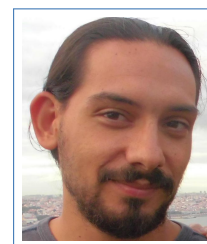


Francesco Dolce

Curriculum
Vitae
Studiorumque

Office 10c - Trojanova 13, Nové Město, Praha 2 (Czechia)
Katedra Matematiky, Fakulta Jaderná a Fyzikálně Inženýrská
České Vysoké Učení Technické v Praze
✉ francesco.dolce@fjfi.cvut.cz



Current position

- from 2019 **Postdoctoral researcher**, *FJFI, Czech Technical University in Prague*, (Czechia).
Researcher at ČVUT in Prague.
Research interests include theoretical computer science and discrete mathematics, namely :
formal languages, combinatorics on words, codes, automata, groups and semigroups, symbolic
dynamical systems.
- 2019 **Teacher**, *FIT and FJFI, Czech Technical University in Prague*, (Czechia).
Teaching at the Fakulta Informačních Technologí (Faculty of Information Technology) and the
Fakulta Jaderná a Fyzikálně Inženýrská (Faculty of Nuclear Sciences and Physical Engineering).

Education, training and former positions

- 2018 - 2019 **ATER**, *IRIF, Université Paris Diderot*, Paris (France).
Teacher and researcher at IRIF, Université Paris Diderot.
- 2016 - 2018 **Postdoctoral researcher**, *LaCIM, Université du Québec à Montréal*, Montreal
(Quebec, Canada).
Postdoctoral research at the LaCIM, UQÀM. Co-organizer of the **International Conference
“Words 2017”**
Co-organizer of the weekly seminar “Séminaire de combinatoire et d’informatique théorique du
LaCIM”.
- Fall 2017 **Teacher**, *McGill University*, Montreal (Quebec, Canada).
Teacher at Université du Québec à Montréal.
- Winter 2017 **Teacher**, *Université du Québec à Montréal*, Montreal (Quebec, Canada).
Teacher at Université du Québec à Montréal.
- 2013 - 2016 **PhD in Computer Science**, *Université Paris-Est*, Paris (France).
“Thèse de doctorat en informatique” with supervisor Prof. Dominique Perrin. Thesis “*Codes
bifixes, combinatoire des mots et systèmes dynamiques symboliques*” (Bifix codes, Combinatorics
on Words and Symbolic Dynamical Systems).
- 2013 - 2016 **Teacher Assistant**, *Université Paris-Est*, Paris (France).
Teacher Assistant (“*Moniteur d’initiation à l’enseignement supérieur*”) at Université Paris-Est
Marne-la-Vallée.
- 2013 **Winner of “RDMath IdF” PhD scholarship**, *Région Île-de-France*, (France).
Winner of the prestigious PhD scholarship for mathematicians in the great Paris region.
- 2012 - 2013 **Master degree in Mathematics and Computer Science**, *Université Paris-Est
Marne-la-Vallée*, Paris (France).
“International Master in Mathematics and Computer Science - the Bezout Excellence Track”
with internship supervisor Prof. Dominique Perrin. Master thesis “*Codes bifixes, échanges
d’intervalles et propriété de la base d’indice fini*” (Bifix codes, Interval exchanges and the
Finite Index Basis property), *mention très bien*.

- 2012 **CRUI-MAE Internship**, *Italian Cultural Institute of Culture*, Athens (Greece).
“Conference of Italian University Rectors - Ministry of Foreign Affairs” internship at the cultural office of the Italian embassy in Athens, Greece.
- 2012 **Winner of “E. Gugino” prize**, *Università degli Studi di Palermo*, Palermo (Italy).
Winner of “E. Gugino” prize for the best master thesis in Mathematics of Università degli Studi di Palermo for the academic year.
- 2009 - 2012 **Master degree in Mathematics**, *Università degli Studi di Palermo*, Palermo (Italy).
“Diploma di Laurea Specialistica in Matematica” at Università degli Studi di Palermo; thesis “*Codici bifissi in insiemi Sturmiani*” (Bifix codes in Sturmian sets) with supervisor Prof. Antonio Restivo; mark 110/110 cum laude and *menzione al premio Gugino*.
- 2005 - 2009 **Bachelor in Mathematics**, *Università degli Studi di Palermo*, Palermo (Italy).
“Diploma di Laurea Triennale in Matematica” at Università degli Studi di Palermo; thesis “*Cenni sulla teoria dei nodi*” (Knot theory) with supervisor Prof. Claudio G. Bartolone; mark 110/110 cum laude.
- 2007 - 2008 **Erasmus scholarship**, *Université d’Artois*, Arras (France).
Study period at the Université d’Artois as part of the Erasmus program.
- 2000 - 2005 **High school diploma**, *Liceo Scientifico Benedetto Croce*, Palermo (Italy).
“Diploma di Liceo Scientifico”; mark 100/100.

