

Curriculum Vitae et Studiorum

SIMONE RINALDI

Date and place of birth. May, 18, 1971. Siena.

Address. Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche, Via Roma 56, University of Siena (SI).

Current position. Full Professor in Computer Science (from 17/11/2017).

Academic degrees.

- Laurea cum laude in Mathematics, University of Siena, December 1997.
- Ph.D. in Computer Science, University of Florence, April 2002.

Research interests.

- All the aspects of Combinatorics and their relations with other parts of mathematics, physics, computer science and biology; in particular: enumerative and bijective combinatorics; general methodologies for the enumeration of combinatorial structures; random and exhaustive generation of combinatorial objects; polyominoes enumeration; combinatorics of permutations, with particular interest on pattern avoiding permutations. Lattice path combinatorics.
- Theory of Formal Languages; in particular, two-dimensional languages, local languages, tiling-system recognizable languages; recognizability of polyominoes by tiling systems. Combinatorial properties of the Burrows-Wheller transform.
- Discrete Tomography: unicity, consistency and reconstruction of discrete sets from some discrete projections along one or more directions; algorithms for the reconstruction of discrete sets in presence of absorbed projections.

Participation to recent (2011-) research projects.

- Progetto PRIN “Automi e Linguaggi Formali: Aspetti Matematici e Applicativi” (2011-2013) (Responsabile nazionale Prof. A. Restivo) all'interno dell'unità di Firenze (Responsabile locale Prof. E. Barucci).
- Progetto finanziato dal Gruppo Nazionale per il Calcolo Scientifico (GNCS) ‘Proprietà algebriche e combinatorie dei cammini discreti’ (2012), responsabile Prof. Luca Ferrari (Univ. Firenze).
- Progetto GNCS ‘Problemi di decomponibilità per strutture discrete’ (2013), responsabile Prof. Andrea Frosini (Univ. Firenze).
- Progetto GNCS ‘Studio di pattern in strutture discrete’ (2014), responsabile Prof. Luca Ferrari (Univ. Firenze).

- Progetto GNCS 2015: “Problemi di consistenza, unicità e ricostruzione per grafi e ipergrafi” - Coordinator Dott. Andrea Frosini.
- Progetto ex 60%: "Generazione ed enumerazione di matrici e parole", (2016) Dipartimento di Matematica e Informatica Ulisse Dini dell'Università di Firenze - Coordinatrice Prof.ssa Elisa Pergola.
- Progetto GNCS 2016: “Permutazioni, cammini, parole: combinatoria e algoritmi” - Coordinatore Prof. Luca Ferrari.
- Progetto “Strumenti algoritmici e tomografici per lo studio dei sistemi neurali complessi e delle patologie neurali (NeTom)”, finanziato dalla Cassa di Risparmio di Firenze (2018), cui partecipano le Unità Operative di:
 - Università di Siena, responsabile Prof. Simone Rinaldi;
 - Università di Firenze (Dipartimento di Matematica e Informatica 'Ulisse Dini'), responsabile Prof. Andrea Frosini;
 - Politecnico di Milano (Dipartimento di Matematica), responsabile Prof. Paolo Dulio.
- Progetto “EACO”: BUSINESS INTELLIGENCE per Attività di R&D inerente l’ANALISI dei Tickets (INCIDENT MANAGEMENT) attraverso le tecnologie del MACHINE LEARNING e il calcolo di un KPI che misuri l’efficacia dei controlli.
In collaboration with MPS Bank, from 1-9-2021 to 31-3-2022.

Organization of Meetings

- “*Discrete Tomography Workshop: Algorithms and Applications*”, October 11-13, 2000 Siena.
- “*GASCOM 2001, Random Generation and Bijective Combinatorics*”, November 18-20, 2001, Siena.
- “*HUPO Proteomics Standards Initiative Spring Workshop*”, April 17-20 2005, Siena.
- “*GASCOM 2008, Random Generation and Bijective Combinatorics*”, June 16-19, 2008, Bibbiena.
- “*Lattice Path Combinatorics and Applications*”, Siena, July 4-7, 2010.
- “*GASCOM 2014, Random Generation and Bijective Combinatorics*”, (Scientific Committee) Bertinoro (Cesena), 23-25 giugno 2014.
- “*DGCI 2014, Discrete Geometry for Computer Imagery*”, (Conference co-chair) Siena, 10-12 settembre 2014.
- “*8th International Conference on Lattice Path Combinatorics & Applications*”, (Scientific Committee) 17-20 agosto 2015, California State Polytechnic University, Pomona (USA).
- “*International Symposium on Logic-based Program Synthesis and Transformation*” (LOPSTR 2015) (Organizing Committee) 13-15 luglio 2015, Siena.

