Advances in Robotics and Control – 2020s
Assignment

Submission date: 14/04/2020, Total Marks: 40

1) Consider the curve given by $f(t)=(t,t^2,t^3)$
   (b) Write a code to plot the curve and draw a Frenet frame (T,N,B) at any given parmeter value. [10]
   (c) Plot the Osculating circle at the parameter. [5]
   (d) Find the Curvature and Torsion of the curve at that parameter value. [5]

2) (a) Write a code to draw a 2D Bezier curve (along with control polygon), where the points will be given randomly within some bounded workspace. [10]
   (b) Select a parameter value $u = c$ to subdivide the Bezier curve, and draw control polygons for individual components. [10]