Teaching experience

- 2019 - 2020 **Linear Algebra with Applications**, (Systems of linear equations, matrices, vector spaces, etc.).
FJFI, Czech Technical University in Prague - 2nd year of bachelor
- 2019 - 2020 **Mathematics for Informatics**, (Multivariate optimisation, General algebra, Numerical mathematics, etc.).
FIT, Czech Technical University in Prague - 1st year of master
- 2018 - 2019 **Internet and web tools**, “*Internet et Outils*”, (HTML, CSS, PHP, Javascript).
Université Paris Diderot L1-S2 - 1st year of bachelor
- 2018 - 2019 **Introduction to Operating Systems**, “*Initiation aux systèmes d’exploitation*”, (UNIX).
Université Paris Diderot L1-S1 - 1st year of bachelor
- 2018 - 2019 **Introduction to Programming**, “*Initiation à la programmation 1*”, (Java).
Université Paris Diderot L1-S1 - 1st year of bachelor
- 2018 - 2019 **XML**, “*Formats de documents et XML*”, (XML).
Université Paris Diderot M1/M2-S1 - 1st and 2nd year of master
- Fall 2017 **Linear Algebra and Geometry**, (matrices, diagonalization, linear transformations, vectorial spaces, euclidian geometry).
McGill University - several programs
- Winter 2017 **Linear algebra**, “*Algèbre Linéaire II*”, (vectorial spaces and endomorphisms).
Université du Québec à Montréal - 1st year of bachelor
- 2015 - 2016 **Databases**, “*Base de données*”, (MySQL).
Université Paris-Est Marne-la-Vallée L2-S4 - 2nd year of bachelor
- 2015 - 2016 **Web Programming**, “*Programmation web*”, (HTML, CSS, Javascript).
École Supérieure d’Ingénieurs Paris-Est IMAC 1 - 1st year of engineering school

- 2014 - 2015 **Algorithms and Computer Programming**, “*Algorithmique et Programmation 1*”, (Python).
Université Paris-Est Marne-la-Vallée L1-S1 - 1st year of bachelor
- 2014 - 2015 **Algorithms and Computer Programming**, “*Algorithmique et Programmation 2*”, (Python).
Université Paris-Est Marne-la-Vallée L1-S2 - 1st year of bachelor
- 2014 - 2015 **Databases**, “*Base de données*”, (MySQL).
Université Paris-Est Marne-la-Vallée L2-S4 - 2nd year of bachelor
- 2013 - 2014 **Algorithms**, “*Algorithmique 3*”, (Graph Theory).
Université Paris-Est Marne-la-Vallée L2-S4 - 2nd year of bachelor
- 2013 - 2014 **Mathematics for Computer Science**, “*Mathématiques pour l’Informatique 1*”, (Words, Languages, Codes, Complexity).
Université Paris-Est Marne-la-Vallée L1-S2 - 1st year of bachelor
- 2013 - 2014 **Mathematics for Computer Science**, “*Mathématiques pour l’Informatique 3*”, (Recursion and Induction).
Université Paris-Est Marne-la-Vallée L2-S4 - 2nd year of bachelor
- 2013 - 2014 **Computer Programming**, “*Programmation 1*”, (C++).
Université Paris-Est Marne-la-Vallée L1-S1 - 1st year of bachelor

