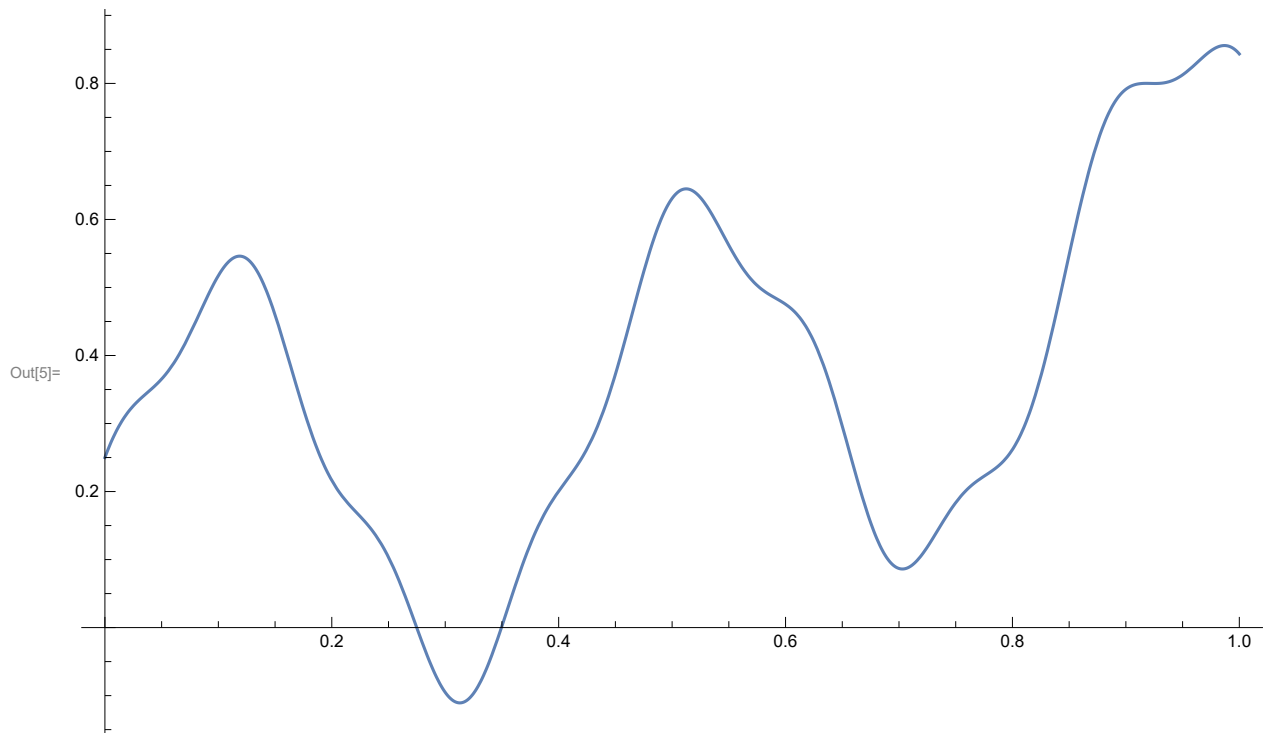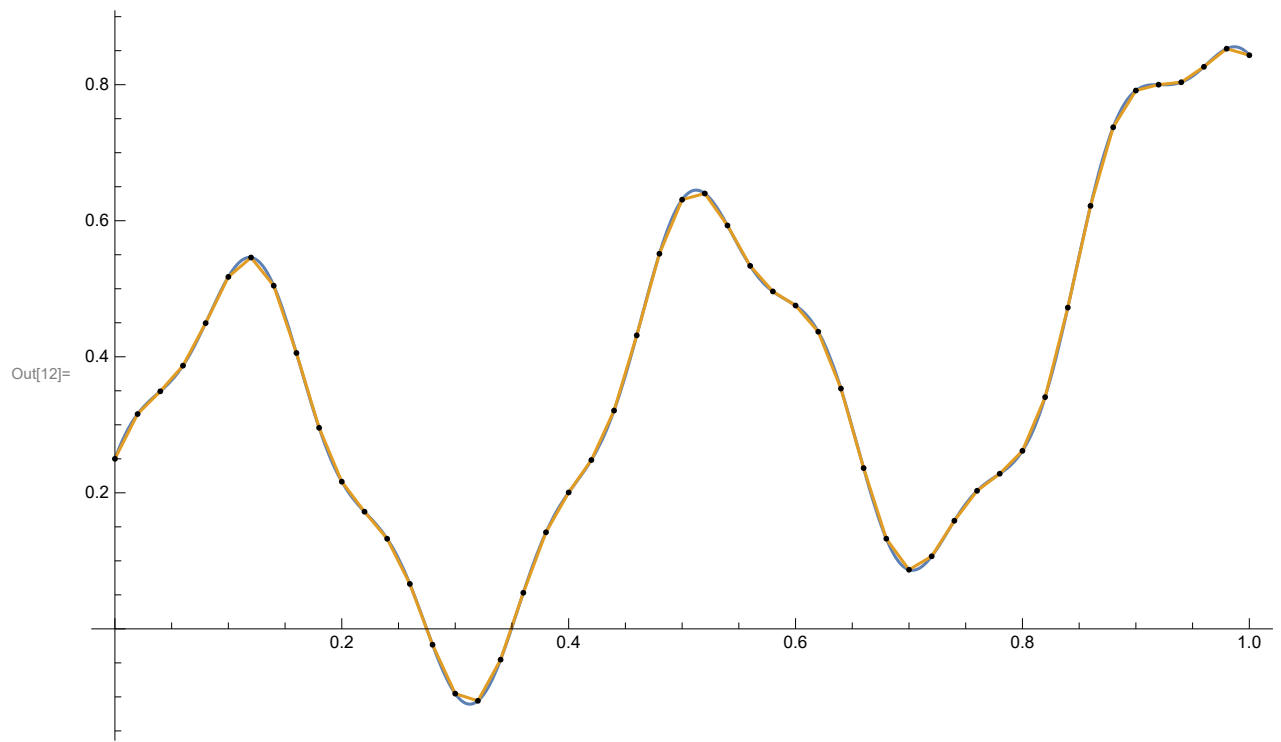`SetDirectory[NotebookDirectory[]];`

```
f3[x_] := 0.4*x^2 + 0.3*Sin[15*x] + 0.05*Cos[50*x] + 0.2;
Plot[f3[x], {x, 0, 1}, AxesOrigin -> {0, 0}, ImageSize -> Full]

step = 0.02; (*discretization step*)
data = ({#1, f3[#1]} & ) /@ Range[0, 1, step]; (*discretized function data*)
h1 = data[[1,2]]; (*first point height*)
inclinations = 1/Apply[Divide, Differences[data], {1}];
inclinationChanges = Join[{inclinations[[1]]}, Differences[inclinations]];
pa = Transpose[{data[[1 ;; -2,1]], inclinationChanges}]; (*x with inclinaton changes*)
fR[x_] = h1 + Plus @@ (#1[[2]]*Ramp[-#1[[1]] + x] & ) /@ pa
plot = Plot[{f3[x], fR[x]}, {x, 0, 1}, AxesOrigin -> {0, 0}, Epilog -> Point /@ data, 
Export["ramp_approx_wl.png", plot]
```

