

1137-53-90

Boris Botvinnik* (botvinn@uoregon.edu), Department of Math., University of Oregon, Eugene, OR 97402. *Topology of spaces of metrics of positive scalar/Ricci curvature.*

First, I will review the Hitchin's index-difference map from the space $\mathcal{R}^{psc}(W^d)$ of psc-metrics to the real K -theory. In particular, we discuss the result by myself, J. Ebert and O. Randal-Williams that the index-difference map induces nontrivial homomorphism in homotopy groups $\pi_k \mathcal{R}^{psc}(W^d) \rightarrow KO_{k+d+1}$ are not trivial.

Next, I plan to discuss related recent results on the space of positive Ricci curvature. In particular, that some rational homotopy groups of the space $\mathcal{R}^{pRc}(W^d)$ of metrics with positive Ricci curvature, where $W^d = (S^n \times S^n)^{k\#}$ for some n and k . This work is joint with J. Ebert and D. Wraith. (Received January 28, 2018)