

**Curriculum Vitae**  
**of**  
**Mustapha Lahyane, Ph.D.**

Professional Address: Institute of Physics and Mathematics (IFM), University of Michoacan  
Universidad de San Nicolas de Hidalgo, Edificio C-3. Ciudad Universitaria.  
Colonia Felicitas del Rio, C.P. 58040 Morelia, Michoacan, Mexico  
E-mail Address: lahylene@ifm.umich.mx

Personal Data: Birthdate: January 01, 1967.  
Gender: Male.  
Military Situation: Duty-Free.  
Marital Status: Living with Ms. Marie-Pierre Meulemans since 1994.  
Nationality: Moroccan.

**SNI:**

January 01, 2009 – December 31, 2011: Member of SNI with level I (SNI I).  
January 01, 2012 – December 31, 2014: Member of SNI with level I (SNI I).  
January 01, 2015 – December 31, 2018: Member of SNI with level I (SNI I).

**PROMEP:**

July 30, 2010 – July 29, 2013: I have the so-called “Perfil Deseable”.  
July 30, 2013 – July 29, 2016: I have the so-called “Perfil Deseable”.

**Member of the Research group: Cuerpo Académico Geometría Diferencial y Algebraica.**  
**Level: En consolidación.**

**Education:**

December 03, 1998: Ph.D. in Mathematics (speciality Algebraic Geometry) obtained with high honors at “Laboratoire de Jean-Alexandre Dieudonné”, U.M.R. C.N.R.S. N:6621. University of Nice Sophia-Antipolis, Nice, France.  
Thesis advisor: Prof. Gang Xiao.  
Group Responsible: Prof. André Hirschowitz.  
Thesis title: Exceptional Curves on Rational Surfaces with  $K^2 = 0$ .  
June 1992: DEA in Pure Mathematics (equivalent to the Masters in Mathematics), University of Nice Sophia-Antipolis.  
Theme: Lie Groups and Algebras.  
Organizers: Prof. François Rouvière and the associated Professor André Cérézo.

June 1991: Maitrise of Mathematics (fourth year university degree), equivalent to the Bachelor of Science in Mathematics, University of Hassan II, Ain Chock. Faculty of Sciences Ain Chock, Casablanca, Morocco.

### Research interests

Algebraic Geometry, Commutative Algebra, Combinatorics, and Applications to Coding Theory.

