

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome ANTONIO
Cognome RESTIVO
Recapiti Facoltà di Scienze, Dipartimento di Matematica e Informatica, Ufficio n. 112
Telefono 091-23891102
E-mail antonio.restivo@unipa.it
restivo@math.unipa.it

FORMAZIONE TITOLI

Antonio Restivo si è laureato in Fisica presso l'Università di Palermo nel 1969 discutendo una tesi sulla descrizione matematica dei campi quantizzati.

Successivamente egli ha rivolto i suoi interessi alla Computer Science e dal 1971 al 1981 è stato ricercatore del Consiglio Nazionale delle Ricerche (C.N.R.) presso l'Istituto di Cibernetica a Napoli.

Dal 1981 è professore ordinario di Informatica Teorica presso l'Università di Palermo.

ATTIVITA' DIDATTICA

Docente dell'insegnamento Informatica Teorica (modulo di Teoria degli Automi e dei Linguaggi Formali) presso il corso di laurea in Informatica.

Docente dell'insegnamento di Teoria dell'Informazione presso il corso di laurea magistrale in Matematica.

RICERCHE FINANZIATE

Coordinatore nazionale del progetto PRIN 2010/2011 dal titolo Teoria degli Automi e dei Linguaggi Formali: Aspetti Matematici e Applicativi

ASSOCIAZIONI SCIENTIFICHE

E' stato eletto membro della Academia Europaea nel 2011.

PUBBLICAZIONE

2012

Ira M. Gessel, Antonio Restivo, Christophe Reutenauer: A bijection between words and multisets of necklaces. Eur. J. Comb. 33(7): 1537-1546 (2012)

Giuseppe Castiglione, Antonio Restivo: On the Shuffle of Star-Free Languages. Fundam. Inform. 116(1-4): 35-44 (2012)

Antonio Restivo, Giovanna Rosone: On the product of balanced sequences. RAIRO - Theor. Inf. and Applic. 46(1): 131-145 (2012)

Maxime Crochemore, Laura Giambruno, Alessio Langiu, Filippo Mignosi, Antonio Restivo: Dictionary-symbolwise flexible parsing. J. Discrete Algorithms 14: 74-90 (2012)

Dominique Perrin, Antonio Restivo: A note on Sturmian words. *Theor. Comput. Sci.* 429: 265-272 (2012)

Antonio Restivo, Roberto Vaglica: A graph theoretic approach to automata minimality. *Theor. Comput. Sci.* 429: 282-291 (2012)

Antonio Restivo, Roberto Vaglica: Extremal minimality conditions on automata. *Theor. Comput. Sci.* 440-441: 73-84 (2012)

Giuseppa Castiglione, Antonio Restivo, Marinella Sciortino: Nondeterministic Moore automata and Brzozowski's minimization algorithm. *Theor. Comput. Sci.* 450: 81-91 (2012)

Filippo Mignosi, Antonio Restivo: Characteristic Sturmian words are extremal for the Critical Factorization Theorem. *Theor. Comput. Sci.* 454: 199-205 (2012)

2011

Giusi Castiglione, Antonio Restivo, Marinella Sciortino: Hopcroft's algorithm and tree-like automata. *RAIRO - Theor. Inf. and Applic.* 45(1): 59-75 (2011)

Antonio Restivo, Giovanna Rosone: Balancing and clustering of words in the Burrows-Wheeler transform. *Theor. Comput. Sci.* 412(27): 3019-3032 (2011)

Antonio Restivo, Roberto Vaglica: Some Remarks on Automata Minimality. *Developments in Language Theory 2011*: 15-27

Giusi Castiglione, Antonio Restivo, Marinella Sciortino: Nondeterministic Moore Automata and Brzozowski's Algorithm. *CIAA 2011*: 88-99

2010

Jean Berstel, Luc Boasson, Olivier Carton, Jean-Eric Pin, Antonio Restivo: The expressive power of the shuffle product. *Inf. Comput.* 208(11): 1258-1272 (2010)

Roberto Mantaci, Sabrina Mantaci, Antonio Restivo: Balance Properties and Distribution of Squares in Circular Words. *Int. J. Found. Comput. Sci.* 21(4): 647-664 (2010)