- “GASCOM 2016, Random Generation and Bijective Combinatorics”, (Scientific Committee) Bastia (Corsica), 1-3 giugno 2016.
- “DGMM 2024, IAPR Third International Conference on Discrete Geometry and Mathematical Morphology” (co-Chair), April 15-18 2024, Florence.

Other research related scientific activities

- Simone has been advisor of 8 Phd students at the PhD school of “Engineering and Informatic Science” of the University of Siena:
 - Francesca De Carli (co-advised by Laurent Vuillon, University of Savoie in Chambéry);
 - Filippo Disanto (co-advised by Enrica Duchi, University of Paris 7);
 - Daniela Battaglino (co-advised by Jean Marc Fedou, University of Nice),
 - Samanta Socci (co-advised by Enrica Duchi, University of Paris 7),
 - Veronica Guerrini (co-advised by Mathilde Bouvel, University of Zurich).
 - Ilaria Mancini.
 - Giulia Palma (co-advised by Andrea Frosini, University of Florence)
- Member of the Editorial Board of Pure Mathematics and Applications, PuMA, “Algebra and Theoretical Computer Science”.
- Referee for several international journals, including: Discrete Mathematics, Discrete and Applied Mathematics, Theoretical Computer Science, Electronic Journal of Combinatorics, Journal of Combinatorial Theory, Journal of Integer Sequences, Advances in Applied Mathematics, International Journal of Foundations of Computer Science and International Conferences, including: Words, DLT, STACS, SODA, FPSAC, Permutation Patterns, AofA.

International Referee Activity

Nel **2004**: Simone Rinaldi è stato referee per il rapporto di ricerca (per il conseguimento del *Degree in Master of Science*, University of the Witwatersrand di Johannesburg) del Dr K. Muthambi dal titolo:

“*The ECO method and its application to enumeration of plane trees*”,

con advisor Arnold Knopfmacher e Helmut Prodinger.

Nel **2005** Simone Rinaldi ha fatto parte della commissione giudicatrice della tesi di Dottorato di Matematica Applicata:

“*Ordered Generation of Classes of Combinatorial Structures*”,

di Xavier Molinero Albareda, Universitat Politècnica de Catalunya, Barcellona, con advisor Prof. Conrado Martínez Parra.

Nel **2009** Simone Rinaldi ha fatto parte della commissione giudicatrice della tesi di dottorato:

“Quelques problèmes combinatoires et algorithmiques sur les classes de permutations”,

di Mathilde Bouvel, per il Doctorat d’Informatique de l’Université Paris Diderot – Paris 7.

Nel **2011** Simone Rinaldi ha fatto parte della commissione giudicatrice della tesi di dottorato:

“Size constrained clustering”,

di Jianyi Lin, per il Dottorato di “Matematica e Statistica per le Scienze Computazionali” dell’Università di Milano.

Nel **2017** Simone Rinaldi ha fatto parte della commissione giudicatrice della tesi di dottorato:

“Balance properties on Christoffel words and applications”,

di Lama Tarsissi, per il Dottorato: DOCTEUR DE LA COMMUNAUTE UNIVERSITE’GRENOBLE ALPES, Spécialité: Mathématiques.

Teaching (academic year 2023/24):

- Discrete Mathematics (for the degree in Applied Mathematics);
- Databases (for the degree in Mathematics);
- Institutions of Mathematics and biostatistics (for the degree in Biology).

PUBLICATIONS

BOOK CHAPTERS

1. *E. Barcucci, A. Frosini, A. Kuba, A. Nagy, S. Rinaldi, M. Samal, S. Zopf*, “Emission Discrete Tomography”, in *Advances in Discrete Tomography and Its Applications*, Birkhauser, G.T. Herman, A. Kuba Eds. 271-302 (2006).
2. *F. Disanto, L. Ferrari, R. Pinzani, S. Rinaldi*, “Catalan lattices on series parallel interval orders”, in *Associahedra, Tamari lattices, and Related Structures (Tamari Memorial Festschrift)*, *Progress in Mathematics*, Vol. 299 Müller-Hoissen, Folkert; Pallo, Jean Marcel; Stasheff, Jim (Eds.) 2012, 323-338, Springer Basel.