Publications in international journals

- 2020 F. Dolce, D. Perrin *Eventually dendric shift spaces*, Ergodic Theory and Dynamical Systems, DOI : 10.1017/etds.2020.35 (2020), available on-line.
- 2019 F. Dolce, A. Restivo, C. Reutenauer *On generalized Lyndon words*, Theoretical Computer Science, Volume 777, In memory of Maurice Nivat, a founding father of Theoretical Computer Science - Part I (2019) 232–242.
- 2018 V. Berthé, F. Dolce, F. Durand, J. Leroy, D. Perrin *Rigidity and Substitutive Tree Words*, International Journal of Foundations of Computer Science, Volume 29, Number 5 (2018), 705–720.
- 2018 F. Dolce, D. Perrin, A. Restivo, C. Reutenauer, G. Rindone *Birecurrent sets*, International Journal of Algebra and Computation, Volume 28, Number 4 (2018), 613–652.
- 2017 F. Dolce, D. Perrin, *Interval exchanges, admissibility and branching Rauzy induction*, RAIRO - Theoretical Informatics and Applications, Volume 51, Number 3 (2017), 141–166.
- 2017 V. Berthé, C. De Felice, V. Delecroix, F. Dolce, J. Leroy, D. Perrin, C. Reutenauer, G. Rindone *Specular sets*, Theoretical Computer Science, volume 684 (2017), 3–28.
- 2017 V. Berthé, V. Delecroix, F. Dolce, D. Perrin, C. Reutenauer, G. Rindone, *Return words of linear involutions and fundamental groups*, Ergodic Theory and Dynamical Systems, volume 37, Issue 3 (2017), 693–715.
- 2017 F. Dolce, D. Perrin, *Neutral and tree sets of arbitrary characteristic*, Theoretical Computer Science, volume 658 (2017), part A, 159–174.
- 2015 V. Berthé, C. De Felice, F. Dolce, J. Leroy, D. Perrin, C. Reutenauer, G. Rindone, *Maximal bifix decoding*, Discrete Mathematics, volume 338 (2015), no. 5, pages 725–742.
- 2015 V. Berthé, C. De Felice, F. Dolce, J. Leroy, D. Perrin, C. Reutenauer, G. Rindone, *Acyclic, connected and tree sets*, Monatshefte für Mathematik, volume 176 (2015), no. 4, pages 521–550.

- 2015 V. Berthé, C. De Felice, F. Dolce, J. Leroy, D. Perrin, C. Reutenauer, G. Rindone, *The finite index basis property*, Journal of Pure and Applied Algebra, volume 219 (2015), no. 7, pages 2521–2537.
- 2015 V. Berthé, C. De Felice, F. Dolce, J. Leroy, D. Perrin, C. Reutenauer, G. Rindone, *Bifix codes and interval exchanges*, Journal of Pure and Applied Algebra, volume 219 (2015), no. 7, pages 2781–2798.

Conference papers with proceedings

- 2019 F. Dolce, D. Perrin, *Return words and bifix codes in eventually dendric sets*, WORDS 2019, Loughborough (England, UK).
- 2019 F. Dolce, D. Perrin, *Eventually dendric shifts*, CSR '19, Novosibirsk (Russia).
- 2019 F. Dolce, A. Restivo, C. Reutenauer, *Some variations on Lyndon words*, CPM 2019, Pisa (Italy).
- 2015 V. Berthé, C. De Felice, V. Delecroix, F. Dolce, J. Leroy, D. Perrin, C. Reutenauer, G. Rindone, *Specular sets*, WORDS 2015, Kiel (Germany).
- 2015 F. Dolce, D. Perrin, *Enumeration formulae in neutral sets*, DLT2015 - 19th International Conference on Developments in Language Theory, Liverpool (England, UK).

Other conference papers

- 2016 F. Dolce, R. Kyriakoglou, J. Leroy, *Decidable properties of extension graphs for substitutive languages*, 16th Mons Theoretical Computer Science Days, Liège (Belgium).
- 2014 F. Dolce, *A note on regular interval exchange sets over a quadratic field*, 15th Mons Theoretical Computer Science Days, Nancy (France).
- 2014 V. Berthé, V. Delecroix, F. Dolce, D. Perrin, C. Reutenauer, G. Rindone, *Linear involutions, bifix codes and free groups*, 15th Mons Theoretical Computer Science Days, Nancy (France).
- 2014 V. Berthé, C. De Felice, F. Dolce, J. Leroy, D. Perrin, C. Reutenauer, G. Rindone, *Return words in tree sets*, 15th Mons Theoretical Computer Science Days, Nancy (France).

