

# Curriculum Vitae

August 25, 2016

## 1. Personal Particulars.

Name : Loke, Hung Yean  
Date of Birth: January 8, 1968  
Sex: Male  
Citizenship: Singapore

## 2. Current Address.

Department of Mathematics  
National University of Singapore  
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## 3. Education.

1997 Ph.D in Mathematics, Harvard University, USA.  
1992 - 1997 Graduate Student, Harvard University, USA.  
1992 B.Sc. (Hons) in Mathematics, National University of Singapore.

#### 4. Working Experiences.

1 January 2016 - present	Tenured Professor, Dept of Mathematics, NUS.
1 July 2003 - 31 December 2015	Tenured Associate Professor, Dept of Mathematics, NUS.
1 August 1998 - 30 June 2003	Assistant Professor Dept of Mathematics, NUS.
1 May 1997 - 31 July 1998	Lecturer, Dept of Mathematics, NUS.
19 May 1992 - 30 April 1997	Senior Tutor, Dept of Mathematics, NUS.

#### 5. Research Interests.

Representation theory of Lie groups and  $p$ -adic groups.

#### Research students supervised

1. Tang U-Liang, PhD, 2011.
2. Ai Xinghuan, Master, 2009.

#### Publications

1. Loke H Y and Ma J.-j., *Local Theta Correspondences of Supercuspidal Representations*. Preprint at arXiv:1512.01797.
2. Loke H Y, Ma J.-j. and G. Savin, *Local theta correspondences between epipelagic supercuspidal representations*. Math. Z. 283, no. 1 (2016) 169-196. arXiv:1501.07069.
3. Loke H Y, Ma J.-j. and Tang U-L., *Associated cycles of local theta lifts of unitary characters and unitary lowest weight modules*. Preprint. arXiv:1207.6451.
4. Loke H Y and Ma J.-j., *Invariants and  $K$ -spectrums of local theta lifts*. Compositio Mathematica, volume 151, issue 01, (2014) 179-206. arXiv:1302.1031.
5. Loke H Y and G. Savin, *Rational forms of exceptional dual pairs*. Journal of Algebra, 422 (2015), 683-696. arXiv:1212.1957.
6. Loke H Y, Ma J.-j. and Tang U.-L., *Transfers of  $K$ -types on local theta lifts of characters and unitary lowest weight modules*. Israel Journal of Mathematics, 201, no. 1 (2014), 1-24. arXiv:1207.6454.
7. Loke H Y and G. Savin, *On the maximal primitive ideal corresponding to the model nilpotent orbit*. International Mathematics Research Notices, 2012, no. 24 (2012): 5731-5743.

8. Loke H Y and G. Savin, *Representations of the two-fold central extensions of  $SL_2(\mathbb{Q}_2)$* . Pacific Journal of Mathematics, 247, no. 2 (2010), 435-454. arXiv:0902.1264.
9. Loke H Y and G. Savin, *Modular forms on nonlinear double covers of algebraic groups*. Transactions of the American Mathematical Society, 362 (2010), 4901-4920.
10. Loke H Y,  *$G_2(q)$  invariants of  $SO_8(q)$* . Journal of Algebra, 321 (2009), 1-17.
11. Loke H Y and G. Savin, *Dual pair correspondences for non-linear covers of orthogonal groups*. Journal of Functional Analysis, 225 (2008), 184-199.
12. Loke H Y and G. Savin, *The smallest representations of non-linear covers of odd orthogonal groups*. American Journal of Mathematics, 130 (2008), 963-979.
13. Loke H Y and G. Savin, *On minimal representations of Chevalley groups of type  $D_n$ ,  $E_n$  and  $G_2$* . Mathematische Annalen, 340 (2008), 195-208.
14. Loke H Y and G. Savin, *On local lifts from  $G_2(R)$  to  $Sp_6(R)$  and  $F_4(R)$* . Israel Journal of Mathematics, 159, no. 1 (2007), 349-371.
15. Loke H Y and G. Savin, *Rank and matrix coefficients for simply laced groups*. Journal fur die Reine und Angewandte Mathematik, 599 (2006), 201-216.
16. Loke H Y, *Howe quotients of unitary characters and unitary lowest weight modules*. Representation Theory, 10 (2006). (An appendix by Lee Soo Teck).
17. Loke H Y, *Exceptional Lie algebras with  $S_4$  structures over  $Z$* . International Mathematics Research Notices, 63 (2004), 3391-3408.
18. Lee S T and Loke H Y, *Degenerate principal series representations of  $Sp(p, q)$* . Israel Journal of Mathematics, 137 (2003), 355-379.
19. Loke H Y, *Quaternionic representations of exceptional Lie groups*. Pacific Journal of Mathematics, 211, no. 2 (2003), 341-367.
20. Lee S T and Loke H Y, *Degenerate principal series representations of  $U(p, q)$  and  $Spin_0(p, q)$* . Compositio Mathematica, 132, no. 3 (2002), 311-348.
21. Loke H Y, *Trilinear forms of  $gl_2$* . Pacific Journal of Mathematics, 197, no. 1 (2001), 119-144.
22. Loke H Y, *Restrictions of quaternionic representations*. Journal of Functional Analysis, 172, no. 2 (2000), 377-403.