INTERNATIONAL JOURNALS

3. *E. Barcucci, A. Del Lungo, A. Frosini, S. Rinaldi*, “A technology for reverse-engineering a combinatorial problem from a rational generating function”, *Advances in Applied Mathematics (Impact Factor 0.833)* 26 (2001) 129-153.
4. *E. Barcucci, E. Pergola, R. Pinzani, S. Rinaldi*, “A bijection for some paths on the slit plane”, *Advances in Applied Mathematics (Impact Factor 0.833)*, 26 (2001) 89-96.

5. *E. Barcucci, S. Rinaldi*, “Some linear recurrences and their combinatorial interpretation by means of regular languages”, *Theoretical Computer Science (Impact Factor 0.643)*, 255 (2001) 679-686.
6. *E. Pergola, R. Pinzani, S. Rinaldi, R. A. Sulanke*, “A bijective approach to the area of generalized Motzkin paths”, *Advances in Applied Mathematics (Impact Factor 0.833)*, 28 (2002), 580-591.
7. *E. Pergola, R. Pinzani, S. Rinaldi*, “Approximating algebraic functions by means of rational ones”, *Theoretical Computer Science (Impact Factor 0.643)*, 270 (2002) 643-657.
8. *A. Frosini, S. Rinaldi*, “The complexity of the reconstruction of (r,h,v) from two projections and an approximation algorithm”, *Pure Mathematics and Applications*, 11 (2000) 485-496.
9. *A. Del Lungo, M. Mirolli, R. Pinzani, S. Rinaldi*, “A bijection for directed convex polyominoes”, *Discrete Mathematics and Theoretical Computer Science (Impact Factor 0.465)*, special issue: “Discrete Models: Combinatorics, Computation, Geometry”, (2001) 133-144.
10. *E. Barcucci, E. Pergola, R. Pinzani, S. Rinaldi*, “ECO-systems for Dyck and Schröder paths”, *Pure Mathematics and Applications*, 11 (2000) 401-407.
11. *F. Migliorini, S. Rinaldi*, “A classification of two-generated finite groups”, *Pure Mathematics and Applications*, 4 (2000) 603-614.
12. *E. Barcucci, E. Pergola, R. Pinzani, S. Rinaldi*, “ECO method and hill-free paths”, *Séminaire Lotharingien de Combinatoire*, 46, (2001).
13. *L. Ferrari, E. Pergola, R. Pinzani, S. Rinaldi*, “An algebraic characterization of the set of succession rules”, *Theoretical Computer Science (Impact Factor 0.643)*, 281 (2002) 351-367.
14. *E. Pergola, R. Pinzani, S. Rinaldi, R. A. Sulanke*, “Lattice paths moments by cut and paste”, *Advances in Applied Mathematics (Impact Factor 0.833)*, 30 (2003) 208-218.

