Publications

Refereed journals with impact factor

1. J. Florian, T. Veselá, L. Dvořáková: *Normalization of Ternary Generalized Pseudostandard Words*, submitted to Theoret. Comput. Sci. (2018)

2. L. Dvořáková, T. Velká: *Fixed Points of Morphisms among Binary Generalized Pseudostandard Words*, Integers - Electronic Journal of Combinatorial Number Theory **18** (2018), A21

3. L. Dvořáková, J. Florian: *A New Estimate on Complexity of Binary Generalized Pseudostandard Words*, Integers - Electronic Journal of Combinatorial Number Theory **17** (2017), A61

4. L. Dvořáková, J. Florian: *On Periodicity of Generalized Pseudostandard Words*, Electronic Journal of Combinatorics **23(1)** (2016), # P1.2

5. L. Balková, M. Bucci, A. De Luca, J. Hladký, S. Puzynina: *Aperiodic Pseudorandom Number Generators Based on Infinite Words*, Theoret. Comput. Sci. **647** (2016), 85–100

   (a) CITED IN: R. Bets, J. Buls: *On the Existence of 1-Bounded Bi-ideals with the WELL-DOC Property*, SYNASC 2015, IEEE Computer Society, ISBN 978-1-5090-0461-4, 320–324

6. L. Balková, M. Bucci, A. De Luca, S. Puzynina: *Infinite Words with Well Distributed Occurrences*, In: J. Karhumäki, A. Lepistö, L. Zamboni (Eds.), Combinatorics on Words, LNCS **8079** (2013), 46–57, Springer

7. L. Balková, E. Pelantová, Š. Starosta: *Proof of the Brlek-Reutenauer Conjecture*, Theoret. Comput. Sci. **475** (2013), 120–125

   (a) CITED IN: E. Pelantová, Š. Starosta: *Palindromic Richness for Languages Invariant under More Symmetries*, Theoret. Comput. Sci. **518** (2014), 42–63

8. L. Balková: *Factor Frequencies in Generalized Thue-Morse Words*, Kybernetika **48(3)** (2012), 371–385

   (a) CITED IN: J. Peltomäki, V. Salo: *On Winning Shifts of Marked Uniform Substitutions*, arXiv:1705.08747 (2017)

   (b) CITED IN: E. Pelantová, Š. Starosta: *Palindromic Richness for Languages Invariant under More Symmetries*, Theoret. Comput. Sci. **518** (2014), 42–63

   (c) CITED IN: Š. Starosta: *Generalized Thue-Morse Words and Palindromic Richness*, Kybernetika **48** (2012), 361–370

9. L. Balková: *Factor Frequencies in Languages Invariant under Symmetries Preserving Factor Frequencies*, Integers - Electronic Journal of Combinatorial Number Theory **12** (2012), A36

10. L. Balková, E. Pelantová, Š. Starosta: *Corrigendum: "On the Brlek-Reutenauer Conjecture"*, Theoret. Comput. Sci. (2012), doi: 10.1016/j.tcs.2012.09.003

11. L. Balková, E. Pelantová, Š. Starosta: *On the Brlek-Reutenauer Conjecture*, Theoret. Comput. Sci. **412** (2011), 5649–5655

   (a) CITED IN: B. Bašić: *A Note on the Paper "On Brlek-Reutenauer Conjecture"*, Theoret. Comput. Sci. **448** (2012), 94–96

12. L. Balková, K. Břinda, O. Turek: *Abelian Complexity of Infinite Words Associated with Quadratic Parry Numbers*, Theoret. Comput. Sci. **412** (2011), 6252–6260

   (a) CITED IN: J. Chen, Z. Wen: *On the Abelian Complexity of Generalized Thue-Morse Sequences*, arXiv:1809.06554 (2018)

   (b) CITED IN: J. Chen, Z. Wen, W. Wu: *On the Additive Complexity of a Thue-Morse Like Sequence*, arXiv:1802.03610 (2018)

   (c) CITED IN: I. Kaboré, B. Kientéga: *Abelian Complexity of Thue-Morse Word over a Ternary Alphabet*, WORDS 2017: Combinatorics on Words, 132–143

   (d) CITED IN: J. Chen, X. Lu, W. Wu: *On the k-abelian Complexity of the Cantor Sequence*, Journal of Combinatorial Theory, Series A **155** (2018), 287–303

