

# Curriculum Vitae - Ágnes Tóth

## PERSONAL AND CONTACT INFORMATION

name                   Ágnes Tóth  
born                   10th August, 1983, Debrecen, Hungary  
nationality           hungarian  
mailing address      Nádudvari 25., 4200 Hajdúszoboszló, Hungary  
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## POSITIONS

**September 2012 – present      *junior researcher***  
**Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences**

## EDUCATION

Fall 2002 – Spring 2008      *MSc in Mathematics*  
Budapest University of Technology and Economics (BUTE), Faculty of Natural Sciences  
Diploma with honours  
Title of Master thesis: Asymptotic values of graph parameters  
Supervisor: Dr. Gábor Simonyi

Fall 2008 – Fall 2013        *PhD in Mathematics*  
BUTE, Graduate School of Mathematics and Computer Science,  
Department of Computer Science and Information Theory  
Summa cum laude  
Title of Ph.D. thesis: Colouring problems related to graph products and coverings  
Supervisor: Dr. Gábor Simonyi

Fall 2009 – present         *BSc student in Computer Engineering*  
BUTE, Faculty of Electrical Engineering and Informatics  
Topic of the Diploma: Solving graph theory problems with logic programming  
Supervisor: Dr. Péter Szeredi  
Expected graduation: Fall 2013

## PRIZES, SCHOLARSHIPS

Conference of Student Participating in Research, BUTE, 1th prize (2006)  
**National Conference of Student Participating in Research, 1th prize (2007)**  
Excellent University Student of Faculty of Natural Science, BUTE (2007, 2008)  
**Rényi Kató Prize of the János Bolyai Mathematical Society (2008)**  
BUTE Research Grant, 3rd prize (2011)  
**Scholarship of the Hungarian Republic (Fall 2006 – Spring 2008)**  
**Google Europe Anita Borg Memorial Scholarship, Finalist (2007)**  
Scholarship of the Pro Progressio Foundation for PhD students (Fall 2011 – Summer 2012)

## STUDYING ABROAD, RESEARCH VISITS

ATHENS course, Ecole Supérieure de Physique et de Chimie Industrielles de Paris,  
course with title “Computer Algebra with Maple” (Fall 2006, 1 week)  
Visited Shinya Fujita (Gunma Nat. Coll. of Tech.) in Japan,  
and gave a seminar talk at the Tokyo University of Science (Spring 2011, 3 weeks)

## PUBLICATIONS

- [1] Á. Tóth, *On the ultimate lexicographic Hall-ratio*, Discrete Mathematics, 309 (2009), 3992–3997.
- [2] Á. Tóth, *The ultimate categorical independence ratio of complete multipartite graphs*, SIAM J. Discrete Math., 23 (2009), 1900–1904.
- [3] G. Brightwell, G. Cohen, E. Fachini, M. Fairthorne, J. Körner, G. Simonyi, Á. Tóth, *Permutation capacities of families of oriented infinite paths*, SIAM J. Discrete Math., 24 (2010), 441–456.
- [4] A. Gyárfás, G. Simonyi, Á. Tóth, *Gallai colorings and domination in multipartite digraphs*, J. Graph Theory, 71 (2012), 278–292.
- [5] S. Fujita, M. Furuya, A. Gyárfás, Á. Tóth, *Monochromatic tree partitions in edge-colored graphs and hypergraphs*, The Electron. J. Combin. 19, P27 (2012).
- [6] L. Lesniak, S. Fujita, Á. Tóth, *New results on long monochromatic cycles in edge-colored complete graphs*, to appear in Journal of Combinatorial Mathematics and Combinatorial Computing.
- [7] Á. Tóth, *Answer to a question of Alon and Lubetzky about the ultimate categorical independence ratio*, submitted to Journal of Combinatorial Theory, Series B.
- [8] G. Chen, S. Fujita, A. Gyárfás, J. Lehel, Á. Tóth, *Around a biclique cover conjecture*, manuscript.

## SELECTED CONFERENCE TALKS

- Wolfram Technology Conference, Champaign, October 2007,**  
Title of the talk: Fast edge coloring of graphs with Mathematica
- 6th Japanese-Hungarian Symposium on Discrete Mathematics and Its Applications,  
Budapest, May 2009,  
Title of the talk: Asymptotic values of graph parameters
- 8th French Combinatorial Conference, Paris, July 2010,**  
Title of the talk: Gallai colorings and domination in multipartite digraphs
- 7th Slovenian International Conference on Graph Theory, Bled, June 2011,  
Title of the talk: On the ultimate direct Hall-ratio
- 4th biennial Canadian Discrete and Algorithmic Mathematics Conf., St. Johns's, June 2013,**  
Title of the talk: The asymptotic value of the independence ratio for direct graph power

## TEACHING EXPERIENCE

- Fall 2004 – Spring 2013** Teaching assistant,  
BUTE, Departement of Computer Science and Information Theory  
various courses for engineer students:  
Introduction to Computer Science, Theory of Algorithms, Data Mining,  
Linear Algebra, Probability Theory  
Combinatorics and Graph Theory for mathematician students
- Fall 2008, Fall 2009 Teaching assistant, BUTE, Mathematical Institute  
Informatics for mathematician students

## LANGUAGES SKILLS

- |         |  |
|---------|--|
| English | Intermediate state level language exam |
| German  | Intermediate state level language exam |
| French  | basic level                            |

## PROGRAMMING EXPERIENCE

- C, Mathematica, Prolog**, Java, Maple, Matlab, Sage

Budapest, 15th of September, 2013