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Autore	Fischmann Matthias
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Nota di contenuto	Cover -- Title page -- Chapter 1. Introduction -- Chapter 2. Preliminaries -- 2.1. The -method -- 2.2. Notation and induced representations -- 2.3. A branching problem -- Chapter 3. Singular vectors -- 3.1. The \gol-equivariance -- 3.2. Families of singular vectors of the first type -- 3.3. Families of singular vectors of the second type -- 3.4. Singular vectors of the third type -- 3.5. Singular

vectors of the fourth type -- 3.6. Middle degree cases -- Chapter 4. Conformal symmetry breaking differential operators on differential forms -- 4.1. Families of the first type -- 4.2. Families of the second type -- 4.3. Hodge conjugation -- 4.4. Operators of the third type -- 4.5. Operators of the fourth type -- 4.6. Operators on middle degree forms -- 4.7. Proof of Theorem 3 -- 4.8. Examples -- Chapter 5. Geometric formulas for conformal symmetry breaking operators -- 5.1. Preparations -- 5.2. Even-order families of the first and second type -- 5.3. Odd-order families of the first and second type -- 5.4. Operators of the third and fourth type -- Chapter 6. Factorization identities for conformal symmetry breaking operators -- 6.1. Branson-Gover, gauge companion and -curvature operators -- 6.2. Main factorizations -- 6.3. Supplementary factorizations -- 6.4. Applications -- Appendix: Gegenbauer and Jacobi polynomials -- Bibliography -- Back Cover.

Sommario/riassunto

"We study conformal symmetry breaking differential operators which map differential forms on Rn to differential forms on a codimension one subspace Rn-1. These operators are equivariant with respect to the conformal Lie algebra of the subspace Rn-1. They correspond to homomorphisms of generalized Verma modules for so(n, 1) into generalized Verma modules for so(n+1, 1) both being induced from fundamental form representations of a parabolic subalgebra. We apply the F-method to derive explicit formulas for such homomorphisms. In particular, we find explicit formulas for the generators of the intertwining operators of the related branching problems restricting generalized Verma modules for so(n+1, 1) to so(n, 1). As consequences, we derive closed formulas for all conformal symmetry breaking differential operators in terms of the first-order operators d, , d and and certain hypergeometric polynomials. A dominant role in these studies is played by two infinite sequences of symmetry breaking differential operators which depend on a complex parameter . Their values at special values of appear as factors in two systems of factorization identities which involve the Branson-Gover operators of the Euclidean metrics on Rn and Rn-1 and the operators d, , d and as factors, respectively. Moreover, they naturally recover the gauge companion and Q-curvature operators of the Euclidean metric on the subspace Rn-1, respectively"--