Alberto Ravagnani

Marie Curie Research Fellow

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Last CV update: May 2019

GENERALITIES

Born in Verona, Italy. Italian citizen.

LANGUAGES

English (fluent), French (good), Italian (native).

EDUCATION

- **Ph.D. in Mathematics**, University of Neuchâtel, Switzerland, **Sept. 2016**.
  Dissertation: "Properties and constructions of codes with the rank and the subspace metric".
  The thesis was awarded the Prize L. Du Pasquier et L. Perrier (see below).
  Advisor: Prof. Dr. Elisa Gorla.

- **M.Sc. in Mathematics**, University of Trento, Italy, Mar. 2012.
  Dissertation: "On Goppa codes on the Hermitian curve". Grade: 110/110 with distinction.
  Advisors: Prof. Dr. Edoardo Ballico, Prof. Dr. Massimiliano Sala.

- **B.Sc. in Mathematics**, University of Trento, Italy, Sept. 2010.
  Dissertation: "Selected topics in algebraic geometry". Grade: 110/110 with distinction.
  Advisor: Prof. Dr. Edoardo Ballico.

POSITIONS HELD

- **Marie Curie Research Fellow**, May 2018 – present.
  School of Mathematics and Statistics, University College Dublin, Ireland.

- **Research Fellow**, Sept. 2017 – Apr. 2018.
  School of Mathematics and Statistics, University College Dublin, Ireland.

- **Postdoctoral Fellow**, Nov. 2016 – Aug. 2017.
  Department of Electrical and Computer Engineering, University of Toronto, Canada.

- **Assistant**, Sept. 2012 – Oct. 2016.
  Department of Mathematics, University of Neuchâtel, Switzerland.

Awards, Prizes, Grants

Source	Award/Prize/Grant	Date
University College Dublin (Seed Funding Scheme)	Dissemination and Outputs Award	Apr. 2019
Nexans Foundation Switzerland	Nexans Prize 2017, for "the brilliant international academic path and the remarkable contributions to coding theory" — *for details, see the* press release	Dec. 2017
Irish Research Council	Postdoctoral Fellowship — *declined*	Apr. 2017
European Commission (Marie Curie Grants Scheme)	Marie Curie Individual Fellowship	Mar. 2017
University of Neuchâtel	Prize L. Du Pasquier et L. Perrier, for the best Ph.D. thesis in the Faculty of Science in 2015–16	Nov. 2016
Swiss Science Foundation	Mobility Postdoc Fellowship	May 2016
Springer Publishing	Best Talk Award at the Swiss Graduate Colloquium in Mathematics, EPFL Lausanne	Feb. 2015
Springer Publishing	Best Talk Award at the Swiss Graduate Colloquium in Mathematics, University of Fribourg	Sept. 2013
University of Trento, Italy	Student prize for academic records	Nov. 2013
INdAM – Italian Institute for Mathematics	Scholarship for B.Sc. students in Mathematics (national written competition)	Oct. 2007
Italian Ministry of Education	Student prize for school records	Sept. 2007

Travel Awards and Travel Support

Source	Award	Date
ICERM, Brown University	Travel award in connection with the workshop "Nonlinear Algebra in Applications"	Nov. 2018
Swiss Mathematical Society	5 travel awards in the period 2013–2016 to participate to conferences and research meetings	2013 – 2016
European Commission (COST Action n. IC1104)	Financially supported 7 times in the period 2013–2016 to participate to conferences and meetings witin the framework of the COST Action n. IC1104	2013 – 2016
European Commission (Twinning Project n. 692178)	Financial support to visit University of Iaşi (Romania) as invited lecturer	Apr. 2016
SIAM – Society for Industrial and Applied Mathematics	Travel award in connection with the SIAM AG15 conference on Applied Algebraic Geometry	Aug. 2015
SIAM – Society for Industrial and Applied Mathematics	Travel award in connection with the SIAM AG13 conference on Applied Algebraic Geometry	Aug. 2013
Various institutions	Financial support in connection with research visits and participation to conferences and workshops	2012 – present

APPROVED RESEARCH PROPOSALS

(submitted as the main applicant)

Funding Body	Proposal Title	Details
Irish Research Council (Postdoc Fellowships Scheme)	Covering Properties of Codes Endowed with the Rank Metric	Approved in Apr. 2017 [92'000 EUR]
European Commission (Marie Curie Grants Scheme)	ACCENT (research topics: rank-metric codes, network coding)	Approved in Mar. 2017 [176'000 EUR]
Swiss Science Foundation (Mobility Fellowships Scheme)	An Algebraic Approach to Multi-Source Network Flow	Approved in May 2016 [67'000 CHF]

JOURNAL ARTICLES

(all contributions are peer-reviewed or submitted to a peer-reviewed journal)

- **Tensor representation of rank-metric codes** (with E. Byrne, A. Neri, and J. Sheekey).
  Submitted — arxiv 1904.05227.

