An AdS/CFT correspondence on complex manifolds with strictly pseudoconvex boundary

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The Anti-de Sitter/Conformal Field Theory correspondence between string and conformal field theories in physics has also attracted a great deal of recent interest from mathematicians. In this talk I’ll look at what could be considered one of its manifestations in complex / CR geometry. I’ll introduce CR-geometric analogues of renormalised volume, conformal anomaly, renormalised Chern-Gauss-Bonnet formula, Q-curvature etc., and compare and contrast them with their counterparts from conformal geometry. Crucial to the construction will be Fefferman’s Einstein-Kähler metric and the ambient pseudohermitian connection of Graham and Lee.

For more information about this seminar, visit the DG/PDE Seminar Web page (from the Math Department home page, www.math.washington.edu, follow the link Seminars, Colloquia, and Conferences).

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