Giusi Castiglione, Antonio Restivo, Marinella Sciortino: On extremal cases of Hopcroft's algorithm. *Theor. Comput. Sci.* 411(38-39): 3414-3422 (2010)

Antonio Restivo, Roberto Vaglica: Automata with Extremal Minimality Conditions. *Developments in Language Theory 2010*: 399-410

Maxime Crochemore, Laura Giambruno, Alessio Langiu, Filippo Mignosi, Antonio Restivo: Dictionary-Symbolwise Flexible Parsing. *IWOCA 2010*: 390-403

2009

Marie-Pierre Béal, Fabio Burderi, Antonio Restivo: Coding Partitions of Regular Sets. *IJAC* 19(8): 1011-1023 (2009)

Antonio Restivo, Giovanna Rosone: Burrows-Wheeler transform and palindromic richness. *Theor. Comput. Sci.* 410(30-32): 3018-3026 (2009)

Giusi Castiglione, Antonio Restivo, Marinella Sciortino: Circular sturmian words and Hopcroft's algorithm. *Theor. Comput. Sci.* 410(43): 4372-4381 (2009)

Antonio Restivo, Giovanna Rosone: Balanced Words Having Simple Burrows-Wheeler Transform. *Developments in Language Theory 2009*: 431-442

Giuseppa Castiglione, Antonio Restivo, Marinella Sciortino: Hopcroft's Algorithm and Tree-like Automata. *ICTCS 2009*: 75-81

Antonio Restivo, Giovanna Rosone: On Balancing of a Direct Product. *ICTCS 2009*: 190-195

Giusi Castiglione, Antonio Restivo, Marinella Sciortino: On Extremal Cases of Hopcroft's Algorithm. *CIAA 2009*: 14-23

2008

Sabrina Mantaci, Antonio Restivo, Marinella Sciortino: Distance measures for biological sequences: Some recent approaches. *Int. J. Approx. Reasoning* 47(1): 109-124 (2008)

Laura Giambruno, Antonio Restivo: An automata-theoretic approach to the study of the intersection of two submonoids of a free monoid. *ITA* 42(3): 503-524 (2008)

Sabrina Mantaci, Antonio Restivo, Giovanna Rosone, Marinella Sciortino: A New Combinatorial Approach to Sequence Comparison. *Theory Comput. Syst.* 42(3): 411-429 (2008)

Dora Giammarresi, Antonio Restivo: Matrix-based complexity functions and recognizable picture languages. *Logic and Automata* 2008: 307-330

Roberto Mantaci, Sabrina Mantaci, Antonio Restivo: Balance Properties and Distribution of Squares in Circular Words. *Developments in Language Theory* 2008: 504-515

Dora Giammarresi, Antonio Restivo: Ambiguity and Complementation in Recognizable Two-dimensional Languages. *IFIP TCS* 2008: 5-20

Giusi Castiglione, Antonio Restivo, Marinella Sciortino: Hopcroft's Algorithm and Cyclic Automata. *LATA* 2008: 172-183

2007

Fabio Burderi, Antonio Restivo: Coding Partitions. *Discrete Mathematics & Theoretical Computer Science* 9(2) (2007)

Giusi Castiglione, Andrea Frosini, Emanuele Munarini, Antonio Restivo, Simone Rinaldi: Combinatorial aspects of L-convex polyominoes. *Eur. J. Comb.* 28(6): 1724-1741 (2007)

Fabio Burderi, Antonio Restivo: Varieties of Codes and Kraft Inequality. *Theory Comput. Syst.* 40(4): 507-520 (2007)

Chiara Epifanio, Alessandra Gabriele, Filippo Mignosi, Antonio Restivo, Marinella Sciortino: Languages with mismatches. *Theor. Comput. Sci.* 385(1-3): 152-166 (2007)

Raffaele Giancarlo, Antonio Restivo, Marinella Sciortino: From first principles to the Burrows and Wheeler transform and beyond, via combinatorial optimization. *Theor. Comput. Sci.* 387(3): 236-248 (2007)

Sabrina Mantaci, Antonio Restivo, Giovanna Rosone, Marinella Sciortino: An extension of the Burrows-Wheeler Transform. *Theor. Comput. Sci.* 387(3): 298-312 (2007)