- **Partitions of matrix spaces with an application to q-rook polynomials** (with H. Gluesing-Luerssen).
  Submitted — arxiv 1811.01282.

- **Partition-balanced families of codes and asymptotic enumeration in coding theory** (with E. Byrne).
  Submitted — arxiv 1805.02049.

- **An Assmus-Mattson theorem for rank-metric codes** (with E. Byrne).
  SIAM Journal on Discrete Mathematics, to appear.

- **Rank-metric codes and q-polymatroids** (with E. Gorla, R. Jurrius, and H. López).
  Journal of Algebraic Combinatorics, to appear.

- **Adversarial network coding** (with F. R. Kschischang).
  IEEE Transactions on Information Theory, 65 (2019), 1, pp. 198 – 219.

- **Duality of codes supported on regular lattices, with an application to enumerative combinatorics**.
  Designs, Codes and Cryptography, 86 (2018), 9, pp. 2035 – 2063.

- **An algebraic framework for end-to-end physical-layer network coding** (with E. Gorla).
  IEEE Transactions on Information Theory, 64 (2018), 6, pp. 4480 – 4495.

- **Weight distribution of rank-metric codes** (with J. de la Cruz, E. Gorla, and H. López).
  Designs, Codes and Cryptography, 86 (2018), 1, pp. 1–16.

- **Covering radius of matrix codes endowed with the rank metric** (with E. Byrne).
  SIAM Journal on Discrete Mathematics, 31 (2017), 2, pp. 927 – 944.

- **Subspace codes from Ferrers diagrams** (with E. Gorla).
  Journal of Algebra and Its Applications, 16 (2017), n. 7.

- **Optimal Ferrers diagram rank-metric codes** (with T. Etzion, E. Gorla, and A. Wachter-Zeh).
  IEEE Transactions on Information Theory, 64 (2016), n. 4, pp. 1616 – 1630.

- **Generalized weights: An anticode approach**.
  Journal of Pure and Applied Algebra, 220 (2016), n. 5, pp. 1946 – 1962.

- **Equidistant subspace codes** (with E. Gorla).
  Linear Algebra and its Applications, 490 (2016), pp. 48 – 65.

- **Rank-metric codes and their duality theory**.
  Designs, Codes and Cryptography, 80 (2016), n. 1, pp. 197–216.

- **Embedding Suzuki curves in $\mathbb{P}^4$** (with E. Ballico).
  Journal of Commutative Algebra, 7 (2015), n. 2, pp. 149 – 166.

- **A zero-dimensional approach to Hermitian codes** (with E. Ballico).
  Journal of Pure and Applied Algebra, 219 (2015), n. 4, pp. 1031 – 1044.

- **On the geometry of Hermitian one-point codes** (with E. Ballico).
  Journal of Algebra, 397 (2014), pp. 499 – 514.

- **Partial spreads in random network coding** (with E. Gorla).
  Finite Fields and Their Applications, 26 (2014), pp. 104 – 115.

- **Classification of binary systematic codes of small defect**.
  Le Matematiche, 69 (2014), n. 1, pp. 275 – 284.

- **The dual geometry of Hermitian two-point codes** (with E. Ballico).
  Discrete Mathematics, 313 (2013), n. 23, pp. 2687 – 2695.

- **On the dual minimum distance and minimum weight of codes from a quotient of the Hermitian curve** (with E. Ballico).
  Applicable Algebra in Engineering, Communication and Computing, 24 (2013), n. 5, pp. 343 – 354.

- **On the projective normality of Artin-Schreier curves** (with E. Ballico).
  Le Matematiche, 68 (2013), n. 2, pp. 91 – 98.

- **On the duals of geometric Goppa codes from norm-trace curves** (with E. Ballico).
  Finite Fields and Their Applications, 20 (2013), pp. 30 – 39.

REFEREED CONFERENCE PROCEEDINGS

(all contributions are peer-reviewed or submitted to a peer-reviewed conference)

- **On the sparsity of MRD codes** (with E. Byrne).
  11th International Workshop on Coding and Cryptography – WCC 2019.