### Publications in peer-reviewed journals:

- 2014 1. Authors: **Brenda Leticia De La Rosa Navarro, J. Bosco Frías Medina**, Mustapha Lahyane, **Israel Moreno Mejía**, and **Oswaldo Osuna Castro**.  
Title: A Geometric Criterion for the Finite Generation of the Cox Rings of Projective Surfaces.  
Accepted and to be published in *Revista Matemática Iberoamericana*.  
ISSN: 0213-2230. E-ISSN: 2235-0616
2. **Brenda Leticia De La Rosa Navarro**, and Mustapha Lahyane.  
Title: Algebraic-Geometric Codes from Rational Surfaces.  
Accepted and to be published in *Contemporary Mathematics of the American Mathematical Society*.
3. **Brenda Leticia De La Rosa Navarro**, Mustapha Lahyane, and **Emma Previato**.  
Title: Vector bundles with a view toward coding theory.  
Accepted and to be published in *Contemporary Mathematics of the American Mathematical Society*.
- 2013 4. Authors: **Jesús Adrián Cerda-Rodríguez, Gioia Failla**, Mustapha Lahyane, **Israel Moreno Mejía**, and **Oswaldo Osuna Castro**.  
Title: Rational surfaces with an anticanonical divisor not reduced.  
*Analele Stiintifice ale Universitatii OVIDIUS Constanta* 21 (2013), no. 3, 229240.  
Seria Matematica ISSN 1224-1784. Electronic ISSN 1844-0835.
- 2012 5. Autores: **Jesús Adrián Cerda-Rodríguez, Gioia Failla**, Mustapha Lahyane, and **Oswaldo Osuna Castro**.  
Título: Fixed Loci of the anticanonical complete linear systems of anticanonical rational surfaces.  
Balkan Journal of Geometry and Its Applications. Vol. 17, No. 1, (2012), 1-8.
- 2010 6. Author: Mustapha Lahyane.  
Title: On the finite generation of the effective monoid of rational surfaces.  
Journal: *Journal of Pure and Applied Algebra*, Volume 214, Issue 7 (2010), 1217-1240.
- 2008 7. Authors: Mustapha Lahyane, **Gioia Failla** and **Israel Moreno Mejía**.  
Title: On the vanishing of cohomology of divisors on nonsingular rational surfaces.  
Journal: *International Journal of Contemporary Mathematical Sciences*, Volume 3, 2008, number 21, 1031-1040.
- 2007 8. Authors: **Gioia Failla**, Mustapha Lahyane and **Giovanni Molica Bisci**.  
Title: Rational Surfaces of Kodaira type *IV*.  
Journal: *Bollettino dell'Unione Matematica Italiana, Sezione B; articoli di ricerca matematica*, ISSN 0392-4041, Volume 10, Number 3 (2007), pages 741-750.
9. Authors: **Gioia Failla**, Mustapha Lahyane and **Giovanni Molica Bisci**.  
Title: The finite generation of the monoid of effective divisor classes on Platonic rational surfaces.  
Journal: Singularity Theory, Proceedings of the 2005 Marseille Singularity School and Conference, 565-576, CIRM, Marseille, France. World Scientific Publishing Co. 2007.
10. Authors: **Gioia Failla**, Mustapha Lahyane and **Giovanni Molica Bisci**.  
Title: Some Applications of the Set of Curves on Fibred Surfaces to Coding Theory.  
Journal: Communications to SIMAI Congress, ISSN 1827-9015, Vol. 2 (2007).
- 2006 11. Authors: **Gioia Failla**, Mustapha Lahyane and **Giovanni Molica Bisci**.  
Title: On the finite generation of the monoid of effective divisor classes on rational surfaces of type  $(n, m)$ .

- Journal: *Atti dell'Accademia Peloritana dei Pericolanti Classe di Scienze Fisiche, Matematiche e Naturali*. Volume **LXXXIV**, CIA0601001, pp. 1-9, 2006.
- 2005 12. Authors: Mustapha Lahyane and **Brian Harbourne**.  
 Title: Irreducibility of  $-1$ -Classes on Anticanonical Rational Surfaces and Finite Generation of the Effective Monoid.  
 Journal: *Pacific Journal of Mathematics*, Volume **218**, No. 1. (2005), 101-114.
13. Author: Mustapha Lahyane.  
 Title: Irreducibility of the  $(-1)$ -classes on smooth rational surfaces.  
 Journal: *Proceedings of the American Mathematical Society*, Volume **133**, Number 8 (2005), 2219-2224.
14. Author: Mustapha Lahyane.  
 Title: Exceptional curves on smooth rational surfaces with  $-K$  not nef and of self-intersection zero.  
 Journal: *Proceedings of the American Mathematical Society*, Volume **133**, Number 6 (2005), 1593-1599.
- 2004 15. Author: Mustapha Lahyane.  
 Title: Rational surfaces having only a finite number of exceptional curves.  
 Journal: *Mathematische Zeitschrift*, Volume **247** (2004), 213-221.
16. Author: Mustapha Lahyane.  
 Title: Exceptional curves on rational surfaces having  $K^2 \geq 0$ .  
 Journal: *C.R. Acad. Sci. Paris, Ser I*, Volume **338** (2004), 873-878.
- 2002 17. Author: Mustapha Lahyane.  
 Title: Optimal bound for the number of  $(-1)$ -curves on extremal rational surfaces.  
 Journal: *International Journal of Mathematics and Mathematical Sciences*, Volume **31:2** (2002), 123-126.

### Supervised Theses and Postdoctoral Projects:

Name of the postdoc: V. Janitzio Mejía-Huguet, Ph.D..  
 Department: IFM-UMSNH.  
 Title of the Project: Sobre los Números de Sierpinski y Temas Afines.  
 Period: September 1, 2008 - August 31, 2009.  
 Status: Finished on August 31, 2009.  
 Financial support from Conacyt with an amount of \$ 240,000.00 M.N..  
 Responsible of the project: Dr. Mustapha Lahyane.