Books (Editor)

- 2017 S. Brlek, F. Dolce, C. Reutenauer, É. Vandomme, *Combinatorics on Words : 11th International Conference, WORDS 2017*, Montréal, QC, Canada, September 11-15, 2017, Proceedings, Springer.

Theses

- 2016 F. Dolce, *Codes bifixes, combinatoire des mots et systèmes dynamiques*, PhD thesis, Université Paris-Est.
- 2013 F. Dolce, *Codes bifixes, échanges d'intervalles et propriété de la base d'indice fini*, Master thesis, Université Paris-Est Marne-la-Vallée.
- 2012 F. Dolce, *Codici bifissi ed insiemi Sturmiani*, Master thesis, Università degli Studi di Palermo.
- 2009 F. Dolce, *Cenni sulla teoria dei nodi*, Bachelor thesis, Università degli Studi di Palermo.

Preprints

- F. Dolce, R. Kyriakoglou, J. Leroy, *Decidable properties of extension graphs for substitutive languages*.

Talks given at Conferences and Schools

- Sep. 2019 WORDS 2019, *Bifix codes and return words in eventually dendric sets*, Loughborough (England, UK).
- July 2019 CSR '19 : The 14th International Computer Science Symposium in Russia, *Eventually dendric shifts*, Novosibirsk (Russia).
- Jun. 2019 SDA2-2019 : Journées Annuelles Systèmes Dynamiques, Automates et Algorithmes, *Eventually dendric shifts*, Orsay (France).
- Mar. to Apr. 2017 Combinatorics on Words and Tilings (school and workshop), *Palindromes and tree sets*, Montreal (Quebec, Canada).
- Jan. 2017 Secondo Incontro di Combinatoria delle Parole, *Palindromes and tree sets*, Palerme (Italy).
- July 2016 SDA2-2016 : Journées Annuelles Systèmes Dynamiques, Automates et Algorithmes, *Specular sets*, Lyon (France).
- May 2016 Numeration 2016, *Return words and palindromes in specular sets*, Prague (Czech Republic).
- Jan. 2016 FLA 2016 - Formal Languages and Automata, *Neutral sets of arbitrary characteristic*, Naples (Italy).
- Oct. 2015 EQINOCS Workshop, *Enumeration formulæ in neutral sets*, Grenoble (France).
- Sep. 2015 WORDS 2015, *Specular sets*, Kiel (Germany).
- July 2015 DLT 2015 - 29th International Conference in Language Theory, *Enumeration formulæ in neutral sets*, Liverpool (England, UK).
- May 2015 Workshop on Automatic Sequences, *Maximal bifix decoding of a tree set*, Liège (Belgique).
- Apr. 2015 SDA2-2015 : Journées Annuelles Systèmes Dynamiques, Automates et Algorithmes, *Maximal bifix decoding of a tree set*, Marne-la-Vallée (France), *orateur invité*.
- Feb. 2015 Colloquium EQINOCS, *Acyclic, connected and tree sets*, Créteil (France).
- Sep. 2014 15th Mons Theoretical Computer Science Days, *Regular interval exchange sets over a quadratic field*, Nancy (France).
- Jan. 2014 Representing Streams II (winter school and workshop), *Two-sided Rauzy induction*, Leyde (Netherlands).

Talks given at Seminars

- Sep. 2019 Combinatorial and Algebraic Structures Seminar, *An introduction to dendric sets*, Prague (Czech Republic).
- Apr. 2019 Séminaire du LIGM, *Eventually dendric sets*, Marne-la-Vallée (France).
- March 2019 Séminaire de l'Équipe Automates (IRIF), *Generalized Lyndon words*, Paris (France).
- March 2019 Séminaire de Mathématiques Discrètes, *Generalized Lyndon words*, Liège (Belgium).
- March 2018 Séminaire du CANA, *Tree sets : from combinatorics on words to symbolic dynamics*, Marseille (France).