- **Matrix codes with the rank metric and their covering radii** (with E. Byrne).
  23rd International Symposium on Mathematical Theory of Networks and Systems – MTNS 2018.

- **On the rank-metric covering radius** (with E. Byrne).
  10th International Workshop on Coding Theory and Cryptography – WCC 2017.

- **Subspace codes from Ferrers diagrams** (with E. Gorla).
  Effective Methods in Algebraic Geometry – MEGA 2015.

- **On the dual minimum-weight codewords of one-point Goppa codes** (with E. Ballico).
  21st International Symposium on Mathematical Theory of Networks and Systems – MTNS 2014.

BOOK CHAPTERS AND SURVEYS

- **Matrix codes and rook theory**.
  In the Oberwolfach Report of the conference "Contemporary Coding Theory" (ID 1912), 2019, to appear.

- **Codes endowed with the rank metric** (with E. Gorla).
  In "Network Coding and Subspace Designs", M. Greferath, M. O. Pavčević, N. Silberstein and M. Á. Vázquez-Castro – Eds., Springer, 2018.

THESES

- **Properties and constructions of codes with the rank and the subspace metric**.
  Ph.D. thesis, University of Neuchâtel, Switzerland, 2016.

- **On Goppa codes on the Hermitian curve**.
  M.Sc. thesis, University of Trento, Italy, 2012.

- **Selected topics in algebraic geometry**.
  B.Sc. thesis, University of Trento, Italy, 2009.

TALKS AT INTERNATIONAL CONFERENCES AND WORKSHOPS

(invited talks are marked with an asterisk; planned talks are also included)

- **Coding theory and asymptotic enumeration**. *
  Workshop "Commutative algebra meets combinatorics", Neuchâtel, Switzerland, July 2019.

- **Partitions of matrix spaces and q-rook polynomials**. *
  Conference "SIAM AG19", Bern, Switzerland, July 2019.

- **Network coding, rank-metric codes, and rook theory**. *
  Mini-conference "c_2 invariant meets rook theory", Berlin, Germany, Apr. 2019.

- **On the sparsity of MRD codes**.
  Conference "WCC 2019", Henri Lebesgue Center, France, Mar. 2019.

- **Matrix codes and rook theory**. *
  Conference "Contemporary Coding Theory", Oberwolfach, Germany, Mar. 2019.

- **The covering radius of rank-metric codes**. *
  Conference "Coding Theory for Networks, Storage, and Security", Dagstuhl, Germany, Dec. 2018.

- **Network coding and the rank metric**. *
  Workshop "Nonlinear Algebra in Applications", ICERM, Providence, USA, Nov. 2018.

- **Covering radius of rank-metric codes**. *
  Conference "MTNS 2018", Hong Kong, China, July 2018.

- **On the structure of equidistant subspace codes**. *
  Workshop "Coding Theory and Cryptography", Ghent University, Belgium, Dec. 2017.

- **Rank-metric codes of zero defect**.
  Conference "SIAM AG17", Atlanta, USA, Aug. 2017.

- **Combinatorics and covering radius of rank-metric codes**. *
  Conference "Mathematical Congress of the Americas", Montréal, Canada, July 2017.

- **Equidistant subspace codes**. *
  Conference "Joint Mathematics Meetings", Atlanta, USA, Jan. 2017.

- **Equidistant subspace codes**.
  Conference "Network Coding and Designs", Dubrovnik, Croatia, Apr. 2016.

- **Weight distribution of rank-metric codes**. *
  Conference "The First Colombian Workshop on Coding Theory", Barranquilla, Colombia, Nov. 2015.

- **Generalized rank weights**.
  Conference "DARNEC 2015", Istanbul Technical University, Turkey, Nov. 2015.

- **Rank-metric codes: Duality and MacWilliams identities**.
  Conference "SIAM AG15", Daejeon, South Korea, Aug. 2015.

- **Delsarte codes and MacWilliams identities**.
  Conference "7th Workshop on Coding and Systems", Salamanca, Spain, July 2015.

- **Subspace codes from Ferrers diagrams**.
  Conference "MEGA 2015 – Effective Methods in Algebraic Geometry", Trento, Italy, June 2015.

- **Subspace codes from Ferrers diagrams**.
  Conference "4th Castle Meeting on Coding Theory and Applications", Palmela, Portugal, Sept. 2014.