   (e) CITED IN: X. Lu, J. Chen, Z. Wen, W. Wu: *On the Abelian Complexity of the Rudin–Shapiro Sequence*, Journal of Mathematical Analysis and Applications **451(2)** (2017), 822–838

   (f) CITED IN: B. Madill, N. Rampersad:*The Abelian Complexity of the Paperfolding Word*, Discrete Math. **313 (7)** (2013), 831–838

13. L. Balková, E. Pelantová, Š. Starosta: *Infinite Words with Finite Defect*, Adv. in Appl. Math. (2011), doi: 10.1016/j.aam.2010.11.006, the original publication is available at http://www.sciencedirect.com/science/journal/01968858

   (a) CITED IN: E. Pelantová, Š. Starosta: *Palindromic Richness for Languages Invariant under More Symmetries*, Theoret. Comput. Sci. **518** (2014), 42–63

14. L. Balková, K. Klouda, E. Pelantová: *Critical Exponent of Infinite Words Coding Beta-integers Associated with Non-simple Parry Numbers*, Integers - Electronic Journal of Combinatorial Number Theory, Proceedings of the Leiden Numeration Conference 2010 **11b** (2011) A1

15. L. Balková, E. Pelantová, Š. Starosta: *Sturmian Jungle (or Garden?) on Multiliteral Alphabets*, RAIRO - Theor. Inf. Appl. **44** (2010), 443–470

   (a) CITED IN: K. Klouda, K. Medková, E. Pelantová, Š. Starosta: *Fixed Points of Sturmian Morphisms and their Derivated Words*, Theoret. Comput. Sci. **743** (2018), 23–37

   (b) CITED IN: J. Rukavička: *On the Number of Rich Words*, DLT 2017: Developments in Language Theory, 345–352

   (c) CITED IN: S. Labbé, E. Pelantová, Š. Starosta: *On the Zero Defect Conjecture*, European J. Combin. **62** (2017), 132–146

   (d) CITED IN: Z. Masáková, T. Vávra: *Integers in Number Systems with Positive and Negative Quadratic Pisot Base*, RAIRO - Theor. Inf. Appl. **48(3)** (2014), 341–367

   (e) CITED IN: O. Turek: *Balances and Abelian Complexity of a Certain Class of Infinite Ternary Words*, Theoret. Comput. Sci. **44** (2010), 313-337

16. L. Balková, E. Pelantová, Š. Starosta: *Palindromes in Infinite Ternary Words*, RAIRO - Theor. Inf. Appl. **43** (2009), 687–702

17. L. Balková, K. Klouda, E. Pelantová: *Repetitions in Beta-integers*, Lett. Math. Phys. **87** (2009), 181–195

18. S. T. Ali, L. Balková, E. M. F. Curado, J.-P. Gazeau, M. A. Rego-Monteiro, Ligia M. C. S. Rodrigues, K. Sekimoto: *Noncommutative Reading of the Complex Plane through Delone Sequences*, J. Math. Phys. **50** (2009), 043517

19. L. Balková, J.-P. Gazeau, E. Pelantová: *Asymptotic Behavior of Beta-integers*, Lett. Math. Phys. **84** (2008), 179–198

    (a) CITED IN: W. Steiner: *On the Structure of (-β)-integers*, RAIRO - Theor. Inf. Appl. **46** (2012), 181–200

    (b) CITED IN: Z. Masáková, T. Vávra: *Arithmetics in Numeration Systems with Negative Quadratic Base*, Kybernetika **47** (2011), 74–92

20. L. Balková, E. Pelantová: *A Note on Symmetries in the Rauzy Graph and Factor Frequencies*, Theoret. Comput. Sci. **410** (2009), 2779–2783

21. L. Balková, E. Pelantová, W. Steiner: *Sequences with Constant Number of Return Words*, Monatshefte für Mathematik vol. **155** No. 3-4 (2008), 251–263

    (a) CITED IN: K. Klouda, K. Medková, E. Pelantová, Š. Starosta: *Fixed Points of Sturmian Morphisms and their Derivated Words*, Theoret. Comput. Sci. **743** (2018), 23–37

    (b) CITED IN: D. Perrin: *Groups, Languages and Dendric Shifts*, In: Hoshi, Mizuho, Seki, Shinnosuke (Eds.), DLT 2018, Developments in Language Theory, 60–73

