

Curriculum Vitae for Mark Siggers

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Current Position: Professor, Department of Mathematics,
Kyungpook National University, Daegu, South Korea.

Citizenship: Canadian/British

Academic Positions

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| Apr 2020 — present | Professor ,
Department of Mathematics, Kyungpook National University,
Daegu, South Korea. |
| Oct 2014 — Apr 2020 | Associate Professor ,
Kyungpook National University, |
| Apr 2009 — Sep 2014 | Assistant Professor ,
Kyungpook National University. |
| Aug 2007 — Apr 2009 | NSERC Postdoctoral fellow ,
School of Computing Science, Simon Fraser University
Advisor: Professor Pavol Hell. |
| May 2006 — May 2007 | Postdoctoral researcher ,
Department of Applied Mathematics, Charles University
Advisor: Professor Jaroslav Nešetřil. |
| Jan. 2006 — May 2006 | Postdoctoral lecturer and researcher ,
Department of Mathematics and Statistics, University of Victoria
Advisor: Professor Gary MacGillivray |
| Sept. 2005 — Dec. 2005 | Postdoctoral researcher ,
Department of Mathematics and Statistics, Thompson Rivers University
Advisor: Professor Rick Brewster |
| Sept. 2001 — May. 2005 | Teaching Fellowship , Department of Mathematics, Emory University |

Service and Duties

Jan 2019 — present	Editor-in-Chief for Kyungpook Mathematical Journal
Jan 2019 — Dec 2019	Director of BK21 for KNU Math Department
Jan 2018 — Jan 2019	Vice-chair, KNU Math Department
Sept 2017 — Dec 2018	Editor Kyungpook Mathematical Journal
Sept 2014 — Dec 2018	Editor for International Journal of Graph Theory and its application
March 2012 — present	Organiser of KPPY Combinatoric Workshop

Grants

- Korean Ministry of Education funded Basic Research Grant. (2022-2027)
- Korean Ministry of Education funded Basic Research Grant. (2016-2018) extended (- 2022)
- Korean Ministry of Education funded Basic Research Grant. (2012-2015)
- Kyungpook National University Research Grant. (2012)
- Kyungpook National University Research Grant. (2010)

Awards

- Yeungnam Mathematical Society Outstanding Researcher Award (2024).
- Kyungpook National University Mathematics Department Top Teacher Award (2011).

Recent Papers

- H.B. Kim, J.B. Lee, M. Siggers. *Mixing is hard for triangle free reflexive graphs* European Jour. of Comb. 116, 103860, (Feb 2024).
- H.B. Kim, M. Siggers. *Towards a dichotomy for the switch list homomorphism problem for signed graphs* Kyungpook Math. Jour. 63(3), (Sept 2023), 355-372.
- C.W. Heo, H.B. Kim, M. Siggers. *The complexity of the matroid-homomorphism problem* Electronic Jour. Comb. 30(2), (May 2023).
- J.B. Lee, J. Noel, M. Siggers. *Recolouring homomorphisms to triangle-free reflexive graphs* J Algebr Comb. (Feb 2023).
- M. Siggers. *A reflexive digraph that is retraction trivial but not endomorphism trivial* Discrete Math. 345(3), 112713, (March 2022).
- R. Brewster, J.B. Lee. M. Siggers. *Reconfiguration of homomorphisms to reflexive digraph cycles* Discrete Math. 344(8), 112441 (August 2021.)
- R. Brewster, J.B. Lee, B. Moore, J. Noel, M. Siggers *Graph Homomorphism Reconfiguration and Frozen H-Colourings* J. Graph Theory 94(3), 398-420. (July 2020.)
- J.B. Lee, J. Noel, M. Siggers *Reconfiguring Graph Homomorphisms on the Sphere* European J. Combin. 86 (103086) (May 2020).
- M. Siggers *On the representation of finite distributive lattices* Kyungpook Mathematical Journal 60(1), 1-20. (March 2020.)

- S.J. Lee, N. Tokushige, M. Siggers, *AK-type stability theorems on cross t -intersecting families* European J. Combin. 82(102993), (Dec. 2019).
- M. Siggers, *Reflexive graphs with Near-Unanimity but no Semilattice Polymorphisms* Elect. J. Math. 25(4), #P4.2 (Oct. 2018)
- R. Brewster, M. Siggers, *The complexity of signed H -colouring* Discrete Math. 341(10), 2768-2773, (Oct. 2018).
- R. Brewster, J.B. Lee, M. Siggers, *Recoloring reflexive digraphs* Discrete Math. 341(6), 1708-1721. (Jun. 2018)
- B. Larose, M. Siggers, *NU polymorphisms of reflexive digraphs* SIAM J. Discrete Math. 32(1), 728–749 (Mar. 29 2018).
- M. Siggers, *Distributive lattice polymorphisms on reflexive graphs* Bull. Korean Math. Soc. 2018 Vol. 55, No. 1, 81-105 (2018)

Recent Conference Talks

Oct 2024	2024 KMS Fall Meeting <i>Complexity Framework for Forbidden Subgraphs</i>
Jun 2023	10th Slovenian Conference on Graph Theory <i>Relative Brightwell Winkler and shortest path reconfiguration</i>
Apr 2023	2023 KMS Spring Meeting <i>C5-critical series parallel graphs</i>
Feb 2023	17th KIAS Combinatorics Workshop <i>Everywhere dismantlable graphs and shortest path reconfiguration</i>
Jan 2023	Winter Workshop on Combinatorics in Gonjiam <i>Combinatorial Reconfiguration</i>
Sept 2022	2022 Combinatorics Workshop at GIST <i>Homomorphism Extension Reconfiguration</i>
Oct 2021	2021 KMS Fall Meeting Online <i>The homomorphism reconfiguration problem for triangle free graphs</i>
May 2021	OSACA Seminar <i>Towards a Dichotomy for the Switch List Homomorphism Problem for Signed Graphs</i>
May 2021	IBS DIMAG Discrete Math Seminar <i>The list switch homomorphism problem for signed graphs</i>
Mar 2019	17th USTC-AHU Joint Seminar on Algebraic Combinatorics, (Hefei, China) <i>The reconfiguration problem for graphs</i>
Jun 2018	International Conf. of the Honam-Youngnam Mathematical Societies <i>Cross t-intersecting Families of Sets</i>
Jun 2018	KIAS Combinatorics Workshop <i>Recoloring and other problems of connectivity in the Hom-graph</i>
Apr 2018	2018 KMS Spring Meeting <i>A dichotomy for signed graph homomorphism</i>
Apr 2018	KAIST Combinatorics Seminar, (Taejeon, Korea) <i>The reconfiguration problem for graph homomorphisms</i>