15. *L. Ferrari, E. Pergola, R. Pinzani, S. Rinaldi*, “Jumping succession rules and their generating functions”, *Discrete Mathematics (Impact Factor 0.6)* 271 (2003) 29-50.
16. *A. Del Lungo, M. Nivat, R. Pinzani, S. Rinaldi*, “A bijection for the total area of parallelogram polyominoes”, *Discrete and Applied Mathematics (Impact Factor 0.722)*, 144 (2004) 291-302.
17. *A. Del Lungo, E. Duchi, A. Frosini, S. Rinaldi*, “Enumeration of convex polyominoes using the ECO method”, *Discrete Mathematics and Theoretical Computer Science (Impact Factor 0.465)*, Vol. AB (2003) pp. 103-116.
18. *L. Ferrari, E. Pergola, S. Rinaldi*, “Some bijective results about the area under Schröder paths”, *Theoretical Computer Science (Impact Factor 0.643)*, 307 (2003) 327-335.
19. *E. Duchi, J.M. Fedou, S. Rinaldi*, “From Object grammars to ECO method”, *Theoretical Computer Science (Impact Factor 0.643)*, 314 1-2 (2004) 57-95.
20. *E. Duchi, A. Frosini, S. Rinaldi, R. Pinzani* “A note on rational succession rules”, *Journal of Integer Sequences*, 6 Article 03.1.7 (2003).
21. *A. Frosini, M. Mirolli, S. Rinaldi*, “On the enumeration of pseudo-parallelogram polyominoes”, *Pure Mathematics and Application* 14, special issue on the 65th birthday of Franco Migliorini 21-33 (2003).
22. *E. Duchi, S. Rinaldi*, “An object grammar for column-convex polyominoes”, *Annals of Combinatorics (Impact Factor 0.407)*, 8 (2004) 27-36.
23. *E. Deutsch, L. Ferrari, S. Rinaldi*, “Production matrices” *Advances in Applied Mathematics (Impact Factor 0.833)* 34 (2005) 101-122.
24. *A. Del Lungo, E. Duchi, A. Frosini, S. Rinaldi*, “On the generation and enumeration of various classes of convex polyominoes” *Electronic Journal of Combinatorics (Impact Factor 0.638)*, 11 (2004) #60.
25. *S. Brlek, E. Duchi, E. Pergola, S. Rinaldi*, “On the equivalence problem for succession rules”, *Discrete Mathematics (Impact Factor 0.6)* 298 (2005) 142-154.

26. A. Frosini, E. Barcucci, S. Rinaldi, "An algorithm for the reconstruction of discrete sets from two projections in presence of absorption", *Discrete and Applied Mathematics* (Impact Factor **0.722**), Vol.151, Issue 1-3 (2005) 21-35.
27. S. Rinaldi, D.G. Rogers "How the odd terms in the Fibonacci sequence stack up", *Math. Gazette* (Impact Factor **0.56**) (2006) 90, 431-442.
28. E. Barcucci, A. Frosini, S. Rinaldi, "On directed-convex polyominoes in a rectangle", *Discrete Mathematics* (Impact Factor **0.6**), 298 (2005) 62-78.
29. G. Castiglione, A. Frosini, A. Restivo, S. Rinaldi, "Enumeration of L -convex polyominoes", *Theoretical Computer Science* (Impact Factor **0.643**) 347, 336-352(2005).
30. E. Pergola, S. Rinaldi, "In Memoriam: Alberto Del Lungo (1965-2003)", Editorial of *Theoretical Computer Science* (Impact Factor **0.643**) 346, Issues 2-3, 183-492 (28 November 2005), "In memoriam: Alberto Del Lungo (1965-2003)", Edited by E. Pergola and S. Rinaldi.
31. L. Ferrari, S. Rinaldi, "Enumeration of generalized hook partitions", *INTEGERS: The Electronic Journal of Combinatorial Number Theory*, 5 (1) (2005) #A29.
32. F. De Carli, A. Frosini, S. Rinaldi, A. Sorbi, "Some applications of tiling recognizable languages", *Pure Mathematics and Applications* 16, 1-2 (2005) 69-80.
33. A. Frosini, S. Brlek, S. Rinaldi, L. Vuillon, "Tilings by translation: enumeration by a rational language approach", *Electronic Journal of Combinatorics* (Impact Factor **0.638**), 13 (1) (2006) R15.
34. A. Frosini, S. Rinaldi "On the sequence A079500 and its combinatorial interpretations", *Journal of Integer Sequences*, Vol. 9 (2006) Article 06.3.1.
35. G. Castiglione, A. Frosini, E. Munarini, A. Restivo, S. Rinaldi "Combinatorial aspects of L -convex polyominoes", *European Journal of Combinatorics* (Impact Factor **0.65**), Vol. 286, (2007) 1724-1741.
36. E. Duchi, S. Rinaldi, G. Schaeffer, "The number of Z -convex polyominoes", *Advances in Applied Mathematics* (Impact Factor **0.833**) 40 (2008) 54-72.