Name of the postdoc: V. Janitzio Mejía-Huguet, Ph.D..  
 Department: IFM-UMSNH.  
 Title of the Project: Sobre la Función  $\phi$  de Euler y los Números de Fibonacci.  
 Period: September 1, 2009 - August 31, 2010.  
 Status: Finished on August 31, 2010.  
 Financial support from Conacyt with an amount of \$ 240,000.00 M.N..  
 Responsible of the project: Dr. Mustapha Lahyane.

### Ph.D. Students:

- Name of the Student: Gioia Failla.  
 Department: Department of Mathematics of the University of Messina.  
 Title of the Ph.D. Thesis: Hankel Varieties.  
 Date of the thesis Defense: April 4, 2008.  
 Advisor of the Thesis: Dr. Salvatore Giuffrida from the University of Catania.  
 Coadvisor of the Thesis: Dr. Mustapha Lahyane.
- Name of the Student: Paola Stagliano.  
 Department: Department of Mathematics of the University of Messina. Italy  
 Title of the Ph.D. Thesis: Graded modules on commutative noetherian rings generated by  $s$ -sequences.

Date of the thesis Defense: 21 March 2011.

Advisor of the Thesis: Dr. Gaetana Restuccia of the University of Messina, Italy.

Co-advisor: Dr. Mustapha Lahyane.

3. Name of the Student: Jesús Adrián Cerda Rodríguez.  
Department: Instituto de Física y Matemáticas de la Universidad Michoacana de San Nicolás de Hidalgo.  
Title of the Ph.D. Thesis: Geometría de las Superficies Racionales Armónicas.  
Date of the thesis defense: 26 April 2012. Degree obtained with *mención honorífica*.  
Advisor of the Ph.D. Thesis: Dr. Mustapha Lahyane.
4. Name of the Student: Brenda Leticia De La Rosa Navarro.  
Department: Instituto de Física y Matemáticas de la Universidad Michoacana de San Nicolás de Hidalgo.  
Title of the Ph.D. Thesis: Códigos Algebraico-Geométricos en Dimensión Superior.  
Date of the thesis defense: 8 October 2013. Degree obtained with *mención honorífica*.  
Advisor of the Ph.D. Thesis: Dr. Mustapha Lahyane.

#### **graduate Students:**

1. Name of the Student: Brenda Leticia De La Rosa Navarro.  
Department: Instituto de Física y Matemáticas de la Universidad Michoacana de San Nicolás de Hidalgo.  
Title of the Master Thesis: Sobre los Parámetros de los Códigos y los Anillos de Cox de Superficies Racionales.  
Status: Finished, Master degree obtained on August 13, 2009.  
Advisor of the Master Thesis: Dr. Mustapha Lahyane.  
Coadvisor of the Master Thesis: Dr. Israel Moreno Mejía from IM-UNAM.
2. Name of the Student: Andrés Piedra Charco.  
Department: Instituto de Física y Matemáticas de la Universidad Michoacana de San Nicolás de Hidalgo.  
Title of the Master Thesis: Cohomología de las Gavillas Casi-Coherentes sobre Esquemas Noetherianos.  
Status: Finished, Master degree obtained on January 20, 2010.  
Advisor of the Master Thesis: Dr. Mustapha Lahyane.
3. Name of the Student: Oscar Sánchez Reyes.  
Department: PCCM Student.  
Title of the Master Thesis: Sobre la Estructura Idealística de las Inmersiones Cerradas.  
Date of the thesis defense: 24 August 2012.  
Advisor of the Master Thesis: Dr. Mustapha Lahyane.
4. Name of the Student: Carolina Venegas Pérez.  
Department: PCCM Student.  
Title of the Master Thesis: Códigos Convolucionales.  
Date of the thesis defense: 27 June 2011.  
Advisor of the Master Thesis: Dr. Mustapha Lahyane.
5. Name of the Student: Daniel Robles López.  
Department: Instituto de Matemáticas, UNAM con sede D.F.  
Title of the Master Thesis: Sobre la Dimensión de Fibras de Morfismos entre Espacios de Zariski.  
Date of the thesis defense: 26 June 2012.  
Advisor of the Master Thesis: Dr. Mustapha Lahyane.

