College of Computer & Information Science Northeastern University CSG714: Theory of Computation Spring 2008 Handout 5 25 January 2008

Problem of the Week -3

Undecidability

For a given language L, define $L^{\mathcal{R}}$ as the language $\{w^R : w \in L\}$. (Recall that w^R is the reverse of w.) Prove that it is undecidable to determine whether $L = L^R$.