Giusi Castiglione, Antonio Restivo: L-Convex Polyominoes: A Survey. *Formal Models, Languages and Applications* 2007: 17-33

Marie-Pierre Béal, Fabio Burderi, Antonio Restivo: Coding Partitions: Regularity, Maximality and Global Ambiguity. *Developments in Language Theory* 2007: 48-59

2006

Fabio Burderi, Giuseppa Castiglione, Antonio Restivo: Higman's Theorem on Discrete Sets. *Fundam. Inform.* 74(4): 435-446 (2006)

Clelia de Felice, Antonio Restivo: Preface. *Int. J. Found. Comput. Sci.* 17(3): 489-492 (2006)

Marcella Anselmo, Dora Giammarresi, Maria Madonia, Antonio Restivo: Unambiguous recognizable two-dimensional languages. *ITA* 40(2): 277-293 (2006)

Giusi Castiglione, Antonio Restivo, Roberto Vaglica: A reconstruction algorithm for L-convex polyominoes. *Theor. Comput. Sci.* 356(1-2): 58-72 (2006)

Gabriele Fici, Filippo Mignosi, Antonio Restivo, Marinella Sciortino: Word assembly through minimal forbidden words. *Theor. Comput. Sci.* 359(1-3): 214-230 (2006)

2005

Tero Harju, Juhani Karhumäki, Antonio Restivo: Preface. *Theor. Comput. Sci.* 339(1): 1-2 (2005)

Giusi Castiglione, Andrea Frosini, Antonio Restivo, Simone Rinaldi: Enumeration of L-convex polyominoes by rows and columns. *Theor. Comput. Sci.* 347(1-2): 336-352 (2005)

Sabrina Mantaci, Antonio Restivo, Giovanna Rosone, Marinella Sciortino: An Extension of the Burrows Wheeler Transform and Applications to Sequence Comparison and Data Compression. *CPM* 2005: 178-189

Sabrina Mantaci, Antonio Restivo, Marinella Sciortino: An Extension of the Burrows Wheeler Transform to k Words. *DCC* 2005: 469

Giusi Castiglione, Andrea Frosini, Antonio Restivo, Simone Rinaldi: A Tomographical Characterization of L-Convex

Polyominoes. DGCI 2005: 115-125

Sabrina Mantaci, Antonio Restivo, Giovanna Rosone, Marinella Sciortino: A New Combinatorial Approach to Sequence Comparison. ICTCS 2005: 348-359

Fabio Burderi, Antonio Restivo: Varieties of Codes and Kraft Inequality. STACS 2005: 545-556

Clelia de Felice, Antonio Restivo (Eds.): Developments in Language Theory, 9th International Conference, DLT 2005, Palermo, Italy, July 4-8, 2005, Proceedings. Lecture Notes in Computer Science 3572, Springer 2005, isbn 3-540-26546-5

2004

Giuseppe Castiglione, Antonio Restivo, Sergio Salemi: Patterns in words and languages. Discrete Applied Mathematics 144(3): 237-246 (2004)

Giovanna Guaiana, Antonio Restivo, Sergio Salemi: On the Trace Product and some Families of Languages Closed under Partial Commutations. Journal of Automata, Languages and Combinatorics 9(1): 61-79 (2004)

Giuseppe Castiglione, Antonio Restivo: Ordering and Convex Polyominoes. MCU 2004: 128-139

2003

Antonio Restivo, Pedro V. Silva: Periodicity vectors for labelled trees. Discrete Applied Mathematics 126(2-3): 241-260 (2003)

Giuseppe Castiglione, Antonio Restivo: Reconstruction of L-convex Polyominoes. Electronic Notes in Discrete Mathematics 12: 290-301 (2003)

Marie-Pierre Béal, Maxime Crochemore, Filippo Mignosi, Antonio Restivo, Marinella Sciortino: Computing forbidden words of regular languages. Fundam. Inform. 56(1-2): 121-135 (2003)

Sabrina Mantaci, Antonio Restivo, Marinella Sciortino: Burrows-Wheeler transform and Sturmian words. Inf. Process. Lett. 86(5): 241-246 (2003)