#### **undergraduate Students:**

1. Name of the Student: Juan Bosco Frías Medina.  
Department: Faculty of Sciences of the University of Colima.  
Title of the Undergraduate Thesis (Licenciatura): Sobre el Carácter Algebraico de los Morfismos de Esquemas Afines.  
Status: Finished, degree obtained on September 09, 2010 with the so-called “*Mención Honorífica*”.  
Advisor of the Thesis: Dr. Mustapha Lahyane.

**Summer Research Stays:**

1. Name of the Student: Juan Bosco Frías Medina.  
 Department: Faculty of Science of the University of Colima (Colima, Mexico).  
 Title of the work: Reduction modulo a prime.  
 Status: Work done. This work was done during the research program called "The Research Summer" from July 16 till August 15 in 2008.
2. Name of the Student: Juan Bosco Frías Medina.  
 Department: Faculty of Science of the University of Colima (Colima, Mexico).  
 Title of the work: Puntos de Orden Finito en Curvas Proyectivas.  
 Status: Work done. This work was done during the Summer research program from June 29, 2009 till August 29, 2009. Financed by Academia de Ciencias of Mexico.
3. Name of the Student: Verónica Suaste Morales.  
 Department: University of Guanajuato.  
 Title of the work: Códigos binarios de Golay desde el punto de vista de los sistemas de Steiner.  
 Status: Work done. This work was done during the Summer research program from June 28, 2010 till August 27, 2010 (XX Verano de la Investigación Científica). Financed by Academia de Ciencias of Mexico.

**Projects**

- January 1, 2010 – December 31, 2010: Member of the research project "Algebraic and geometric tools for security in the world" whose financial support is given by the Bonino-Pulejo Foundation (Sicily, Italy). The responsible of the project is Prof. Gaetana Restuccia from the Mathematics Department of the University of Messina (Sicily, Italy).
- January 1, 2010 – December 31, 2010: The leader of the research project "Sobre el carácter algebraico-geométrico de las superficies proyectivas racionales" whose financial support is given by CIC-UMSNH (Coordinación de la Investigación Científica de la Universidad Michoacana de San Nicolás de Hidalgo). The amount of the financial support is: \$ 50,000.00 M.N.
- January 1, 2009 – December 31, 2009: The leader of the research project on the geometry of rational surfaces with applications to the theories of coding and Cox rings whose financial support is given by CIC-UMSNH (Coordinación de la Investigación Científica de la Universidad Michoacana de San Nicolás de Hidalgo). The amount of the financial support is: \$ 59,400.00 M.N.
- September 01, 2008 – August 31, 2009: The leader of the research project entitled "Sobre la geometría de los puntos del plano proyectivo" whose financial support was given by Promep. The amount of the financial support is: \$ 344,185.00 M.N.
- August 01, 2007 – April 15, 2008: The leader of the research project entitled "Superficies Racionales y Aplicaciones a la Teoría de Códigos" whose financial support was given by CONCYTEG (i.e., Consejo de Ciencia y Tecnología del Estado de Guanajuato). The amount of the financial support is: \$ 72,000.00 M.N.
- July 1, 2008 – March 30, 2009: The leader of the research project entitled "El monoide Efectivo de Superficies Racionales Básicas" whose financial support is given by CIC (Coordinación de la Investigación Científica de la Universidad Michoacana de San Nicolás de Hidalgo) and by Coecyt (i.e., Consejo Estatal de Ciencia y Tecnología del Estado de Michoacán). The amount of the financial support is: \$ 80,000.00 M.N. (\$ 60,000.00 M.N. from CIC-UMSNH and \$20,000.00 M.N. from Coecyt.)
- January 2008 – : Member of the project entitled "Sobre el anillo de Cox de una superficie racional." Proyecto PAPIIT-UNAM, starting date: in January 2008, and renewed for the second time on January 2009 and for the third time on January 2010. The amount of the financial support in 2008, 2009 and 2010 are \$84,198.00 M.N., \$92,843.00 M.N. and \$83,065.00 M.N. respectively.
- November 28, 2008 – December 04, 2008: Member of the project entitled "International School and Conference on Coding Theory" whose financial support was given by CONCYTEG (i.e., Consejo de Ciencia y Tecnología del Estado de Guanajuato).
- 2004 – 2007: Member of the project entitled "Geometría Algebraica de las Singularidades, Combinatoria y Computación". This project is financed by Spain and whose number is: MEC2004 MTM 00958.

