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Transport of Light in disordered random media REGINE FRANK, Serin Physics Laboratory, E273 Department of Physics and Astronomy Rutgers University 136 Frelinghuysen Road Piscataway, NJ 08854-8019, USA, ANDREAS LUBATSCH, Georg-Simon-Ohm University of Applied Sciences, Nuremberg, Germany — The Anderson transition was originally proposed for electrons, however it has been soon searched for all kinds of waves in disordered media. This physics became extremely interesting with the application of high amplitude excitations, where the medium is supposed to respond with non-linear effects. In theory it is ever since a challenge to treat large random ensembles numerically, even if the medium is completely non-resonant or passive. We discuss in this talk transport of light with respect to a quantum field theoretical approach and we explain through comparison to other existing theories, what the advantages of state of the art theory in that field is, and why it is exciting.

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