Filippo Mignosi, Antonio Restivo, Pedro V. Silva: On Fine and Wilf's theorem for bidimensional words. Theor. Comput. Sci. 292(1): 245-262 (2003)

Alessandra Gabriele, Filippo Mignosi, Antonio Restivo, Marinella Sciortino: Indexing Structures for Approximate String Matching. CIAC 2003: 140-151

2002

Filippo Mignosi, Antonio Restivo, Marinella Sciortino: Words and forbidden factors. Theor. Comput. Sci. 273(1-2): 99-117 (2002)

Antonio Restivo, Pedro V. Silva: On the lattice of prefix codes. Theor. Comput. Sci. 289(1): 755-782 (2002)

Antonio Restivo, Sergio Salemi: Binary Patterns in Infinite Binary Words. Formal and Natural Computing 2002: 107-118

2001

Filippo Mignosi, Antonio Restivo, Marinella Sciortino: Forbidden Factors and Fragment Assembly. ITA 35(6): 565-577 (2001)

Sabrina Mantaci, Antonio Restivo: Codes and equations on trees. Theor. Comput. Sci. 255(1-2): 483-509 (2001)

Jean-Pierre Duval, Filippo Mignosi, Antonio Restivo: Recurrence and periodicity in infinite words from local periods. Theor. Comput. Sci. 262(1): 269-284 (2001)

Antonio Restivo, Sergio Salemi: Words and Patterns. Developments in Language Theory 2001: 117-129

Filippo Mignosi, Antonio Restivo, Marinella Sciortino: Forbidden Factors and Fragment Assembly. Developments in Language Theory 2001: 349-358

Antonio Restivo, Simona Ronchi Della Rocca, Luca Roversi (Eds.): Theoretical Computer Science, 7th Italian Conference, ICTCS 2001, Torino, Italy, October 4-6, 2001, Proceedings. Lecture Notes in Computer Science 2202, Springer 2001, isbn 3-540-42672-8

1999

Dora Giammarresi, Antonio Restivo: Extending Formal Language Hierarchies to Higher Dimensions. *ACM Comput. Surv.* 31(3es): 12 (1999)

Maria Gabriella Castelli, Filippo Mignosi, Antonio Restivo: Fine and Wilf's Theorem for Three Periods and a Generalization of Sturmian Words. *Theor. Comput. Sci.* 218(1): 83-94 (1999)

Filippo Mignosi, Antonio Restivo, Marinella Sciortino: Forbidden Factors in Finite and Infinite Words. *Jewels are Forever 1999*: 339-350

Maxime Crochemore, Filippo Mignosi, Antonio Restivo, Sergio Salemi: Text Compression Using Antidictionaries. *ICALP 1999*: 261-270

1998

Maxime Crochemore, Filippo Mignosi, Antonio Restivo: Automata and Forbidden Words. *Inf. Process. Lett.* 67(3): 111-117 (1998)

Filippo Mignosi, Antonio Restivo, Sergio Salemi: Periodicity and the Golden Ratio. *Theor. Comput. Sci.* 204(1-2): 153-167 (1998)

Dora Giammarresi, Sabrina Mantaci, Filippo Mignosi, Antonio Restivo: Periodicities on Trees. *Theor. Comput. Sci.* 205(1-2): 145-181 (1998)

Maxime Crochemore, Filippo Mignosi, Antonio Restivo: Minimal Forbidden Words and Factor Automata. *MFCS 1998*: 665-673

1997

Sabrina Mantaci, Antonio Restivo: Tree Codes and Equations. *Developments in Language Theory 1997*: 119-133

1996

Dora Giammarresi, Antonio Restivo: Two-Dimensional Finite State Recognizability. *Fundam. Inform.* 25(3): 399-422 (1996)

Dora Giammarresi, Antonio Restivo, Sebastian Seibert, Wolfgang Thomas: Monadic Second-Order Logic Over Rectangular Pictures and Recognizability by Tiling Systems. *Inf. Comput.* 125(1): 32-45 (1996)

Sabrina Mantaci, Antonio Restivo: Equations on Trees. *MFCS 1996*: 443-456

Marie-Pierre Béal, Filippo Mignosi, Antonio Restivo: Minimal Forbidden Words and Symbolic Dynamics. *STACS 1996*: 555-566

