An Huang

Contact Information

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Education

2005–2011 PhD in Mathematics, University of California at Berkeley
Advisor: Professor Richard Borcherds
Thesis Topic: On quantum field theory and number theory
2001–2005 BS in Mathematics, Nankai University

Major Research Interests

Mathematical physics. More specifically, I work on relations between quantum field theory and number theory or algebra.

Research Preprints

[1] *A note on Nahm's conjecture in rank 2 case* arXiv:math-ph/1008.4981, to appear in Communications in Number Theory and Physics
[2] *On twisted Virasoro operators and number theory* arXiv:math-ph/0909.0795, submitted to Communications in Mathematical Physics, Aug. 2010
[3] *Noncommutative multiplicative norm identities for the quaternions and the octonions*, arXiv:math.RT/1102.2657
[4] *On S-duality and Gauss reciprocity law* arXiv:math-ph/0910.1633 (This paper is still in preparation.)
[5] *Simplifying local BRST cohomology calculation via spectral sequence* arXiv:hep-th/1008.4984

Other Preprints

On ODEs of Type $(y')^{n-1} = a_n y^n + a_{n-1} y^{n-1} + ... + a_0$,
http://math.berkeley.edu/~huangan/ODE.pdf

Selected Talks

- *GKO construction of the discrete series representations of the Virasoro algebra (I,II)*, conformal field theory seminar, Berkeley, Feb. 2008
- *Virasoro algebras and two dimensional CFT*, conformal field theory seminar, Berkeley, Mar. 2008
- *An invitation to Nahm's conjecture*, geometry and topology seminar, University of Southern California, Oct. 2010
- *An invitation to Nahm's conjecture*, representation theory, geometry and combinatorics joint seminar, Berkeley, Nov. 2010

Teaching Experience

- Grader for math 185 (single complex variable), Fall 2005
- TA for math 1A (calculus), Spring 2006
- TA for math 53 (multivariable calculus), Fall 2006, Fall 2010
- TA for math 16B (calculus and analytic geometry), Spring 2007, Spring 2008, Fall 2008, Fall 2009, Spring 2010
- TA for math 55 (discrete mathematics), Fall 2007
- TA for math 54 (linear algebra and differential equations), Spring 2009

Awards

- William V. Power Graduate Award, 2005
- Chinese Academy of Science Research Scholarship, 2004
- Jiang-Lifu First-class Scholarship, 2003

Personal Interests

- The game of Go: my level is about Chinese amateur 4 Dan, or US 7 Dan.
- Chinese literature
- Swimming, hiking, soccer, pingpong