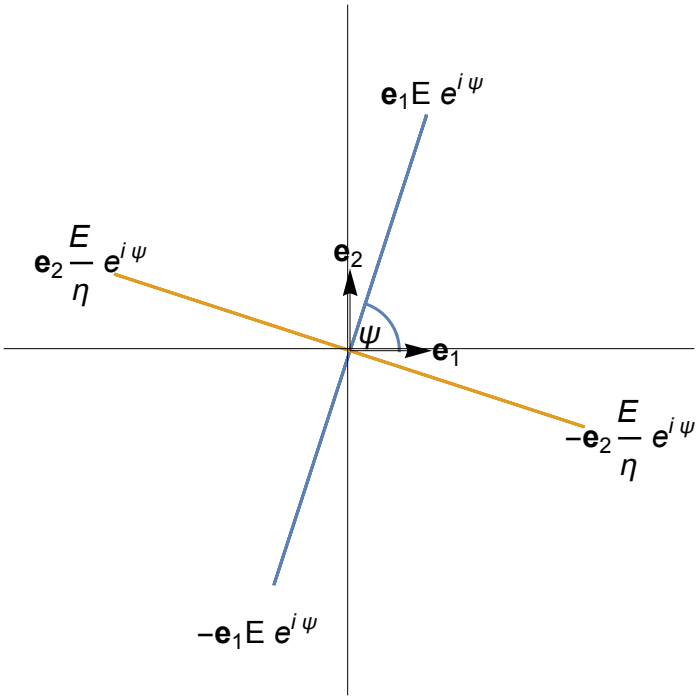
Figure (linearPolarizationFig1.eps) showing the electric and magnetic field directions for a linearly polarized field propagating at a fixed angle to the horizontal in the transverse plane.

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

```
/Users/pjoot/project/figures/GAelectrodynamics
```

```
ClearAll[p1, bold, pt, fs]
pt[r_, t_] := r {Cos[t], Sin[t]};
bold = Style[ #, Bold] &;
fs := Style[ #, FontSize → 16 ] &;

p1 = Module[{e1, e2, psi, r, o, vecE, te1, te2, vecH, rho},
  {e1, e2} = IdentityMatrix[2];
  psi = .4 Pi;
  rho = 3;
  r = rho {-1.4, 1.4};
  o = {0, 0};
  vecE = pt[rho, psi] ;
  vecH = pt[rho, psi + Pi / 2];
  te1 = Subscript["e" // bold, 1] // fs;
  te2 = Subscript["e" // bold, 2] // fs;
  Show[{
    ParametricPlot[{vecE Cos[ t ], vecH Cos[ t ]}, {t, 0, 2 Pi},
     PlotRange → {r, r},
     Ticks → None
    ],
    ParametricPlot[(rho / 5) {Cos[t], Sin[t]}, {t, 0, psi}],
    Graphics[{
      Arrow[{o, e1}],
      Arrow[{o, e2}],
      Text[te1, 1.2 e1],
      Text[te2, 1.2 e2],
      Text[Row[{te1, "E e^iψ" // fs}], 1.1 vecE],
      Text[Row[{"-" // fs, te1, "E e^iψ" // fs}], -1.2 vecE],
      Text[Row[{te2, "E/η e^iψ" // fs}], 1.1 vecH],
      Text[Row[{"-" // fs, te2, "E/η e^iψ" // fs}], -1.2 vecH],
      Text[ "ψ" // fs, pt[0.3, psi / 2]]
     },
     AspectRatio → 1 ]
   }]
 ]
```




```
peeters`exportForLatex["linearPolarizationFig1", p1]
```

```
{linearPolarizationFig1.eps, linearPolarizationFig1pn.png}
```