- **On the dual minimum-weight codewords of one-point Goppa codes**. *
  Conference "MTNS 2014", Groningen, The Netherlands, July 2014.

- **Partial spreads in network coding**.
  Conference "Random network codes and Designs over GF(q)", Ghent, Belgium, Sept. 2013.

- **Partial spreads in network coding**. *
  Conference "SIAM AG13", Colorado, USA, Aug. 2013.

- **Network coding and algebraic curves**. *
  COST conference on Network Coding, University of Zurich, Switzerland, June 2013.

- **Geometry in coding theory**. *
  Workshop "BunnyTn 3", Trento, Italy, Mar. 2012.

SEMINAR AND COLLOQUIUM TALKS

(invited talks are marked with an asterisk; planned talks are also included)

- **Partitions of matrix spaces and q-rook polynomials**. *
  University of Neuchâtel, Switzerland, Feb. 2019.

- **Adversarial network coding**. *
  University of Paris 8, Paris, France, Dec. 2018.

- **Adversarial network coding**. *
  University of Kentucky, Lexington, USA, Oct. 2018.

- **Density problems in coding theory**.
  University College Dublin, Ireland, May 2018.

- **Adversarial network coding**. *
  University of Neuchâtel, Switzerland, Feb. 2018.

- **Les matématiques et les communications numériques: Des satellites aux réseaux**. *
  University of Neuchâtel, Switzerland, Dec. 2017.

- **A mathematical framework for adversarial network communications**. *
  University College Dublin, Ireland, Nov. 2017.

- **An algebraic framework for physical-layer network coding**.
  University of Neuchâtel, Switzerland, June 2017.

- **An application of coding theory to enumerative combinatorics**. *
  University of Toronto, Canada, May 2017.

- **An algebraic framework for end-to-end physical-layer network coding**. *
  University of Kentucky, Lexington, USA, Mar. 2017.

- **Combinatorics of MacWilliams identities**. *
  Clemson University, Clemson, USA, Jan. 2017.

- **Ferrers diagram codes and the Etzion-Silberstein conjecture**. *
  University of Fribourg, Switzerland, Sept. 2016.

- **Codes endowed with the rank metric**. *
  University of Iaşi, Romania, Apr. 2016.

- **Coding theory and combinatorics**. *
  University of Fribourg, Switzerland, Nov. 2015.

- **Combinatorics of MacWilliams identities**. *
  University College Dublin, Ireland, Oct. 2015.

- **Equidistant codes in network coding**.
  Swiss Graduate Colloquium, Bern, Switzerland, Sept. 2015.

- **Coding theory: Reliable communications over noisy channels**.
  University of Neuchâtel, Switzerland, May 2015.

- **Delsarte codes and their MacWilliams identities**.
  University of Zurich, Switzerland, Mar. 2015.

- **An application of coding theory to enumerative combinatorics**.
  Swiss Graduate Colloquium, Lausanne, Switzerland, Feb. 2015.

- **Rank-metric codes: duality and MacWilliams identities**. *
  University of Montpellier, France, Jan. 2015.

- **Duality of rank-metric codes**. *
  Autonomous University of Barcelona, Spain, Dec. 2014.

- **Error correction in random network coding**.
  Swiss Graduate Colloquium, Geneva, Switzerland, Feb. 2014.

- **Coding and network coding**.
  Swiss Graduate Colloquium, Fribourg, Switzerland, Sept. 2013.

- **Partial spread codes**.
  University of Neuchâtel, Switzerland, May 2013.

- **On the parameters of binary systematic codes of small defect**.
  Workshop "Algebra and Geometry", Bern, Switzerland, Sept. 2012.

- **Goppa codes from the Hermitian curve and its quotients**. *
  University of Basel, Switzerland, May 2012.

- **Introduction to noncommutative geometry**.
  University of Trento, Italy, June 2011.

- **Coxeter groups and affine geometry**.
  University of Trento, Italy, Mar. 2009.

TEACHING EXPERIENCE

- In the Fall 2019, I will be the lecturer of the Matrix Algebra course (MATH10200) at University College Dublin. MATH10200 is a service course offered to B.Sc. students in computer science. The number of students we expect in 2019 is ~ 150.

- Participated in specialized workshops on teaching and mentoring at University College Dublin, e.g. workshop RSSDP10 on "Monitoring, Assessment and Exams".

- Guest lecturer at University College Dublin for a B.Sc. course in coding theory (~ 40 students), 2018.

