**REVERSIBLE DATA HIDING BASED ON HISTOGRAM MODIFICATION OF PIXEL DIFFERENCES**

Abstract— In this letter, we present a reversible data hiding scheme based on histogram modification. We exploit a binary tree structure to solve the problem of communicating pairs of peak points. Distribution of pixel differences is used to achieve large hiding capacity while keeping the distortion low. We also adopt a histogram shifting technique to prevent overflow and underflow. Performance comparisons with other existing schemes are provided to demonstrate the superiority of the proposed scheme.

Index Terms— Image authentication, lossless watermarking, reversible data hiding.