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Duals of Bernoulli Numbers and Polynomials and Euler Numbers and Polynomials

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Oral Presentation O5.2

**DUALS OF BERNOULLI NUMBERS AND POLYNOMIALS AND
EULER NUMBERS AND POLYNOMIALS**

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A pair of infinite inverse matrices can define a sequence inverse relationship. If the pair of matrices is the same, they define a dual relationship. Here presented is a unified approach to construct dual relationships via pseudo-involution of Riordan arrays. Then we give four dual relationships for Bernoulli numbers and Euler numbers, from which the corresponding dual sequences of Bernoulli polynomials and Euler polynomials are constructed. Some applications in the construction of identities of Bernoulli numbers and polynomials and Euler numbers and polynomials are discussed based on the dual relationships.