Curriculum vitae - Marco Andreatta

Academic positions
1983-1987 *Assistant professor*, Faculty of Science-University of Trento.
1987-1991 *Associate professor* in geometry, Faculty of Science-University of Milano.
1991-2000 *Associate professor* in geometry, Faculty of Science-University of Trento.
2000- *Full professor* in geometry, Faculty of Science-University of Trento.

Visiting professor
1985/86 Guest Assistant Prof., University of Notre Dame, U.S.A, academic year
1991 Visiting Professor, University of Warsaw, PL, October.
1991 Visiting Professor, University of Notre Dame, U.S.A., December.
1992 Visiting, MSRI Berkley, U.S.A., November.
1993 Visiting Professor, Max-Planck-Institute, Bonn, De, May-June.
1994 Visiting Professor, Max-Planck-Inst.,Bonn, De, September-December
1996 Visiting Professor, Max-Planck-Institute, Bonn-De, May-June.
1997 Visiting Professor, University of Utah, USA., September-November.
2002 Visiting Professor,Newton Institute for Math., Cambridge-UK, May-June
2005 Visiting Professor, Max-Planck-Inst., Bonn, De, May-July.
2009 Research Member, MSRI Berkley, U.S.A., March-April.
2009 Visiting Professor, University of Bayreuth-De, October-November.

Administrative and organizative appointments
Director of the Centro Internazionale di Ricerche Matematiche (CIRM) of the Fondazione Bruno Kessler- Trento, since December 2011. *Member of the scientific commiteee* of C.I.R.M. - FbK-Trento since 2006.
President of the Scienze Museum of Trento (MUSE), since 2011.
Director of the local research unit of the Istituto Nazionale di Alta Matematica (INdAM), since April 2003.
Co-ordinator of the local unit of many *Prin-MIUR projects* since 2001.

Dean of the Faculty of Science (Biol., Phys., Math.,Comp.Science) at the University of Trento, November 2004-december 2008.
Dean of the Mathematical area of the Faculty of Science - University of Trento, (2002-2004).
Dean of the PhD program in Mathematics at the University of Trento (1999 - 2002).
Member of the Consiglio di Amministrazione (Administrativ Board) of the University of Trento, as representative of the Full Professor (2004) and of the Assistant professor (1984-85).

Research activities
My main field of interest is Algebraic Geometry. In particular problems related to the classification of projective varieties of dimension ≥ 3 (key words: Minimal Models, Mori theory, Adjunction theory, Fano varieties, Calabi-Yau and Symplectic manifolds)) and to the study of particular morphisms between projective varieties (key words: Extremal contractions, Fano-Mori contractions, Mori fiber spaces,.
Recently I worked on the following problems:

a) characterization of extremal morphisms in the sense of Mori theory

b) Frenkel-Hartshorne conjecture and its generalizations, i.e. characterization of projective space and other simple varieties;

c) relations between the geometric structure of a projective variety and the one of its hyperplane section (or more generally of a section of an ample vector bundle);

d) Application of the Minimal Model Theory (MMP) to Adjunction Theory.

e) Constructions of special projective varieties with trivial canonical bundles (Kummer constructions of Calabi-Yau and Symplectic manifolds) and computation of their Poincaré polynomials.

f) The Mori Dream Space structure of complex symplectic manifolds of dimension 4.

g) Public understanding of Science, the role of Mathematics.

AMS Subject Classification: 14Jxx, 14Exx, 14F05, 32Jxx, 32Sxx,53Bxx, 53Cxx.

I am author of more then 50 research papers published on international journal with referee (see AMS MathSciNet: http://www.ams.org/mathscinet/search/publications.html?pg1=IID&s1=25985).

Direction and organization of research

Advisor of five PhD thesis, respectively of

M. Mella (1997), Full professor, University of Ferrara

G. Occhetta (1999), Associate professor, University of Trento

D. Panizzolo (2003), Research fellow DISI-Trento.

C. Novelli (2004), Assistent Professor, University of Padova

E. Chierici (2004), Math Teacher, Milano

L. Tasin, (2013), Post Doc, MPI-Bonn and University of Bonn.

Scientific organizers of several international conferences among with

June 1994 School and conference: "Higher dimensional complex varieties" , Trento.

December 1994 Workshop: "Vectors Bundles on Fano Manifold", Trento.

May 1995 School: "Enumerative Geometry of Moduli Spaces of Curves", Trento.

September 1996 School and conference: "Trends in Algebraic Geometry, Applications and Relations with Physics", Trento.

