

72 Prof. David A. Yuen



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Education

PhD Mathematics, Princeton University 1988

MS Mathematics, University of Chicago 1985

BA Mathematics, University of Chicago 1985

Research Interests

Siegel Modular Forms, Geometry of Numbers, Theta Functions, Computer Science

Major Publications

Computations of Spaces of Paramodular Forms of General, Journal of the Korean Mathematical Society, 53 (2016) pp. 645-689.

Paramodular Cusp Forms, Mathematics of Computation, 84 (2015) pp. 1401-1438. Borchers Products Everywhere", Journal of Number Theory, 148 (2015) pp. 164-195.

Congruences to Ikeda-Miyawaki Lifts and Triple L-Values of Elliptic Modular Forms", Journal of Number Theory, 134 (2014) pp 142-180.

Abhandlungen aus dem Mathematisches Seminar der Universitat Hamburg, 83 (2013) pp 111-128.

The Cusp Structure of the Paramodular Groups of Degree Two, Journal of the Korean Mathematical Society, 50 (2013) 445-464.

The Chiral Superstring Siegel Form in Degree Two is a Lift, Journal of the Korean Mathematical Society, 49 (2012) 293-314. (with Cris Poor)

Computing Siegel Modular Forms and Paramodularity, Proceedings of the RIMS conference, Automorphic forms, trace formulas and zeta functions, (2011), pages 90-95.

Binary Forms and the Hyperelliptic Superstring Ansatz, Mathematische Annalen, 352 (2011) 1-24. (with Cris Poor)

Modular Forms of Weight 8 for $\Gamma_0(1,2)$, Mathematische Annalen, 346 (2010) 477-498. (with Manabu Oura, Cris Poor, Riccardo Salvati-Manni)

Lifting Puzzles in Degree Four, Bulletin of the Australian Mathematical Society, 80 (2009) 65-82. (with Cris Poor and Nathan Ryan)

Towards the Siegel Ring in Genus Four, International Journal of Number Theory, 4 (2008) 563-586. (with Manabu Oura and Cris Poor)

Paramodular Cusp Forms, Proceedings of the Fourth Spring Conference on Modular Forms and Related Topics (2007) 198-215. (with Cris Poor).

Dimensions of Cusp Forms for $\Gamma_0(p)$ in Degree Two and Small Weights, Abhandlungen aus dem Mathematisches Seminar der Universitat Hamburg, 77 (2007) 59-80.

Computations of Spaces Siegel Modular Cusp Forms, *Journal of the Mathematics Society of Japan*, 59 (2007) 185-222 (with Cris Poor)..

The Berge-Martinet Constant and Slopes of Siegel Cusp Forms, *Bulletin of the London Mathematical Society*, 38 (2006) 913-924 (with Cris Poor)..

A generalization of the Valence Inequality for Siegel Modular Forms, *Proceedings of the Third Spring Conference on Modular Forms and Related Topics*, (2005) 73-78 (with Cris Poor)..

The Extreme Core, *Abhandlungen aus dem Mathematisches Seminar der Universitat Hamburg*, 75 (2005) 51-75.

Projectile Motion with Resistance and the Lambert W Function, *The College Mathematics Journal*, 35 (2004) 337-350 (with Ed Packel)..

Slopes of Integral Lattices, *Journal of Number Theory*, 100 (2003) 2363-380 (with Cris Poor).

Restrictions of Siegel modular forms to modular curves, *Bulletin of the Australian Mathematical Society*, 65 (2002) 239-252 (with Cris Poor).

The dyadic trace and odd weight computations for Siegel modular cusp forms , *Bulletin of the Australian Mathematical Society*, 63 (2001) 269-271 (with Cris Poor).

Linear dependence among Siegel modular forms, *Mathematische Annalen*, 318 (2000) 205-234 (with Cris Poor).

On the volume of a certain polytope , *Experimental Mathematics*, 9(2000) 91-99 (with C. Chan and D. Robbins).

Dimensions of spaces of Siegel cusp forms and theta series with pluri-harmonics, *The Far East Journal of Mathematics*, 1 (1999) 849-863 (with Cris Poor).

An elementary proof of the irreducibility of the rank g picard bundle, *Rocky Mountain Journal of Mathematics*, 26 (1996) 1581-1591.

Estimates for dimensions of spaces of Siegel modular cusp forms, *Abhandlungen aus dem Mathematisches Seminar der Universitat Hamburg*, 66 (1996) 337-354 (with Cris Poor).

Dimensions of Siegel modular forms of low weight in degree four, *Bulletin of the Australian Mathematical Society*, 54 (1996) 309-315 (with Cris Poor).

Relations on the period mapping giving extensions of mixed Hodge structures on compact Riemann surfaces, *Geometrica Dedicata*, 59 (1996) 243-291 (with Cris Poor).

Second order theta functions and vector bundles over Jacobi varieties, *Transactions of the American Mathematical Society*, 320 (1990) 457-492.