1995

Filippo Mignosi, Antonio Restivo, Sergio Salemi: A Periodicity Theorem on Words and Applications. *MFCS 1995*: 337-348

1994

Marcella Anselmo, Antonio Restivo: Factorizing Languages. *IFIP Congress (1) 1994*: 445-450

Dora Giammarresi, Sabrina Mantaci, Filippo Mignosi, Antonio Restivo: A Periodicity Theorem for Trees. *IFIP Congress (1) 1994*: 473-478

Dora Giammarresi, Antonio Restivo, Sebastian Seibert, Wolfgang Thomas: Monadic Second-Order Logic Over Pictures and Recognizability by Tiling Systems. *STACS 1994*: 365-375

1992

Dora Giammarresi, Antonio Restivo: Recognizable Picture Languages. *IJPRAI* 6(2&3): 241-256 (1992)

Antonio Restivo: A Note on Renewal Systems. *Theor. Comput. Sci.* 94(2): 367-371 (1992)

Giovanna Guaiana, Antonio Restivo, Sergio Salemi: Star-Free Trace Languages. *Theor. Comput. Sci.* 97(2): 301-311 (1992)

1991

Giovanna Guaiana, Antonio Restivo, Sergio Salemi: On Aperiodic Trace Languages. STACS 1991: 76-88

1990

Giovanna Guaiana, Antonio Restivo, Sergio Salemi: Complete subgraphs of bipartite graphs and applications to trace languages. ITA 24: 409-418 (1990)

Antonio Restivo: Codes and Local Constraints. Theor. Comput. Sci. 72(1): 55-64 (1990)

1989

Antonio Restivo, Sergio Salemi, Tecla Sportelli: Completing Codes. ITA 23(2): 135-147 (1989)

Antonio Restivo: Finitely Generated Sofic Systems. Theor. Comput. Sci. 65(2): 265-270 (1989)

Antonio Restivo: A note on multiset decipherable codes. IEEE Transactions on Information Theory 35(3): 662-663 (1989)

1988

Antonio Restivo: Codes and Automata. Formal Properties of Finite Automata and Applications 1988: 186-198

1986

Aldo de Luca, Antonio Restivo: On a generalization of a conjecture of Ehrenfeucht. Bulletin of the EATCS 30: 84-90 (1986)

Aldo de Luca, Antonio Restivo: Star-Free Sets of Integers. Theor. Comput. Sci. 43: 265-275 (1986)

1985

Clelia de Felice, Antonio Restivo: Some Results On Finite Maximal Codes. ITA 19(4): 383-403 (1985)

Antonio Restivo: Rational Languages and the Burnside Problem. Theor. Comput. Sci. 40: 13-30 (1985)

1984

Antonio Restivo, Christophe Reutenauer: On Cancellation Properties of Languages which are Supports of Ration Power Series. J. Comput. Syst. Sci. 29(2): 153-159 (1984)

Antonio Restivo, Christophe Reutenauer: Cancellation, Pumping and Permutation in Formal Languages. ICALP 1984: 414-422

Antonio Restivo, Sergio Salemi: Overlap-free words on two symbols. Automata on Infinite Words 1984: 198-206

Aldo de Luca, Antonio Restivo: Representations of Integers and Language Theory. MFCS 1984: 407-415

1983

Antonio Restivo, Sergio Salemi: On weakly square free words. Bulletin of the EATCS 21: 49-57 (1983)

Antonio Restivo, Christophe Reutenauer: Some Applications of a Theorem of Shirshov to Language Theory. Information and Control 57(2/3): 205-213 (1983)

Aldo de Luca, Antonio Restivo, Sergio Salemi: On the Centers of a Language. Theor. Comput. Sci. 24: 21-34 (1983)

1981

S. Mauceri, Antonio Restivo: A Family of Codes Commutatively Equivalent to Prefix Codes. Inf. Process. Lett. 12(1): 1-4 (1981)

1980

Aldo de Luca, Antonio Restivo: A Characterization of Strictly Locally Testable Languages and Its Applications to Subsemigroups of a Free Semigroup. Information and Control 44(3): 300-319 (1980)

