

CURRICULUM VITAE

Jeong-Yup Lee

B.Sc., M.Sc, and Ph.D.

Assistant Professor
Dept. of Math. Edu.
Kwandong University
Naegok-dong, Gangneung
Gangwon-do, 210 - 701, Korea

Email: jylee@kwandong.ac.kr, jeongyuplee@yahoo.co.kr
Tel: 82-33-649-7776(office)

EDUCATION

Ph. D. degree 2000/01 - 2004/09

University of Alberta, Edmonton, Canada

- Thesis: Substitutions, Model Sets and Pure Point Spectra
- Supervisor: Robert V. Moody
- Coursework: Complex Variables, Fourier Analysis, Abstract Harmonic Analysis, Monstrous Moonshine, Algebraic Groups, Dynamical Systems, Homological Algebra, and Measure Theory.

M. Sc. degree 1997/09 - 2000/01

University of Alberta, Edmonton, Canada

- Thesis: Lattice Substitution Systems and Model Sets
- Supervisor: Robert V. Moody
- Coursework: Abstract Algebra I and II, Differential Geometry I, Topology, Group Theory, Rings and Modules, Linear Analysis, Algebraic Number Theory, Measure Theory and Probability, Continuous Groups and Their Representations.

(education cont'd;)

B. Sc. degree

1992/03 - 1996/02

Pusan National University, Busan, Korea

- Coursework: Pure and Applied Mathematics, Science and Education courses, etc.

RESEARCH EXPERIENCE

KIAS Research Fellow

Korea Institute for Advanced Study, Seoul, Korea

2007/05 - 2011/02

Visiting Assistant Professor

SWGC, Memorial University of Newfoundland, Canada

2006/09 - 2007/04

NSERC Post doctoral Fellow

University of Victoria, Victoria, Canada

2005/09 - 2006/08

University of Washington, Seattle, USA

2004/09 - 2005/08

Graduate Research Assistant

University of Alberta, Edmonton, Canada

1997/09 - 2004/08

RESEARCH INTEREST

Aperiodic Order	Dynamical Systems	Harmonic Analysis	Discrete Geometry
Substitution Tilings	Tiling Dynamics	Probability	Topology
Spectral Theory	Ergodic Theory	Measure theory	

PUBLICATIONS

Refereed Papers;

1. Jeong-Yup Lee and Boris Solomyak (2011) Pisot family self-affine tilings, discrete spectrum, and the Meyer property. *Discrete and Continuous Dynamical Systems - A*. Accepted.
2. Shigeki Akiyama and Jeong-Yup Lee (2011) Algorithm for determining pure pointedness of self-affine tilings. *Advances in Mathematics*. 226. 2855 - 2883
3. Jeong-Yup Lee and Robert V. Moody (2008) Deforming Meyer sets. *European Journal of Combinatorics* 29. 1919 - 1924.
4. Jeong-Yup Lee and Boris Solomyak (2008) Pure Point Diffractive Substitution Delone Sets have the Meyer Property. *Discrete and Computational Geometry* 39. 319 - 338.
5. Jeong-Yup Lee (2007) Substitution Delone Sets with Pure Point Spectrum are Inter Model Sets. *Journal of Geometry and Physics* 57. 2263 - 2285.
6. Jeong-Yup Lee and Robert V. Moody (2006) A Characterization of Model Multi-colour Sets. *Annales Henri Poincare* 7. 125 - 143.
7. Jeong-Yup Lee, Robert V. Moody, and Boris Solomyak (2003) Consequences of Pure Point Diffraction Spectra for Multiset Substitution Systems. *Discrete and Computational Geometry* 29. 525 - 560.
8. Jeong-Yup Lee, Robert V. Moody, and Boris Solomyak (2002) Pure Point Dynamical and Diffraction Spectra. *Annales Henri Poincare* 3. 1003 - 1018.
9. Jeong-Yup Lee and Robert V. Moody (2001) Lattice Substitution Systems and Model Sets. *Discrete and Computational Geometry* 25. 173-201.

Refereed proceeding papers;

1. Shigeki Akiyama and Jeong-Yup Lee (2010) Determining quasicrystal structures on substitution tilings. *Philosophical Magazine*, Proceeding of the 11th International Conference on Quasicrystals, 13 - 18 June, 1-9.
2. Jeong-Yup Lee (2006) Quasicrystals and Model Sets on Substitution Point Sets. *Philosophical Magazine*, Proceedings of the 9th International Conference on Quasicrystals, Vol. 86, Nos. 6 -8 , 21 February - 11 March, 915 - 920.