23. Loke H Y, *Dual pairs correspondences of  $E_{8,4}$  and  $E_{7,4}$* . Israel Journal of Mathematics, 113 (1999), 125-162.
24. Loke H Y and Gan W T, *Modular forms of level  $p$  on the exceptional tube domain*. Journal of the Ramanujan Mathematical Society, 12, no. 2 (1997), 161-202.

### Invited presentations at scientific meetings/workshops

- IMS program: New Developments in Representation Theory, NUS, Singapore, in March 2016.
- 2014 Workshop on Automorphic forms and representations at the Chinese Academy of Sciences, Beijing, China in July 2014.
- 2014 Nankai Workshop on Representation Theory and Harmonic Analysis, Nankai University, Tianjin, China in June 2014.
- Tsinghua Sanya International Mathematics Forum, Sanya, China in December 2013.
- Asian Mathematical Conference 2013, Pushan, South Korea in June 2013.
- Colloquium, School of Mathematics, Tata Institute of Fundamental Research, Mumbai, India in December 2012.
- IMS program: Branching rules, NUS, Singapore, in March 2012.
- 12th Frontier Science Symposium, NUS, Singapore, in November 2011.
- University of Science and Technology of China/NUS Mathematical Workshop, Herbei, China in September 2011.
- Special Activity on Harmonic Analysis on Lie Groups program at the Max Planck Institute, Bonn, Germany in August 2011.
- Nankai International Workshop on Representation Theory at Nankai University in Tianjin, China in June 2011.
- ICM satellite conference on Automorphic forms and number theory in Goa, India, 14 to 17 August 2010.
- The Nilpotent Orbits and Representation Theory (NORTH) Conference at University of Hokkaido, Japan, from 19 to 23 February 2010.

- The First ELTE-NUS Science Forum at the Eotvos Lorand University in Hungary in May 2008.
- Workshop on ‘Generalizing theta correspondences’ held at the American Institute of Mathematics Palo Alto, California, USA from 28 July to 1 August 2008.
- IMS program: Representation theory of Lie groups program, NUS, Singapore, in December 2002.
- Workshop on Representation of Lie groups in honour of Professor Takeshi Hirai at Kyoto University on 22 February 2002.
- Kyoto Seminar on Harmonic Analysis at the Science Faculty, Kyoto University on 15 January 2002.
- The conference on Representation theory and automorphic forms, Zhu Jia Jian, Zhejiang, China from 1 July 2001 to 5 July 2001.
- Workshop on ‘Prehomogeneous vector spaces’ at RIMS, Kyoto, Japan from 4 Dec 2000 to 8 Dec 2000.

The content of this talk appeared in the workshop proceedings titled ‘On the associated cycles and the restrictions of quaternionic representations’.

### **Membership of organizing/scientific committee of conferences**

- New Developments in Representation Theory program at the Institute for Mathematical Sciences program, NUS, Singapore, in March 2016.
- Branching Laws Symposium at Institute for Mathematical Sciences, NUS, Singapore, March 2012.
- Second Singapore Mathematics Symposium organized by the Singapore Mathematical Society at NTU, Singapore in May 2011.
- First Singapore Mathematics Symposium organized by the Singapore Mathematical Society at NTU, Singapore in May 2010.