- Guest lecturer at University College Dublin for a B.Sc. course in linear algebra for students in computer science (≥ 140 students), 2018.

- Invited lecturer for a M.Sc. course in coding theory at the University of Iaşi, Romania, in the framework of the Horizon 2020 Twinning Project n. 692178, April 2016. The lectures were part of a M.Sc. course in network coding and network security, taught by different lecturers.

- Teaching assistant at the University of Neuchâtel (2012–2016) for the following courses:
    - coding theory,
    - cryptography,
    - matroid theory,
    - topology,
    - numerical analysis (twice),
    - calculus,
    - analysis in several variables,
    - stochastic processes for economics (twice, service course offered in the M.Sc. in statistics).

My responsibilities were the following: Preparation and correction of weekly exercise sheets, occasional lecture delivery, student tutoring, help in the preparation and correction of written exams, assistant and co-examiner in oral exams.

OUTREACH

- In Sept. 2016 and Feb. 2018, I participated to information sessions organized by the Italian high school "N. Copernico" (Verona, Italy). These sessions were addressed to high-school students in their final year interested in studying scientific disciplines at univesity level.

- In the last year of my Ph.D., I was selected by my department to present our teaching offering in Mathematics in the high schools of Neuchâtel and the neighbouring region.

- While a M.Sc. student at the University of Trento, I participated as teacher in the preparation of high-school students to the Italian Math Olympiads.

MENTORING EXPERIENCE

- Ph.D students co-supervised: G. Cotardo, jointly with E. Byrne (main supervisor), since Sept. 2018.
- M.Sc. students co-supervised: G. Cotardo, jointly with E. Ballico and E. Byrne, Sept. 2017 – Mar. 2018.

MEMBERSHIP IN SCIENTIFIC SOCIETIES AND ASSOCIATIONS

- Member of the Marie Curie Alumni Association, since May 2018.
- Member of the COST Action n. IC1104 "Random Network Coding and Designs over GF(q)", 2012–2016.
- Nominated student member of the Society for Industrial and Applied Mathematics (SIAM), 2013 – 2016.

PROFESSIONAL EXPERIENCE AND SERVICE

- As part of my Marie Curie project, the organization of a coding theory workshop at University College Dublin is anticipated in March 2020.

- Organizer, jointly with A. Caminata, of various invited talk sessions (ca. 45 participants) within the SIAM AG19 conference on Applied Algebraic Geometry, Bern, Switzerland, July 2019.

- Organizer, jointly with F. Manganiello and G. Matthews, of various invited talk sessions (ca. 15 participants) within the SIAM AG17 conference on Applied Algebraic Geometry, Atlanta, USA, Aug. 2017.

- Organizer, jointly with F. Manganiello, of various invited talk sessions (ca. 15 participants) within the SIAM AG15 conference on Applied Algebraic Geometry, Daejeon, South Korea, Aug. 2015.

- Co-organizer of the Coding Theory and Cryptography Seminar, joint between the universities of Neuchâtel and Zurich, in the period 2013 – 2016. Principal organizers: E. Gorla and J. Rosenthal.

- Served as reviewer for the proceedings of various international conferences (ISIT, WCC, ITW, ...).

- Served as reviewer for several journals in mathematics and information theory, including: Designs, Codes and Cryptography; IEEE Transactions on Information Theory; Journal of Combinatorial Theory A; Discrete Mathematics; Finite Fields and Their Applications; Applicable Algebra in Engineering, Communication and Computing; Advances in Mathematics of Communications; Journal of Algebra and Its Applications.

RESEARCH VISITS

- University of Kentucky, USA, Oct. 2018.
- University of Kentucky, USA, Mar. 2017.
- Clemson University, USA, Jan. 2017.
- University College Dublin, Ireland, Oct. 2015.
- University of Montpellier, France, Jan. 2015.
- Autonomous University of Barcelona, Spain, Dec. 2014.