FELLOWSHIPS, SCHOLARSHIPS AND AWARDS

- Excellent Teaching Award; Kwandong University; KRW 300,000 ; 2011/08
- Korea Institute for Advanced Study Research Award; KRW 1,000,000 ; 2009/09
- AIWQ5 (5th Asian International Workshop on Quasicrystals) Best Presentation Award for Young Researchers; 2009/06
- Korea Institute for Advanced Study Research Fellowship; KRW 32,490,000/yr + KRW 7,000,000/yr (research grant); 2007/05 - 2011/04
- Natural Sciences and Engineering Research Council Postdoctoral Fellowship; CDN \$ 40,000/yr; 2004/09 - 2006/08
- Izaak Walton Killam Memorial Scholarship; CDN \$ 22,000/yr + tuition + CDN \$ 2,000(research grant) + CDN \$700; Institutional; Academic and Research; University of Alberta; 2003/05 - 2005/04
- Andrew Stewart Memorial Graduate Prize; CDN \$ 5,000; Institutional; Research; University of Alberta; 2003/05
- Province of Alberta Graduate Fellowship; CDN \$ 10,500; Provincial; Academic and Research; University of Alberta; 2002/05 - 2003/04
- Eoin L Whitney Scholarship; CDN \$ 2,000; Institutional; Academic; University of Alberta; 2002/05
- Tuition Scholarship; Tuition; Institutional; Academic; University of Alberta; 1997/09 - 1999/04
- Tuition Scholarship; Tuition; Institutional ; Academic; Pusan National University; 1994/03 - 1996/02

CONFERENCE PRESENTATIONS

Talk presentation;

- “Algorithm for determining pure point spectrum on substitution tilings”, CMS meeting, June 3 - 5, Edmonton, Canada (2011).
- “When do substitution Delone sets have the Meyer property?”, Mathematics of Quasi-Periodic Order, RIMS, June 21 -23, Kyoto, Japan (2010).
- “Determining quasicrystal structure on substitution tilings”, the 11th International Conference on Quasicrystals, June 13 - 18, Sapporo, Japan (2010)
- “When do substitution Delone sets have the Meyer property?”, Kyoto satellite workshop, RIMS, June 21 - 23, Kyoto, Japan (2010)
- “Pisot family substitutions and Meyer sets”, Digital expansions, dynamics and tilings, April 4 - 11, Aussois, France (2010)
- “Pure point spectrum and coincidence on substitution tilings”. KMS-AMS meeting. December 16 - 20. Seoul, Korea (2009)
- “How to check pure point diffraction in substitution point sets”. Aperiodic Workshop. September 07 - 11. Leicester. England (2009)
- “Pure point diffraction on substitution point sets and a computational method”. Measurable and Topological Dynamical Systems in Asia. June 18 - 20. Suwon. Korea (2009)
- “Quasicrystal structures on substitution point sets and a computational method”. 5th Asian International Workshop on Quasicrystals. June 01 - 04. Tokyo. Japan (2009)
- “Computation of coincidence on substitution point sets”. Mini-Workshop: The Pisot Conjecture - From Substitution Dynamical Systems to Rauzy Fractals and Meyer Sets. March 01 - 07. Oberwolfach. Germany (2009)
- “When do substitution point sets have the Meyer property?”. Korea-Japan Workshop on Algebra and Combinatorics. February 9. Busan. Korea (2009)
- “The Meyer property on substitution point sets”. 2008 Global KMS International Conference. October 23 - 25. Jeju. Korea (2008)

(conference presentations cont'd;)