37. F. De Carli, A. Frosini, S. Rinaldi, L. Vuillon, “On the tiling recognizability of various classes of convex polyominoes”, *Annals of Combinatorics* (Impact Factor **0.407**), 13 (2009) 169-191.
38. S. Rinaldi, D. Rogers, “Indecomposability: polyominoes and domino tilings” *Math. Gazette* (Impact Factor **0.56**), Vol. 92, Num. 524, (2008) 193-204.
39. E. Deutsch, L. Ferrari, S. Rinaldi, “Production matrices and Riordan arrays”, *Annals of Combinatorics* (Impact Factor **0.407**), 13 (2009) 63-83.
40. A. Frosini, S. Rinaldi “An object grammar for L-convex polyominoes”, *Pure Mathematics and Applications*, 17 (2006) 1-2 pp. 1-11.
41. F. Disanto, A. Frosini, R. Pinzani, S. Rinaldi, “A closed formula for the number of convex permutominoes”, *Electronic Journal of Combinatorics* (Impact Factor **0.638**) 14 (2007) #R57.
42. A. Bernini, F. Disanto, R. Pinzani, S. Rinaldi, Permutations defining convex permutominoes, *The Journal of Integer Sequences*, Vol. 10 (2007), Article 07.9.7.
43. F. Disanto, R. Pinzani, S. Rinaldi, The combinatorics of convex permutominoes, *The Southeast Asian Bulletin of Mathematics* (Impact Factor **0.36**), (2008) 32 883—912.
44. A. Frosini, M. Nivat, S. Rinaldi “Scanning integer matrices by means of two rectangular windows”, *Theoretical Computer Science* (Impact Factor **0.643**), Vol. 406 1-2 (2008) 90-96.
45. G. Castiglione, A. Frosini, A. Restivo, S. Rinaldi, “A tomographical characterization of L-convex polyominoes”, *Pure Mathematics and Applications*, Vol. 18 (2007), No. 3–4, pp. 1–18.
46. I. Fanti, A. Frosini, E. Grazzini, R. Pinzani, S. Rinaldi “Characterization and enumeration of some classes of convex permutominoes”, *Pure Mathematics and Applications* Vol. 18 No. 3-4 265-290 (2007).

47. E. Grazzini, E. Munarini, M. Poneti, S. Rinaldi “ m -compositions and m -partitions: exhaustive generation and Gray code”, *Pure Mathematics and Applications* Volume 17 (2006), Issue No. 1-2.
48. L. Ferrari, E. Pergola, R. Pinzani, S. Rinaldi “Some applications arising from the interactions between the theory of Catalan-like numbers and the ECO method”, *Ars Combinatoria* 99 (2011) 109-128.
49. E. Deustch, E. Munarini, S. Rinaldi, “Skew Dyck paths”, *Journal of Statistical Planning and Inference* (Impact Factor **0.727**), 140 (2010) 2191–2203.
50. E. Munarini, M. Poneti, S. Rinaldi, “Matrix compositions” *Journal of Integer Sequences*, Vol. 12 (2009), Article 09.4.8
51. F. De Carli, A. Frosini, S. Rinaldi, A. Sorbi, “A lattice structure of local languages” *Theoretical Computer Science* (Impact Factor **0.643**) 410 (2009) 2701_2713.
52. F. Disanto, L. Ferrari, R. Pinzani, S. Rinaldi, “Catalan numbers and relations”, *Electronic Notes in Discrete Mathematics*, Volume 34, 1 August 2009, Pages 429-433, European Conference on Combinatorics, Graph Theory and Applications (EuroComb 2009).
53. E. Deustch, E. Munarini, S. Rinaldi, “Skew Dyck paths, area, super diagonal bargraphs”, *Journal of statistical planning and inference* (Impact Factor **0.727**), Vol. 140, 6, June 2010, 1550-1562.
54. F. Disanto, A. Frosini, M. Poneti, S. Rinaldi, “A poset structure on row convex permutominides”, PUMA special issue for Gascom 08, 16-20 giugno 2008 Bibbiena, M. Poneti Ed., pp. 119-130.
55. E. Barcucci, S. Brocchi, A. Frosini, S. Rinaldi “Reconstruction of convex permutominoes” sottomesso a *PuMA*, *Special Issue* dedicato al Convegno Tomografia Discreta Milano Volume 20 (2009), Issue No. 1-2, 113-125.
56. F. Disanto, L. Ferrari, R. Pinzani, S. Rinaldi, “Catalan relations: a relational-theoretic approach to Catalan numbers”, *Advances in Applied Mathematics* (Impact Factor **0.833**) 45, Issue 4, October 2010, 505-517.

