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Erin Griesenauer* (erin-griesenauer@uiowa.edu), Department of Mathematics, University of Iowa, Iowa City, IA 52242-1419, and **Paul S. Muhly** and **Baruch Solel**. *Cross Section Algebras of Holomorphic Matrix Bundles*.

We discuss algebras of cross sections of holomorphic $M_n(\mathbb{C})$ - fibre bundles defined over Stein compact subsets of complex manifolds, and calculate their C^* -envelopes in the sense of Arveson. Using techniques from the theory of polynomial identity algebras and geometric invariant theory, we apply our analysis to calculate the C^* -envelopes of algebras built from generic matrices and trace algebras that arise in noncommutative function theory. (Received September 02, 2014)