- “Model sets on substitution point sets”. Quasi-periodic structure derived from Cut-and-Projection Method and Related topics. October 01 - 03. Kyoto. Japan (2008)
- “An introduction to tiling/point set dynamical system”. Quasi-periodic structure derived from Cut-and-Projection Method and Related topics. October 01 - 03. Kyoto. Japan (2008)
- “Model sets in terms of two associated dynamical systems”. Workshop on dynamical systems and related topic. August 19 - 22. Daejeon. Korea (2008)
- “The Meyer property on substitution point sets”. Mini-workshop on ‘Aspects of Aperiodic Order’. July 03 - 05. Bielefeld. Germany (2008)
- “Expansive linear maps on substitutions for the Meyer property”. International conference for women in mathematics. June 17. Seoul. Korea (2008)
- “When are substitution point sets nicely ordered?”. Workshop on dynamical systems and related fields. February 18 - 19. Suwon. Korea (2008)
- “Substitution Delone Sets with Pure Point Spectrum are Model Sets”. Western Canada Linear Algebra Meeting. June 23 - 24. Victoria. Canada (2006)
- “Pure Point Diffractive sets and Model Sets in Substitutions”. Summer School in Aperiodic Order. August 08 - 13. Victoria. Canada (2005)
- “Model Sets on Multi-colour Point Sets”. Aperiodic Order: Dynamical Systems, Combinatorics and Operators. May 29 - June 03. Banff. Canada (2004)
- “Model Sets on Substitutions”. The Mathematics and Physics of Long-Range Aperiodic Order. August 04 - 19. Greifswald. Germany (2003)
- “Consequences of Pure Point Diffraction Spectra for Discrete Point Sets”. Aperiodic Order, Dynamical Systems, Operator Algebras and Topology. August 04-08. Victoria. Canada (2002)
- “Lattice Substitution Systems and Model Sets”. Algebra 2000 Summer School & Workshop. Edmonton. Canada (2000)

Poster presentation;

- “Pure Point Diffraction and Cut and Projection Sets”. 9th International Conference on Quasicrystals. May 22 - 26. Ames. USA (2005)
- “Lattice Substitution Systems, Model sets, and Diffractions”. The Aperiodic Order Workshop. Oberwolfach. Germany (2001)

CONFERENCES ATTENDED and INSTITUTES VISITED (Research Purposes)

- University of Erlangen. Erlangen. Germany (2011)
- University of Bielefeld. Bielefeld. Germany (2011)
- University of Washington. Seattle. USA (2010)
- LIAFA. France (2010)
- CIRM. France (2010)
- University of Tsukuba. Tsukuba. Japan (2009)
- University of Jena. Jena. Germany (2009)
- Pusan National University. Busan. Korea (2009)
- Chungbuk National University. Daejeon. Korea (2008)
- Niigata University. Niigata. Japan (2008)
- 10th International Conference on Quasicrystals. Zurich. Swiss (2008)
- Technische Universität Chemnitz. Chemnitz. Germany (2008)
- Korean Mathematical Society conference. Daejeon. Korea (2007)
- Mini Course on Ergodic Ramsey Theory. Suwon. Korea (2007)
- The 4th International Workshop for Korean Women in Mathematics. Pohang. Korea (2007)
- University of Washington. Seattle. USA (2006)
- Northwest Dynamics Symposium. Victoria. Canada (2005)
- Banff International Research Station Workshop on Aperiodic Order. Banff. Canada (2004)
- The Mathematics and Physics of Long-Range Aperiodic Order. Greifswald. Germany (2003)
- Banff International Research Station Workshop on Joint Dynamics. Banff. Canada (2003)
- Research in team. BIRS. Banff. Canada (2003)
- Attending Lecture Series by Klaus Schmitz. Victoria. Canada(2002)

(conferences attended and institutes visited cont'd;)

- Aspects of Symmetry. Banff. Canada (2001)
- University of Washington. Seattle. USA (2001)
- Aperiodic Order. Oberwolfach. Germany (2001)
- The Northwest Dynamics Symposium. Victoria. Canada (2000)
- AMS conference. Austin. USA (1999)

ACADEMIC SERVICES

- Co-organizing a workshop “Mathematics of Aperiodic Order”. Korea Institute for Advanced Study. September 27 - October 01. Seoul. Korea (2010)
- Co-organizing special session “Ergodic theory and dynamical systems” in KMS-AMS meeting. Ewha Womens University. December 16 - 20. Seoul. Korea (2009)
- Local organizer for “2009 International Conference for Women Mathematics”. KIAS. June 18 - 19. Seoul. Korea (2009)
- Member of editorial committee for “KIAS (Korea Institute for Advanced Study) Newsletter”. March 01, 2008 - February 28, 2010

Research Grant

- Fund from the National Research Foundation of Korea: 2010/05 -2013/04.