvsotatakih = {0, 0, 0};
    Δvsotakord = {0, 0};
    ŠtejTakePiksleOkol[slikapiksli, baarva, €, sred, polmer];
    naštetiH += ΔnaštetiH;
    vsotatakih += Δvsotatakih;
    vsotakord += Δvsotakord;
    polmer++
  ];
  barva = vsotatakih / naštetiH;
  N[vsotakord / naštetiH]
}[[1]];

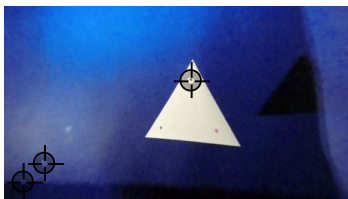
```

```

In[ ]:= mapaslik = "c:\\Users\\gal\\Downloads\\tetraeder\\";
(*seznam poti do slik*)
spds = FileNames[All, mapaslik];
slika1 = Import[spds[[1]]];
slika1piksli = (Delete[#, -1] & /@ #) & /@ ImageData[slika1];
DynamicModule[{leganasliki =  $\frac{1}{10}$  Length[slika1piksli] {{1, 1}, {2, 2}, {3, 3}}},
{
  LocatorPane[Dynamic[leganasliki], slika1],
  Dynamic[
    MatrixForm[
      barve0 = (slika1piksli[[-#[[2]], #[[1]]]]) & /@ Round[Reverse[leganasliki]] ] ],
      Dynamic[MatrixForm[sred0 = Round[leganasliki]]]
    ]
  ]
}

```

Out[ ]:= {



```

, {
  {slika1piksli[[-300, 458]],
    slika1piksli[[-96, 96]],
    slika1piksli[[-48, 48]]},
  {
    {48, 48},
    {96, 96},
    {458, 300}
  }
}

```



```

In[ ]:= spds = FileNames[All, mapaslik];
barva = barve0[[1]];
sred = Round[sred0[[1]]];
 $\epsilon$  = .0005;
stopnjapolinoma = 5;
polinom = Total[
  Table[
    ToExpression["par" <> ToString[i]] *  $\tau^i$ ,
    {i, 0, stopnjapolinoma}]
];
parametri = Table[
  ToExpression["par" <> ToString[i]],
  {i, 0, stopnjapolinoma}];
prejšnjih10sred = {};
dokam = 0;
lege = Table[
  dokam++;
  slika = Import[spds[[i]]];
  slikapiksli = (Delete[#, -1] & /@ #) & /@ ImageData[slika];
  AppendTo[prejšnjih10sred, sred];

  If[
    i > 10,
    prejšnjih10sred = Delete[prejšnjih10sred, 1];
    sred = ((
      nparametri = FindFit[
        #,
        polinom,
        parametri,
         $\tau$ 
      ];
      polinom /. nparametri
    ) /.  $\tau \rightarrow 11$ ) & /@ Transpose[prejšnjih10sred];
    sred = Round[sred];
  ];
  sred = TežPike[slikapiksli, barva,  $\epsilon$ ,
    Novosred[slikapiksli, barva,  $\epsilon$ , sred]];
  sred = Round[sred],

  {i, 1000}]

```

```

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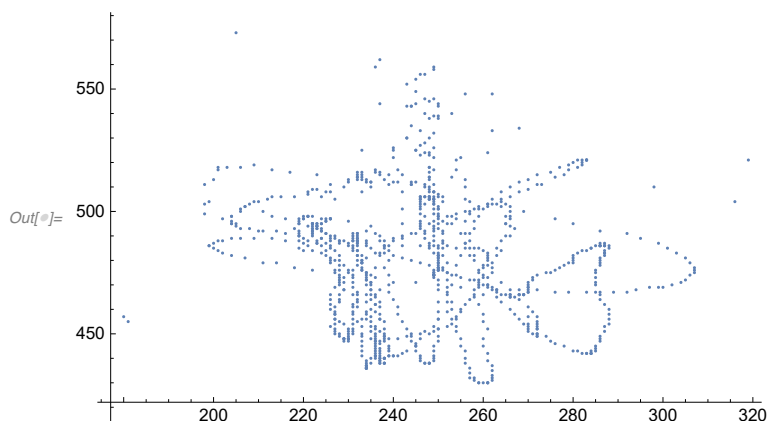
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In[ ]:= ListPlot[%]



In[ ]:= ListPlot[%24]

