

Initialization

```
<<MaTeX`
SetOptions[MaTeX, "Preamble " → {"
  \\usepackage{amssymb ,upref}
  \\usepackage{fourier}
  \\usepackage{tgheros}
  \\usepackage[T1]{fontenc}
  \\usepackage{textcomp }
  \\usepackage{microtype }
"}];

lfs = 10;
tfs = 9;

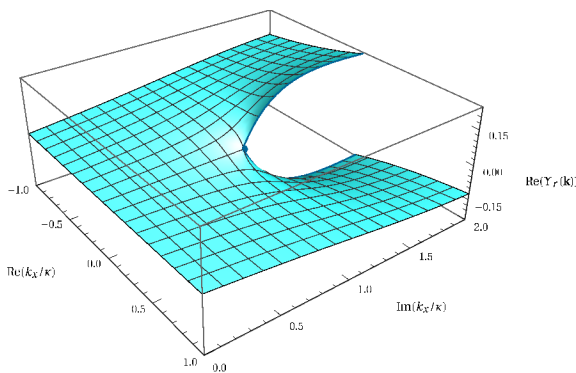
$OutputDirectory= FileNameJoin [{NotebookDirectory[], "..", "Figures"}];
$MainDirectory=
  StringReplace[FileNameJoin [{NotebookDirectory[], ".."}], {" " → "\\ " }];
pdflatex[] := Run["cd "<>$MainDirectory<>
  " && pdflatex --aux-directory=\"build\" Manuscript.tex"] /.
  {0 → "pdflatex successful"}
```

Figure

```

Block[{Y, κ = 1},
  Y =  $\frac{1}{2} (k^2 + \kappa^2) \times \frac{2i}{\sqrt{2\pi}} \frac{1}{k^2} \left( \frac{\kappa}{k^2 + \kappa^2} - \frac{1}{k} \text{ArcTan}\left[\frac{k}{\kappa}\right] \right) /. \{k \rightarrow \text{re}kx + i \text{im}kx\};$ 
  figureB = Show[{
    Plot3D[
      Re[Y]
      , {re kx, -1, 1}, {im kx, 0, 2}
      , ImageSize -> 300
      , PlotRangePadding -> None
      , PlotPoints -> 50
      , ViewPoint -> {1.8, -1.35, 1.3}
      , ViewVertical -> {0, 0, 1}
      , AxesLabel -> {MaTeX["\mathrm{Re}(k_x/\kappa)\quad",
        "\quad\mathrm{Im}(k_x/\kappa)",
        "\quad\mathrm{Re}(\Upsilon_r(\mathbf{k}))"], FontSize -> lfs}
      , PlotStyle -> Directive[Darker[Cyan]]
      , Lighting -> "Neutral"
      ,
      ExclusionsStyle -> {None, Directive[RGBColor[0, 0.4, 0.6], Thickness[0.004]]}
      , Ticks -> {Join[
        {#, MaTeX[PaddedForm[#, {2, 1}], FontSize -> tfs], {0.015, 0}} & /@
        Range[-1, 1, 0.5],
        {#, "", {0.0075, 0}} & /@ Range[-1, 1, 0.1]
      ], Join[
        {#, MaTeX[PaddedForm[#, {2, 1}], FontSize -> tfs], {0.015, 0}} & /@
        Range[0, 2, 0.5],
        {#, "", {0.0075, 0}} & /@ Range[0, 2, 0.1]
      ], Join[
        {#, MaTeX[PaddedForm[#, {3, 2}], FontSize -> tfs], {0.015, 0}} & /@
        Range[-0.15, 0.15, 0.15],
        {#, "", {0.0075, 0}} & /@ Range[-0.2, 0.2, 0.025]
      ]
      ]}
    ], Graphics3D[{RGBColor[0, 0.4, 0.6], PointSize[0.02], Point[{0, 1, 0}]}]
  ]
]

```



```
FileByteCount[
  Export[FileNameJoin[{$OutputDirectory, "figureB-branch-cuts.pdf"}], figureB]]
pdflatex[]
79767

pdflatex successful
```