December1998 Workshop: "Trends in Algebraic Geometry and Applications", Trento.

May 2002 Conference "Giornate di Geometria Algebrica e corr.", Anacapri (Na).

May 2004 Conference "Giornate di Geometria Algebrica e corr, Rimini (Bo).

June 2007 Conference: "Algebraic geometry in higher dimensions" , Trento.

September 2010, Conference: "Perspective on Algebraic Varieties", Trento.

Settembre2015 Convegno: "Classification of Projective Varieties", Trento.

July 2016 Convegno: "GVA2016", Trento.

Teacher of intensive advanced schools in algebraic geometry:

September 1999: 22-nd Warsaw Autumn School in Algebraic Geometry, Wikno-Polonia: Morphisms of Projective Varieties from the viewpoint of Minimal Model Theory. Teachers: Andreatta e Mella.

May 2000; School: Introduzione alla teoria dei modell minimalii, Dipartimento di Matematica of Ferrara . Teachers: Andreatta e Mella.

June 2003 – School: Superfici algebriche, for the PhD program of the Dipartimento di Matematica of Trento. Teachers: Andreatta e Catanese.

August 2007- Summer course: Algebraic Geometry Scuola Matematica interuniversitaria, Perugia.

The notes of the first two schools are in the paper n. 40).

Referee and Reviewer.
I am working as a referee for many journal including Asian J. of Math, , Duke Math. J., J. of Algebraic Geometry, Manuscripta Math., Crelle Journal, J. of Diff. Geom., Int. Math. Research Notices, ….
I am also reviewer for the AMS Math Review.
I was referee for PRIN and FIRB projects of the Italian MIUR.

Talks at conferences and workshops (selected in the last 10 years)
May 2006 Conference: Recent dev. in higher dimensional algebraic geometry, Baltimore US.
Title of the talk: On Fano Manifolds.
June 2006 Conference: Birational Geometry of Varieties, Pisa-Italia.
Title of the talk: On Fano Manifolds.
June 2006 Conference: Algebraic Geometry, Warsaw 60-05, Bedlewo-Polonia.
Title of the talk: On Fano Manifolds.
June 2006 Conference: On Resolution of singularities, ICTP Trieste-Italia.
Title of the talk: On Fano Manifolds.
April 2007 Worshop: Workshop on canonical and minimal models, MSRI Berkeley, US.
September 2007 Conference: School-Workshop ''Special Varieties'', Trento.
Title of the talk: On Fano Manifolds.
May 2009 Conference: School Classification of Algebraic Varieties, Schiermonnikoog, NL
Title of the talk: Lifting from an ample section.
December 2009 Conference: Workshop in Algebraic Geometry, Madrid ES
Title of the talk: On the Kummer construction.
December 2011 Workshop: "Algebraic versus Analytic Geometry", ISI Institute in Vienna,
Title of the talk: Minimal Model Program and Adjunction Theory.
October 2012, Conf: "Groups of Automorphisms in Birational and Affine Geometry", Levico (TN),
Titolo Conferenza: Minimal Model Program and Adjunction Theory.
September 2013, Conf: "Classification of Algebraic Varieties", Cetraro,
Titolo Conferenza: Minimal Model Program on quasi polarized varieties.
February 2014, Conf: "Conference on Algebraic Varieties, in honour of prof. Kiem", Seoul Nat. Un.
Titolo Conferenza: Minimal Model Program and Adjunction Theory.
May 2015, Scuola Avanzata al Centro de Giorgi – Pisa
Titolo Lezioni: Rational Curves on Algebraic Varieties.
January 2016, Asian Winter School of Algebraic Geometry, at KIAS – Seoul-Busan, Corea.
Titolo Lezioni: Families of rational curves which determine the structure of the space

I gave invited talks and colloquia at many institutes (including MPI at Bonn, Newton Institute in Cambridge, ICTP in Trieste, MSRI in Berkeley, Stekelov Institute, Moscow) and departments of mathematics.

In 2015 I was invited to give a lecture to the following "Festival"

Festa di Scienza e Filosofia, Virtute e Conoscenza, Foligno April 2015
Titolo: Un future a n-dimensioni, quale Geometria ci conviene?"

Festival dell'Economia, Trento May 2015,
Tavola rotunda: Una cultura in movimento: libri, sviluppo economico e mobilità sociale

All Science Russia Festival, Moscow October 2015
Titolo: "The problem of Malfatti, two centuries of debate".