- Feb. 2018 Séminaire de Combinatoire et d'Informatique Mathématique du LaCIM, *Rigidity of Substitutive Tree Words*, Montreal (Quebec, Canada).
- March 2017 A&C Seminar, *Maximal bifix decoding*, Waterloo (Ontario, Canada).
- Nov. 2016 Séminaire de Combinatoire et d'Informatique Mathématique du LaCIM, *Maximal bifix decoding of tree and neutral sets*, Montreal (Quebec, Canada).
- Apr. 2016 Séminaire de Combinatoire et d'Informatique Mathématique du LaCIM, *Specular sets*, Montreal (Quebec, Canada).
- Dec. 2015 Seminars of the Words and Automata Research Group, *Specular sets*, Palermo (Italy).
- Nov. 2015 Séminaire de Mathématiques Discrètes, *Specular sets*, Liège (Belgium).
- Jan. 2015 Séminaire du LIGM, *Échanges d'intervalles et codes bifixes*, Marne-la-Vallée (France).
- Nov. 2014 Séminaire de Probabilités et Théorie Ergodique, *Bifix codes and interval exchanges*, Amiens (France).
- Oct. 2014 Journée de restitution du DIM RDM-IdF, *Ensemble d'échanges d'intervalles sur un corps quadratique*, Paris (France).
- June 2009 Séminaire interne, *Cenni sulla teoria dei nodi*, Palermo (Italy).

Participations to other Conferences and Schools

- July 2019 Giornate di Informatica Teorica in memoria di Aldo de Luca, Rome (Italy).
- March 2019 École jeunes chercheurs en informatique mathématique, Marseilles (France).
- Nov. 2018 CODYS » Kickoff, Paris (France).
- Oct. 2018 40 Years of Graphs and Algorithms, Paris (France).
- March 2018 Discrete Models of Complex Systems, Orléans (France).
- Apr. to May 2017 Ponts entre les suites automatiques, l'algèbre et la théorie des nombres (school and workshop), Montreal (Quebec, Canada).
- Sep. 2016 16th Mons Theoretical Computer Science Days, Liège (Belgium).
- May 2016 Colloquium EQINOCs, Paris (France).
- March 2016 Conference dedicated to the scientific legacy of Marcel-Paul Schützenberger, Bordeaux (France).
- March 2016 Combinatorics on Words, Marseilles (France).
- Feb. 2016 LSD&LAW 2016 - London Stringology Days / London Algorithmic Workshop, London (England, UK).
- Jan. 2016 GDR-IM 2016 - Journées nationales 2016 GDR Informatique-Mathématique, Villeta-neuse (France).
- Nov. 2015 CIMPA Research School “CantorSalta2015”, Dynamics on Cantor Sets, Salta (Argentina).
- Aug. to Sep. 2015 CIMPA-IRAN Research School “Tiling and Tessellations”, Isfahan (Iran).
- June 2015 Growth, Symbolic Dynamics and Combinatorics of Words in Groups, Paris (France).
- Dec. 2014 Workshop on Symbolic Dynamics on finitely presented Groups, Santiago (Chile).
- June 2014 Journée du Labex Bézout “Data Science and Massive Data Analysis”, Marne-la-Vallée (France).

- Feb. 2014 2014 IEEE Information Theory and Applications Workshop, San Diego (California, USA).
- Jan. 2014 Colloquium EQINOCS, Marne-la-Vallée (France).
- Dec. 2013 Fractals and Numeration » Approximation and numeration 13, Paris (France).
- July 2013 Words, Codes and Algebraic Combinatorics - A conference in honor of Christophe Reutenauer's 60th birthday, Cetraro (Italy).
- June 2013 DLT 2013 - 17th International Conference on Developments in Language Theory, Marne-la-Vallée (France).
- June 2013 Automata Theory and Symbolic Dynamics Workshop, Vancouver (British Columbia, Canada).
- July to Sep. 2011 Summer school "Summer Course in Mathematics : Perugia 2011" organized by SMI (Inter-University Mathematics School), Perugia (Italy).
- Sep. 2010 Problemi e applicazioni in algebra, geometria e analisi, Genoa (Italy).

Languages

Italian	Mother tongue
English	Fluent
French	Fluent
Spanish	Intermediate
Swedish	Beginner
Czech	Beginner