ENME 606

NONLINEAR CONTROL DESIGN — Prof. M. Krstic

Homework 5

Due April 10, 1996

1. Khalil, Exercise 12.5.
   Hint: Start with $T_1(x) = x_1$ and apply the procedure (12.13), (12.14).

2. Khalil, Exercise 12.8.
   Hint: Apply Theorem 12.1. For inverse dynamics, use $\eta_1 = x_1$ and $\eta_2 = x_2 - x_3$.

3. Khalil, Exercise 12.31, Part (1).
   Hint: For involutivity, employ the result of Exercise 12.27.