57. S. Brocchi, A. Frosini, S. Rinaldi, “A reconstruction algorithm for a subclass of instances of the 2-color problem”, *Theoretical Computer Science* (Impact Factor **0.643**) 412 (36) 4795-4804 (2011).
58. F. Disanto, A. Frosini, S. Rinaldi, “Square involutions”, *Journal of Integer Sequences*, Vol. 14 (2011), Article 11.3.5.
59. N. Beaton, F. Disanto, T. Guttmann, S. Rinaldi, “On the enumeration of column-convex permutominoes”, *Discrete Mathematics and Theoretical Computer Science* (Impact Factor **0.465**), Proceedings of 23th Formal Power Series and Algebraic Combinatorics AO, 2011, 111–122.
60. F. Disanto, S. Rinaldi, “Symmetric permutominoes and involutions”, *Pure Math. Applications*.
61. F. Disanto, E. Duchi, R. Pinzani, S. Rinaldi, “Polyominoes determined by permutations: enumeration via bijections”, *Annals of Combinatorics* (Impact Factor **0.407**) 16 Issue 1 (2012) pp 57-75.
62. J.M. Fedou, A. Frosini, S. Rinaldi, “Enumeration of 4-stack polyominoes”, *Theoretical Computer Science* (Impact Factor **0.643**) [Volume 502](#), 2 :88–97 (2013).
63. S. Brocchi, A. Frosini, R. Pinzani, S. Rinaldi, “A tiling system for L-convex polyominoes”, *Theoretical Computer Science* (Impact Factor **0.643**) [475](#): 73-81 (2013).
64. F. Disanto, E. Pergola, R. Pinzani, S. Rinaldi, “Generation and Enumeration of various classes of interval orders”, *Order*, Volume 30, [Issue 2](#), pp 663-676 (2013).
65. S. Bilotta, F. Disanto, R. Pinzani, S. Rinaldi, “From Catalan structures to Catalan pairs”, *Theoretical Computer Science* (Impact Factor **0.643**) [Volume 502](#), 2 (2013)239-248.
66. A. Frosini, A. Blondin Massè, S. Rinaldi, L. Vuillon, “The shape of permutominoes tiling the plane”, *Discrete and Applied Mathematics* (Impact Factor **0.722**), [161\(15\)](#): 2316-2327 (2013)
67. D. Battaglino, A. Frosini, S. Rinaldi, “Planar configurations induced by exact polyominoes”, *Computer Vision and Image Understanding* (Impact Factor **2.134**), [117\(4\)](#): 319-325 (2013)

68. A. Frosini, S. Rinaldi, L. Vuillon, “How to construct convex polyominoes on DNA Wang tiles?”, *Advances and Applications in Discrete Mathematics*, 11, 1 (2013).
69. S. Rinaldi, S. Socci, “On polygons drawn from a permutation”, *Fundamenta Informaticae* (Impact Factor **0.658**), 125 (2013) 1–14
70. D. Battaglino, J. M. Fedou, S. Rinaldi, S. Socci, “The number of k-parallelgram polyominoes” *Proceedings di FPSAC 2013, Paris 24-29 Giugno 2013, su Discrete Mathematics and Theoretical Computer Science* (Impact Factor **0.465**) *AS*, 2013, 1143–1154.
71. S. Rinaldi, S. Socci, “About half permutations” *Electronic Journal of Combinatorics* (Impact Factor **0.638**), [Volume 21, Issue 1 \(2014\)](#) **Paper #P1.35**.
72. E. Duchi, S. Rinaldi, S. Socci “3-dimensional polygons determined by permutations”, *Journal of Combinatorics*, Vol. 9, No. 1 (2018), pp. 57-94.
73. D. Battaglino, A. Frosini, S. Rinaldi, S. Socci, “The identity transform of a permutation” *Fundamenta Informaticae* (Impact Factor **0.658**), vol. 141, no. 2-3, pp. 191-205, 2015.
74. A. Boussicault, S. Rinaldi, S. Socci, “Enumeration of k-directed polyominoes” *Discrete Mathematics and Theoretical Computer Science* (Impact Factor **0.465**) *DMTCS proc. FPSAC’15*, 2015, 511–522 *Formal Power Series and Algebraic Combinatorics 6-10 luglio 2015*, Daejon South Korea.
75. A. Frosini, V. Guerrini, S. Rinaldi, “Geometric constraints induced by submatrix avoidance” *Theoretical Computer Science* (Impact Factor **0.643**) Volume 624 Issue C, April 2016 Pages 109-120 (2016).
76. M. Bouvel, V. Guerrini, S. Rinaldi, “Slicings of parallelogram polyominoes”, *Discrete Mathematics and Theoretical Computer Science* (Impact Factor **0.465**) *DMTCS proc. FPSAC’16*, 2016, 287-298 *Formal Power Series and Algebraic Combinatorics 4-8 luglio 2016*, Vancouver, Canada.