**Professional Experiences:**

- March 16, 2008 – September 15, 2011: Full Professor (Profesor-Investigador Titular “C” Tiempo Completo) at the “Instituto de Física y Matemáticas (IFM)” of the “Universidad Michoacana de San Nicolás de Hidalgo”. Morelia, Mexico.
- August 01, 2007 – March 15, 2008: Professor-Researcher (Profesor-Investigador Titular “A” Tiempo Completo) at the “Instituto de Física y Matemáticas (IFM)” of the “Universidad Michoacana de San Nicolás de Hidalgo”. Morelia, Mexico.
- November 01, 2006 – July 31, 2007: Professor-Researcher (Investigador Asociado C) at the “Centro de Investigación en Matemáticas, A.C. (CIMAT)”. Guanajuato, Mexico.
- May 19, 2006 – July 05, 2006: Visiting Professor at the Department of Mathematics of Messina University, Messina, Italy.
- October 20, 2005 – December 14, 2005: Visiting Professor at the Department of Mathematics of Messina University, Messina, Italy.
- December 15, 2004 – December 14, 2007: Associate member of the research group “SINGACOM” of the “Álgebra, Geometría y Topología” Department of Valladolid University, Valladolid, Spain.
- July 12, 2004 – August 31, 2005: Visiting Researcher at the “Álgebra, Geometría y Topología” Department of Valladolid University, Valladolid, Spain.
- July 11, 2002 – July 10, 2004: Marie Curie Post-Doctoral Fellow at the “Álgebra, Geometría y Topología” Department of Valladolid University, Valladolid, Spain.
- June 05 – July 10, 2002: Visiting Researcher at the “Álgebra, Geometría y Topología” Department of Valladolid University, Valladolid, Spain.
- January 28, 2000 – May 30, 2002: Post-Doctoral Fellow at the Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- March 19 – April 20, 2002: Visiting Researcher at the “Laboratoire de Jean-Alexandre Dieudonné”, U.M.R. C.N.R.S. N:6621. University of Nice Sophia-Antipolis, Nice, France.
- November 01 – 15, 2000: Visiting Researcher at the Department of Mathematics and Statistics, McGill University, Montreal, Quebec, Canada.
- 1998 – 1999: Teaching mathematics, Nice, France.
- 1993 – 1996: Research and Teaching Assistant at the University of Nice Sophia-Antipolia, Nice, France.
- 1991 – 1993: Responsible for remedial homework at AGORA, Nice-Est, France.

**Organization of National and International Events:**

I have organized the followings:

- 2012 1. Title of the Event: **International Workshop on Coding Theory and Cryptography**.  
July 14-16, 2010. Universidad Michoacana de San Nicolás de Hidalgo. Morelia. Mexico.  
See the web page: <http://www.ifm.umich.mx/itzel/IWCTC10/>
- 2010 2. Title of the Event: **International Workshop on Coding Theory and Cryptography**.  
July 14-16, 2010. Universidad Michoacana de San Nicolás de Hidalgo. Morelia. Mexico.  
See the web page: <http://www.ifm.umich.mx/itzel/IWCTC10/>
3. Title of the Mini-symposium: **New Trends in Algebraic Geometry and Its Applications**.  
Event: SIMAI Congress 2010. University of Cagliari. Cagliari. Italy.  
Dates of the Event: June 21-25, 2010. Italy.
4. Title of the Event: **Recent Developments in Singularity Theory**.  
June 14-18, 2010. University of Michoacaán. Morelia, Mexico.  
See the web page: <http://www.ifm.umich.mx/itzel/DRTS10/>
- 2009 5. Title of the Event: **PREMIERE RENCONTRE ITALIENNE-AFRICAINE DE MATHEMATIQUE**.  
December 03-04, 2009. Mathematics Department of the University of Messina. Sicily. Italy.
6. Title of the Event: **Workshop on Coding Theory and Geometry of Rational Surfaces**.  
September 23th to 26th 2009. IFM-UMSNH. Morelia, Michoacán, Mexico.  
See the web page: <http://www.ifm.umich.mx/itzel/WCTGRS09/>

