# Overlapping parallelograms with fixed areas. Figure: parrallelogramsFig1.eps

```
<< peeters` ;
peeters`setGitDir[ "../project/figures/GAelectrodynamics" ]

/Users/pjoot/project/figures/GAelectrodynamics

ClearAll[parrows, o, e1, e2, parallelogram, p]
o = {0, 0};
e1 = {1, 0};
e2 = {0, 1};
parallelogram[p_, {v1_, v2_}] := Polygon[{p + v1, p + v1 + v2, p + v2, p}]
parrows[p_, {v1_, v2_}] := {
    parallelogram[p, {v1, v2}], Arrow[{p, v1}], Arrow[{p + v1, p + v1 + v2}]
  };
p = Module[{v1, v2, w1, w2, a},
  v1 = 1.5 e1;
  v2 = e1 + e2 / 2 ;
  a = 3 / 4;
  w1 = - (e1 + e2) / Sqrt[2];
  w2 = (e1 - e2) / Sqrt[2];
  Graphics[
   Flatten[
    {
     Opacity[0.3],
     Blue // Darker,
     parrows[o, {v1, v2}],
     Green // Darker,
     parrows[o, {2.2 a w1, w2 / 2.2}],
     Purple // Darker,
     parrows[o, {- w1, -a w2}],
     Yellow // Darker,
     parrows[o, {-a e2, e1}],
     Orange // Darker,
     parrows[o, {-v1 , -v2 + v1}]
    }, 1]
   ]
  ]
```
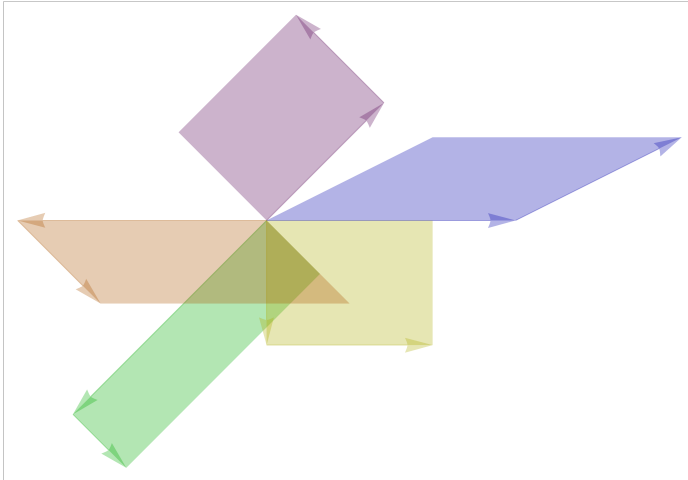
peeters`exportForLatex["parrallelogramsFig1", p]

{parrallelogramsFig1.eps, parrallelogramsFig1pn.png}