    (c) CITED IN: F. Dolce, D. Perrin: *Interval Exchanges, Admissibility and Branching Rauzy Induction*, RAIRO - Theor. Inf. Appl. **51(3)** (2017), 141–166

    (d) CITED IN: F. Dolce, D. Perrin: *Neutral and Tree Sets of Arbitrary Characteristic*, Theoret. Comput. Sci. **658** (2017), 159–174

    (e) CITED IN: Y. Huang, Z. Wen: *Kernel Words and Gap Sequence of the Tribonacci Sequence*, Acta Math. Sci. **36(1)** (2016), 173–194

    (f) CITED IN: Y. Huang, Z. Wen: *The Sequence of Return Words of the Fibonacci Sequence*, Ark. Mat. **54** (2016), 243–275

    (g) CITED IN: J. Almeida, A. Costa: *A Geometric Interpretation of the Schützenberger Group of a Minimal Subshift*, Ark. Mat. **54** (2016), 243–275

    (h) CITED IN: F. Dolce, D. Perrin: *Enumeration Formulae in Neutral Sets*, In: I. Potapov (Eds.) DLT 2015, Lecture Notes in Computer Science **9168**, Springer, Cham

    (i) CITED IN: F. Durand, J. Leroy, G. Richomme: *Do the Properties of an S-adic Representation Determine Factor Complexity?* (2013), Journal of Integer Sequences **16** (2013), Article 13.2.6

    (j) CITED IN: J. Peltomäki: *Privileged Factors in the Thue–Morse Word – A Comparison of Privileged Words and Palindromes*, Discrete Applied Mathematics **193** (2015), 187–199

    (k) CITED IN: S. Puzynina, L. Q. Zamboni: *Abelian Returns in Sturmian Words* J. Combin. Theory Ser. A **120(2)** (2013), 390–408

    (l) CITED IN: D. Guillaume: *Ancestors Graph and an Upper Bound for the Subword Complexity Function*, Theoret. Comput. Sci. **468** (2013), 69–82

    (m) CITED IN: J. Almeida, A. Costa: *Presentations of Schützenberger Groups of Minimal Subshifts*, Israel J. Math. **196** (2013), 1–31

    (n) CITED IN: F. Durand, J. Leroy, G. Richomme:*Towards a statement of the S-adic conjecture through examples*, arXiv:1208.6376 (2012)

22. L. Balková, E. Pelantová, O. Turek: *Combinatorial and Arithmetical Properties of Infinite Words Associated with Quadratic Non-simple Parry Numbers*, RAIRO - Theor. Inf. Appl. vol. **41(3)** (2007), 307–328

    (a) CITED IN: M. Tinková: *Arithmetics in Number Systems with Cubic Base*, arXiv:1807.03050 (2018)

    (b) CITED IN: Z. Masáková, T. Vávra: *Integers in Number Systems with Positive and Negative Quadratic Pisot Base*, RAIRO - Theor. Inf. Appl. **48(3)** (2014), 341–367

23. L. Balková, Z. Masáková: *Palindromic Complexity of Infinite Words Associated with Non-simple Parry Numbers*, RAIRO - Theor. Inf. Appl. **43** (2009), 145–163

    (a) CITED IN: K. Klouda, E. Pelantová: *Factor Complexity of Infinite Words Associated with Non-simple Parry Numbers*, Integers - Electronic Journal of Combinatorial Number Theory **9** (2009), 281–310

24. L. Balková, Z. Masáková, E.Pelantová: *The Meyer Property of Quasicrystals*, J. Phys. A: Math. Gen. **37** (2004), 8853–8864

Refereed journals

1. L. Dvořáková, M. Dohnalová: *Mince zajímají nejen numismatiky*, Pokroky matematiky, fyziky a astronomie, ročník **62** číslo **2** (2017), 110–120

2. L. Dvořáková, J. Veselý: *Anketa L'Enseignement Mathématique a Matyáš Lerch*, Pokroky matematiky, fyziky a astronomie, ročník **61** číslo **4** (2016), 285–294

3. L. Balková, J. Hladký: *Generátory pseudonáhodných čísel založené na nekonečných slovech*, submitted to Pokroky matematiky, fyziky a astronomie (2014)