$0.25 - 1.80813\,\mathrm{Ramp}[-0.98 + x] + 0.193474\,\mathrm{Ramp}[-0.96 + x] + 0.957892\,\mathrm{Ramp}[-0.94 + x] - 0.255107\,\mathrm{Ramp}[-0.92 + x] - 2.26844\,\mathrm{Ramp}[-0.9 + x] - 3.07545\,\mathrm{Ramp}[-0.88 + x] - 1.69871\,\mathrm{Ramp}[-0.86 + x] + 0.89031\,\mathrm{Ramp}[-0.84 + x] + 2.63809\,\mathrm{Ramp}[-0.82 + x] + 2.26791\,\mathrm{Ramp}[-0.8 + x] + 0.42411\,\mathrm{Ramp}[-0.78 + x] - 0.947413\,\mathrm{Ramp}[-0.76 + x] - 0.410689\,\mathrm{Ramp}[-0.74 + x] + 1.62448\,\mathrm{Ramp}[-0.72 + x] + 3.27184\,\mathrm{Ramp}[-0.7 + x] + 2.90419\,\mathrm{Ramp}[-0.68 + x] + 0.659571\,\mathrm{Ramp}[-0.66 + x] - 1.66787\,\mathrm{Ramp}[-0.64 + x] - 2.25328\,\mathrm{Ramp}[-0.62 + x] - 0.890745\,\mathrm{Ramp}[-0.6 + x] + 0.847086\,\mathrm{Ramp}[-0.58 + x] + 1.08346\,\mathrm{Ramp}[-0.56 + x] - 0.612083\,\mathrm{Ramp}[-0.54 + x] - 2.80889\,\mathrm{Ramp}[-0.52 + x] - 3.5191\,\mathrm{Ramp}[-0.5 + x] - 2.02241\,\mathrm{Ramp}[-0.48 + x] + 0.465656\,\mathrm{Ramp}[-0.46 + x] + 1.89696\,\mathrm{Ramp}[-0.44 + x] + 1.25242\,\mathrm{Ramp}[-0.42 + x] - 0.547582\,\mathrm{Ramp}[-0.4 + x] - 1.51866\,\mathrm{Ramp}[-0.38 + x] - 0.466299\,\mathrm{Ramp}[-0.36 + x] + 1.88896\,\mathrm{Ramp}[-0.34 + x] + 3.55194\,\mathrm{Ramp}[-0.32 + x] + 3.07193\,\mathrm{Ramp}[-0.3 + x] + 0.86954\,\mathrm{Ramp}[-0.28 + x] - 1.14821\,\mathrm{Ramp}[-0.26 + x] - 1.33065\,\mathrm{Ramp}[-0.24 + x] + 0.217192\,\mathrm{Ramp}[-0.22 + x] + 1.75551\,\mathrm{Ramp}[-0.2 + x] + 1.53757\,\mathrm{Ramp}[-0.18 + x] - 0.554627\,\mathrm{Ramp}[-0.16 + x] - 2.87345\,\mathrm{Ramp}[-0.14 + x] - 3.4958\,\mathrm{Ramp}[-0.12 + x] - 1.97254\,\mathrm{Ramp}[-0.1 + x] + 0.269548\,\mathrm{Ramp}[-0.08 + x] + 1.2419\,\mathrm{Ramp}[-0.06 + x] + 0.215941\,\mathrm{Ramp}[-0.04 + x] - 1.62185\,\mathrm{Ramp}[-0.02 + x] + 3.29156\,\mathrm{Ramp}[0.+ x]$

Out[12]=

Out[13]= `ramp_approx_wl.png`