77. *E. Duchi, V. Guerrini, S. Rinaldi, G. Schaeffer*, “Fighting fish”, *Journal of Phys A (Impact Factor 1.933)* 2016, IOP Publishing Ltd *Journal of Physics A: Mathematical and Theoretical*, [Volume 50, Number 2.](#)
78. *F. Disanto, L. Ferrari, S. Rinaldi*, “The lattice of interval orders”, *Utilitas Mathematica (Impact Factor 0.37)*, 102, 135-147, (2017).
79. *S. Bilotta, E. Pergola, R. Pinzani, S. Rinaldi*, “Recurrence relations, succession rules and the positivity problem” *Journal of Computer and System Sciences (Impact Factor 1.583)*, (on line available <https://www.sciencedirect.com/journal/journal-of-computer-and-system-sciences/articles-in-press?page-size=20&page=2>), 2016.
80. *R. Cori, E. Duchi, V. Guerrini, S. Rinaldi*, “Families of parking functions counted by Schroder and Baxter numbers”, special issue of *Lattice Path Combinatorics 2015*, Pomona, California, Springer Book Series "Developments of Mathematics".
81. *M. Bouvel, V. Guerrini, A. Rechnitzer, S. Rinaldi*, “Semi-Baxter and strong-Baxter permutations”, *Séminaire Lotharingien de Combinatoire - FPSAC 2017*, 78B.19.
82. *E. Duchi, V. Guerrini, S. Rinaldi, G. Schaeffer*, “Fighting fish: enumerative properties”, *Séminaire Lotharingien de Combinatoire - FPSAC 2017*, 78B.43.
83. *D. Battaglino, M. Bouvel, A. Frosini, S. Rinaldi* “Permutation and polyomino classes with excluded submatrices” *Mathematical Structures in Computer Science (Impact Factor 0.73)*, Volume 27, Issue 2 (Special Issue: XIV ICTCS) February 2017, pp. 157-183.
84. *E. Barcucci, P. Dulio, A. Frosini, S. Rinaldi*, “Ambiguity results in the characterization of hv-convex polyominoes from projections” *Lecture Notes in Computer Science, Proceedings of 20th International Conference on Discrete Geometry for Computer Imagery*, 19-21 settembre 2017 Vienna (Austria).
85. *A. Frosini, P. Dulio, S. Rinaldi, L. Tarsissi, L. Vuillon*, “First steps in the algorithmic reconstruction of digital convex discrete sets”, *Lecture Notes in Computer Science, Proceedings of 11th International Conference on Words*, 11-15 settembre 2017, Montreal (Canada).

86. E. Duchi, V. Guerrini, S. Rinaldi “A generating tree for permutations avoiding the pattern 122^+3 ”, *Fundamenta Informaticae* (Impact Factor **0.658**) 163 (2018) 1–19.
87. M. Bouvel, V. Guerrini, A. Rechnitzer, S. Rinaldi, “Semi-Baxter and strong-Baxter: two relatives of the Baxter sequence”, *SIAM Journal of Discrete Mathematics* (Impact Factor **0.755**), 32 (4) 2795-2819.
88. N. R. Beaton, M. Bouvel, V. Guerrini, S. Rinaldi, “Slicings of parallelogram polyominoes, or how Baxter and Schroder can be reconciled”, *Electronic Journal of Combinatorics* (Impact Factor **0.638**), 26(3) (2019), #P3.13
89. N.R. Beaton, M. Bouvel, V. Guerrini, S. Rinaldi, “Enumerating five families of pattern-avoiding inversion sequences; and introducing the powered Catalan numbers”, to appear on *Theoretical Computer Science* 777, 69-92 (2019).
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