

Figure for (magnetic) vector potential: vectorPotentialFig1.eps.

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

ClearAll[p1, bold]
pt[r_, t_] := r {Cos[t], Sin[t], 0};
bold = Style[#, Bold] &;

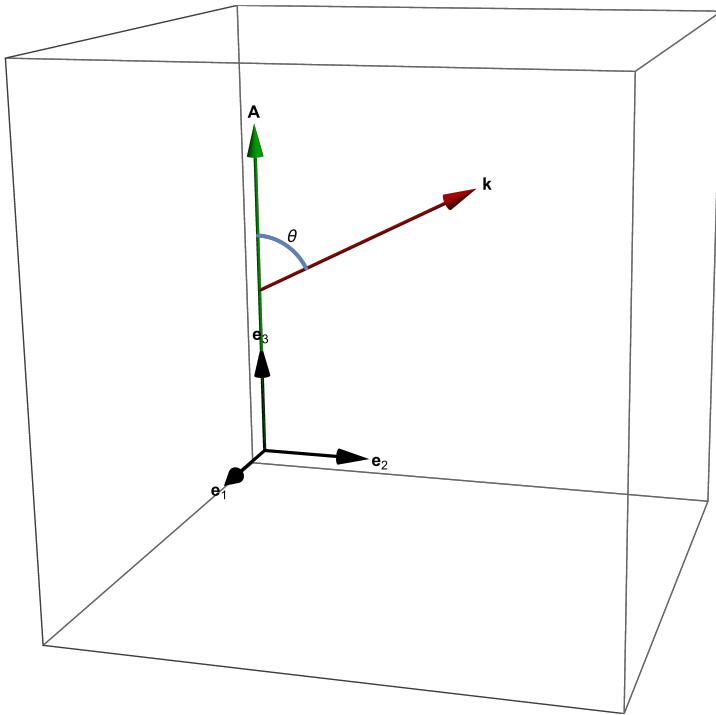
p1 = Module[{o, kp2, kp1, vecA, kdir, e1, e2, e3, rcap, theta, phi, range},
  o = {0, 0, 0};
  kp1 = {0, 0, 1.5};
  kp2 = {0, 2, 2.5};
  {e1, e2, e3} = UnitVector[3, #] & /@ Range[3];
  vecA = 3 e3;
  kdir = kp2 - kp1;
  rcap = kdir // Normalize;
  theta = ArcCos[rcap.e3];
  phi = Pi / 2;
  range = {- .2, 4};
  Show[
    {
      ParametricPlot3D[ kp1 + 0.5 {0, Sin[t], Cos[t]},
        {t, 0, theta}, PlotRange → {range, range, range}, Ticks → None],
      Graphics3D[
        {
          Green // Darker,
          Arrow[Tube[{o, vecA}]],
          Red // Darker,
          Arrow[Tube[{kp1, kp2}]],
          Black // Darker,
          Arrow[Tube[{o, e1}]],
          Arrow[Tube[{o, e2}]],
          Arrow[Tube[{o, e3}]],
          Black,

          Text["A" // bold, vecA + Normalize[vecA] / 10],
          Text["k" // bold, kp2 + rcap / 10],
          Text[Subscript["e" // bold, 1], 1.1 e1],
          Text[Subscript["e" // bold, 2], 1.1 e2],
          Text[Subscript["e" // bold, 3], 1.1 e3],
          Text["θ",
```

```

      kp1 + 0.6 {0, Sin[t], Cos[t]} /. t -> theta / 2]
    }
    , BaseStyle -> 14
  ]
}
]
]
]

```



```

peeters`exportForLatex["vectorPotentialFig1", p1]
{vectorPotentialFig1.eps, vectorPotentialFig1pn.png}

```