PARTICIPATION TO INTERNATIONAL CONFERENCES AND WORKSHOPS

(invitation-only events are marked with an asterisk; planned participations are also included)

- Final workshop of the Manta Project (ANR France). Nogaro en Armagnac, France, Aug. 2019. *
- Workshop "Commutative algebra meets combinatorics". Neuchâtel, Switzerland, July. 2019.
- SIAM AG19 conference on Applied Algebraic Geometry. Bern, Switzerland, July 2019.
- c_2 Invariant Meets Rook Theory. Humboldt University Berlin, Germany, Apr. 2019.
- WCC 2019. Henri Lebesgue Center, France, Mar. 2019.
- Contemporary Coding Theory. Oberwolfach, Germany, Mar. 2019. *
- Workshop " Codes, Cryptology and Curves". TU Eindhoven, The Netherlands, Mar. 2019.
- Algebraic Coding Theory for Networks, Storage, and Security. Dagstuhl, Germany, Dec. 2018. *
- Nonlinear Algebra in Applications. ICERM (Brown University), Providence, USA, Nov. 2018.
- MTNS 2018. Hong Kong, China, July 2018.
- SIAM AG17 conference on Applied Algebraic Geometry. Atlanta, USA, Aug. 2017.
- Workshop on Coding Theory and Cryptography. Ghent University, Belgium, Dec. 2017.
- Mathematical Congress of the Americas 2017. Montréal, Canada, July 2017.
- Joint Mathematics Meetings. Atlanta, USA, Jan. 2017.
- Coding Theory in the Time of Big Data. Dagstuhl, Germany, Aug. 2016. *
- Network Coding and Designs. Dubrovnik, Coratia, Apr. 2016.
- The First Colombian Workshop on Coding Theory. Barranquilla, Colombia, Nov. 2015.
- DARNEC '15 – Design and Application of Random Network Codes. Istanbul, Turkey, Nov. 2015.
- SIAM AG15 conference on Applied Algebraic Geometry. Daejeon, South Korea, Aug. 2015.
- 7th Workshop on Coding and Systems. Salamanca, Spain, July 2015.
- MEGA 2015 – Effective Methods in Algebraic Geometry. Trento, Italy, June 2015.
- 4th Castle Meeting on Coding Theory and Applications. Palmela, Portugal, Sept. 2014.
- MTNS 2014. Groningen, The Netherlands, July 2014.

- Algebra, Codes and Networks. Bordeaux, France, June 2014.
- Congress on Privacy and Surveillance. EPFL, Lausanne, Switzerland, Sept. 2013.
- Random network codes and Designs over GF(q). Ghent, Belgium, Sept. 2013.
- SIAM AG13 conference on Applied Algebraic Geometry. Colorado, USA, Aug. 2013.
- COST conference on Network Coding. Zurich, Switzerland, June 2013.
- Trends in Coding Theory. Centro Stefano Franscini, Ascona, Switzerland, Oct. 2012.

PARTICIPATION TO OTHER CONFERENCES, WORKSHOPS, AND SCHOOLS

- Regular participant of the Algebra & Number Theory seminar (since Sept. 2017). School of Mathematics and Statistics, University College Dublin.
- Regular participant of the Information Theory seminar (in the period Nov. 2016 – Aug. 2017). Department of Electrical and Computer Enginnering, University of Toronto.
- Regular participant of the Swiss Graduate Colloquium (in the period Sept. 2012 – Sept. 2016).
- Regular participant of the Coding Theory and Cryptography seminar (in the period Sept. 2012 – Oct. 2016), joint between the Universities of Neuchâtel and Zurich.
- Graduate school "SM'ART – Matroid Theory in Algebra, Representation Theory and Topology". Les Diablerets, Switzerland, Jan. 2016.
- Graduate course "Arithmetic Geometry and Number Theory". Basel, Switzerland, June 2015.
- Graduate school "Let's Matroid". Neuchâtel, Switzerland, Mar. 2015.
- Graduate school "Lattices, Bilinear Forms and Applications". Les Diablerets, Switzerland, Mar. 2014.
- Tutorial "Numerical Algebraic Geometry". Colorado, USA, July 2013.
- Graduate school "Network Coding and Designs over GF(q)". Barcelona, Spain, Feb. 2013.
- Graduate course "Error-correcting codes". EPFL, Lausanne, Switzerland, Oct. 2012.
- Workshop "Algebra and Geometry". Bern, Switzerland, Sept. 2012.
- Graduate school "Boolean Functions and Applications to Cryptography". Trento, Italy, Mar. 2012.
- Workshop "BunnyTn3" on Information Security. Trento, Italy, Mar. 2012.
- Series of talks on cryptography methods for mobile phones and on-line banking. Trento, Italy, 2011.
- Workshop "BunnyTn" on Information Security. Trento, Italy, Sept. 2010.
- First/second meeting of INdAM fellowship holders (one week each). Perugia, Italy, Aug. 2008/2009.