4. L. Balková, J. Legerský: *Hašovací funkce a kombinatorika na slovech*, Pokroky matematiky, fyziky a astronomie, ročník **58** (2013), 274–284

5. L. Balková, A. Hrušková: *Continued Fractions of Quadratic Numbers*, Acta Polytechnica **53(4)** (2013), 322–328

6. L. Balková, Č. Škarda: *Násobíme chytře?*, Pokroky matematiky, fyziky a astronomie, ročník **57** číslo **3** (2012), 205–216

7. L. Balková: *Nahlédnutí pod pokličku kombinatoriky na nekonečných slovech*, Pokroky matematiky, fyziky a astronomie, ročník **56** číslo 1 (2011), 9–18

8. L. Balková: *Beta-celá čísla a kvazikrystaly*, ČS časopis pro fyziku **6** (2010), 334–336

9. L. Balková: *Return Words and Recurrence Function of a Class of Infinite Words*, Acta Polytechnica **47** (2007), 15–19

10. L. Balková: *Complexity for Infinite Words Associated with Quadratic Non-simple Parry Numbers*, Journal of Geometry and Symmetry in Physics **7** (2006), 1–11

Non-refereed journals

1. L. Dvořáková, D. Ryzák: *Antipalindromy*, submitted to Rozhledy matematicko-fyzikální (2018)

2. L. Dvořáková, G. Ponimatkin: *Kuželosečky v neeukleidovských prostorech*, Rozhledy matematicko-fyzikální **1** (2018), 1–14

3. L. Balková, A. Šťastná: *Jsou české mince optimální?*, Rozhledy matematicko-fyzikální **1–2** (2015), 14–22

4. L. Balková, Č. Škarda: *Pomoc od bezmoci z odmocnin*, Učitel matematiky, ročník **32**, číslo **1(93)** (2014), 35–44

5. L. Balková, A. Hrušková, V. Matúš, J. Schusser, E. Šubert, M. Töpfer: *Ramseyova teorie aneb příklady, které jsou pro počítač příliš složité*, Rozhledy matematicko-fyzikální, ročník **87** číslo **4** (2012), 8–15

6. L. Balková: *Paul Erdös: Život v citátech*, Učitel matematiky, ročník 19, číslo **4(80)** (2011), 227–237

7. L. Balková, M. Bekrová, J. Lukeš: *Jeden za osmnáct a druhý bez dvou za dvacet aneb záporné cifry v zápisu čísel*, Rozhledy matematicko-fyzikální **4** (2010), 3–11

8. L. Balková: *Factor Frequencies of Reversal Closed Languages*, Doktorandské dny, sborník workshopu doktorandů FJFI (2007), 1–8

9. L. Balková: *All About Infinite Words Associated with Quadratic Non-simple Parry Numbers*, Doktorandské dny, sborník workshopu doktorandů (2006), 1–10

10. L. Balková: *Palindromy v nekonečných slovech modelujících kvazikrystaly*, Sborník 14. studentské konference, Komise JČMF pro matematiku na VŠTEZ, Praha, (2006), 7–12

11. L. Balková: *The Meyer Property of Cut-and-project Sets*, Sborník 12. studentské konference, Komise JČMF pro matematiku na VŠTEZ, Praha, (2004), 13–21

12. L. Balková, Z. Masáková: *The Covering Problem Related to Quasicrystals*, Proceedings of the XI-th International Conference Symmetry Methods in Physics, Prague, June 21-24, 2004, Eds. Č. Burdík, O. Navrátil, S. Pošta, (2005) 11p.

Thesis

1. L. Balková: *Beta-integers and Quasicrystals*, doctoral thesis, CTU and University Paris 7, Prague 2008, 162p.

2. L. Balková: *Minimal Covering of the Difference Set*, master thesis, CTU, Prague 2005, 65p.

3. L. Balková: *Problém minimálního pokrytí pro konvexní množiny*, bachelor thesis, CTU, Prague 2004, 52p.

Textbooks

1. L. Balková: *Lineární algebra 2*, Nakladatelství ČVUT 2013, 124p. (in collaboration with students J. Krásenský and J. Klinkovský), ISBN 978-80-01-05441-3

2. L. Balková: *Lineární algebra 1*, Nakladatelství ČVUT 2014, 123p. (in collaboration with students J. Krásenský and J. Klinkovský), ISBN 978-80-01-05346-1