Aldo de Luca, Antonio Restivo: On Some Properties of Very Pure Codes. Theor. Comput. Sci. 10: 157-170 (1980)

Jean-Marie Boë, Aldo de Luca, Antonio Restivo: Minimal Complete Sets of Words. Theor. Comput. Sci. 12: 325-332 (1980)

Aldo de Luca, Antonio Restivo: On Some Properties of Local Testability. ICALP 1980: 385-393

1979

Aldo de Luca, Antonio Restivo: Synchronization and Maximality for Very Pure Subsemigroups of a Free Semigroup. MFCS 1979: 363-371

1978

Antonio Restivo: Some Decision Results for Recognizable Sets in Arbitrary Monoids. ICALP 1978: 363-371

1977

Antonio Restivo: Mots Sans Répétitions et Langages Rationnels Bornés. ITA 11(3): 197-202 (1977)

Luc Boasson, Antonio Restivo: Une Caractérisation des Langages Algébriques Bornés. ITA 11(3): 203-205 (1977)

1976

Antonio Restivo: On a Family of Codes Related to Factorization of Cyclotomic Polynomials. ICALP 1976: 38-44

1975

Antonio Restivo: A Combinatorial Property of Codes Having Finite Synchronization Delay. Theor. Comput. Sci. 1(2): 95-101 (1975)

Antonio Restivo: A characterization of bounded regular sets. Automata Theory and Formal Languages 1975: 239-244

1974

Antonio Restivo: On a Question of McNaughton and Papert. Information and Control 25(1): 93-101 (1974)

1973

Antonio Restivo: Codes and aperiodic languages. Automatentheorie und Formale Sprachen 1973: 175-181

ATTIVITA' SCIENTIFICHE

Fa (o ha fatto) parte dell'editorial board delle seguenti riviste internazionali:

RAIRO Theoretical Informatics and Applications,
Journal of Automata, Languages and Combinatorics,
Fundamenta Informaticae,
Grammars: A Journal of Mathematical Research on Formal and Natural Languages.

E' stato membro del Council dell'E.A.T.C.S. (European Association of Theoretical Computer Science) ed è uno dei fondatori del Capitolo Italiano della stessa associazione.

Ha fatto parte del consiglio scientifico delle seguenti istituzioni:

Laboratoire de Informatique Theorique et Programmation (L.I.T.P.), Université de Paris VI et de Paris VII,
Istituto di Elaborazione dell'Informazione (I.E.I.) del C.N.R., Pisa,
Istituto di Cibernetica del C.N.R., Arco Felice (Na),
Istituto di Tecnologie Didattiche e formative del C.N.R., Palermo.

Ha fatto anche parte del comitato di programma di vari congressi internazionali e, in particolare,:

International Conference on Automata, Languages and Programming (I.C.A.L.P.),
Symposium on Theoretical Aspects of Computer Science (S.T.A.C.S.),
Developments in Language Theory (D.L.T.),
Formal Power Series and Algebraic Combinatorics (F.P.S.A.C),

International Workshop on Descriptive Complexity of Formal Systems (D.C.F.S.).

E' membro dello Steering Committee della International Conference on Developments in Language Theory (D.L.T.), e della International Conference "WORDS".

E' stato invitato da varie università straniere per soggiorni di studio e ricerca. In particolare ha trascorso periodi di diversi mesi come visiting professor nelle seguenti università: Université de Paris VI, Université de Paris VII, Université de Marseille, Université de Rouen, Université de Marne-La-Vallée.

Ha partecipato, spesso come main investigator, a vari progetti di ricerca sia nazionali che internazionali. In particolare ha avuto responsabilità di coordinamento di progetti di ricerca di ampia dimensione su argomenti di ricerca di base in ambito nazionale.

E' stato supervisore di diversi studenti di dottorato, molti dei quali sono attualmente ricercatori attivi in Computer Science.

AMBITI DI RICERCA

Teoria degli Automi e dei Linguaggi Formali,

Combinatoria e Algoritmi su Parole,

Teoria dei Codici e dell'Informazione,

Dinamica Simbolica,

Compressione Dati,

Estensioni di metodi dei Linguaggi Formali agli Alberi ed alle Parole Bidimensionali,

Applicazioni della Combinatoria delle Parole alla Biologia Computazionale.