

ON REFLECTIONLESS EQUI-TRANSMITTING MATRICES

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Abstract. Reflectionless equi-transmitting unitary matrices are studied in connection to matching conditions in quantum graphs. All possible such matrices of size 6 are described explicitly. It is shown that such matrices form 30 six-parameter families intersected along 12 five-parameter families closely connected to conference matrices.

Keywords: quantum graphs, vertex scattering matrix, equi-transmitting matrices.

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