7. Title of the Event: **Minitaller de Geometría Diferencial y Algebraica.**  
 May 21-22, 2009, IFM-UMSNH. Morelia, Mexico.  
 See the web page: <http://www.ifm.umich.mx/~osvaldo/GDA.html>
- 2008 8. Title of the Event: **International School and Conference on Coding Theory.**  
 November 28th to December 4th 2008, CIMAT. Guanajuato, Mexico.  
 See the web page: <http://www.matem.unam.mx/coding/>
9. Title of the Event: **Workshop on Rational Surfaces with Applications.**  
 University of Messina, Faculty of Sciences. November 18-19, 2008. Messina (Sicily), Italy.
10. Title of the Event: **Segundo Encuentro de Matemáticas Colima - Morelia.**  
 29-31 October, 2008. Morelia, Mexico.  
 See the web page: <http://www.ifm.umich.mx/colimamorelia/>
11. Title of the Event: **Primer Simposio de Matemáticas Colima-Morelia.**  
 Colima, 29-31 de Mayo, 2008.  
 See the web page: <http://fejer.ucol.mx/colima-morelia/>
12. Title of the Event: **Escuela de Primavera en Matemáticas.**  
 March 28-April 01, 2008. Morelia, Mexico.  
 See the web page: <http://www.ifm.umich.mx/ep2008/>
- 2007 13. Title of the Event: **Workshop on Commutative Algebra, Algebraic Geometry and Applications to Different Fields.**  
 Brolo (Messina, Italy). September 12-15. 2007.

#### Awards and Memberships before 2011

- September 09,2010: Member of the Bachelor Examination Committee of the student Juan Bosco Frías Medina (Universidad de Colima).
- May 13,2010: Member of the Master Examination Committee of the student Dan Silva López (UNAM, DF).
- January 20,2010: Member of the Master Examination Committee of the student Andrés Piedra Charco (PCCM UNAM-UMSNH).
- February 19,2010: Member of the Bachelor Examination Committee of the student Jorge Contreras (UNAM, DF).
- August 13,2009: Member of the Master Examination Committee of the student Brenda Leticia De La Rosa Navarro (PCCM UNAM-UMSNH).
- October 01,2009 – : Evaluador Acreditado (SINECYT).
- 2009 – : Referee for some research mathematics journals.
- 2008 – 2010: Member of some Examination and Institutional Committees of the University of Michoacán.
- July 2006 – : Member of the Editorial Board of “Atti dell’Accademia Peloritana dei Pericolanti Classe di Scienze Fisiche, Matematiche e Naturali”.
- 2005 – : Permanent member of the Academy of the University of Messina, Messina, Italy.
- November 2009 –December 2009: Financial support from “Istituto Nazionale Di Alta Matematica Francesco Severi” in order to visit Messina University (Messina, Italy) for 2 weeks.
- November 2008 – : Financial support from “Istituto Nazionale Di Alta Matematica Francesco Severi” in order to visit Messina University (Messina, Italy) for the period November 08-22 in 2008.
- June 2006 – : Financial support from “Istituto Nazionale Di Alta Matematica Francesco Severi” in order to visit Messina University (Messina, Italy) for one month in 2006.
- June 2006 – : Doctor of Sciences from the University of Valladolid.
- 2005 – 2009: Qualified to teach at the French Universities for the period 2005-2009.
- 1999 – 2003: Qualified to teach at the French Universities for the period 1999-2003.
- November 2008 – : Financial support from “Istituto Nazionale Di Alta Matematica Francesco Severi” in order to visit Messina University (Messina, Italy) for the period November 08-22 in 2008.
- 2007: Financial support from “Istituto Nazionale Di Alta Matematica Francesco Severi” in order to visit Messina University (Messina, Italy) for one month in 2007.
- July 2006 – : Qualified to teach at the Spanish Universities starting from July 2006.
- 2005 – 2009: Qualified to teach at the French Universities for the period 2005-2009.
- 1999 – 2003: Qualified to teach at the French Universities for the period 1999-2003.

