

# Maps of Cobordism and Integrable Systems

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## Abstract

The solution of the generalized Hirzebruch problem on the divisibility relations between Chern numbers of Chern submanifolds given by the author in [1] demonstrates that the properties of transformations of the complex cobordism ring are subject to special conservation laws analogous to those arising in the theory of integrable systems. This prompts new applications of the theory of integrable systems in algebraic topology.

We shall present and explain various divisibility phenomena between Chern numbers of manifolds with additional stable structures from the point of view of integrable systems and discuss further horizons for applications of this theory in studying homotopy properties of Thom complexes.

## References

- [1] K. E. Feldman, *Chern numbers of Chern submanifolds*, math.AT/0102067; The Quarterly Journal of Mathematics, V. 53 (2002), no. 4, 421–429.