- 2004 – 2007: Member of the project entitled “Geometría Algebraica de las Singularidades, Combinatoria y Computación”. This project is financed by Spain and whose number is: MEC2004 MTM 00958.
- 2004 – : Member of the project entitled “Red Temática de Cálculo Simbólico, Álgebra Computacional y Aplicaciones”. This project is financed by Spain and whose number is: MTM2004-21958-E.
- October 2005 – : Financial support from “Istituto Nazionale Di Alta Matematica Francesco Severi” in order to visit Messina University (Messina, Italy) for the period October 20 - November 20, 2005.
- 2002 – 2004: Marie Curie Mathematics Research Fellowship at the “Álgebra, Geometría y Topología” Department of the University of Valladolid, Valladolid, Spain. July 11, 2002 - July 10, 2004.
- 2002: Financial support in order to visit the “Álgebra, Geometría y Topología” Department of the University of Valladolid, Valladolid, Spain.
- 2001: Financial support in order to participate in the NSF-CBMS Regional Research Conference on Modular Elliptic Curves to be held at the University of Central Florida, Orlando, FL on August 8-12, 2001.
- 2000: Financial support in order to visit the Department of Mathematics and Statistics of McGill University, Montreal, Quebec, Canada.
- 2000 – 2002: Mathematics Research Fellowship at the International Centre for Theoretical Physics, Trieste, Italy. January 28, 2000 - May 30, 2002.
- 2001: Member of the American Mathematical Society since March 2001.
- 2003: Invitation to visit the University of California at Irvine for three months as a Teaching Assistant and as a Researcher.

#### Selected Invited Lectures before 2011:

- 2010
1. Title: Some Applications of the Theory of Cox Rings to Coding Theory.  
Event related to the project: Algebraic and geometric tools for security in the world.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: June 30, 2010.
  2. Title: On the vanishing of cohomology of divisors on smooth rational surfaces.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: June 30, 2010.
  3. Title: Algebraic-Geometry Codes.  
Event related to the project: Algebraic and geometric tools for security in the world.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: June 29, 2010.
  4. Title: Divisors on smooth rational surfaces.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: June 29, 2010.
  5. Title: Geometry of Rational Surfaces.  
Event: MSP33- New Trends in Algebraic Geometry and its Applications. SIMAI Congress, Cagliari, Italy. 21-25 June 2010  
Date: Tuesday 22 June 2010.
  6. Title: Rational Surfaces whose Cox Ring is Finitely Generated.  
Event: MSP33- New Trends in Algebraic Geometry and its Applications. SIMAI Congress, Cagliari, Italy. 21-25 June 2010  
Date: Tuesday 22 June 2010.
  7. Title: Anticanonical Linear Systems of Rational Surfaces.  
Event: MSP33- New Trends in Algebraic Geometry and its Applications. SIMAI Congress, Cagliari, Italy. 21-25 June 2010  
Date: Tuesday 22 June 2010.
- 2009
8. Title: Fixed Components of Anticanonical Rational Surfaces.  
Event: SEMINARIO DELLA SEZIONE DE STRUTTURE ALGEBRICHE, GEOMETRICHE, STORIA E FONDAMENTI.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: December 05, 2009.



- 
9. Title: Harbourne-Hirschowitz Surfaces.  
Event: PREMIERE RENCONTRE ITALIENNE-AFRICAINE DE MATHEMATIQUE.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: December 04, 2009.
  10. Title: Anticanonical Rational Surfaces.  
Event: PREMIERE RENCONTRE ITALIENNE-AFRICAINE DE MATHEMATIQUE.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: December 03, 2009.
  11. Title: Anticanonical Rational Surfaces.  
Event: PREMIERE RENCONTRE ITALIENNE-AFRICAINE DE MATHEMATIQUE.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: December 03, 2009.
  12. Title: Anticanonical Systems of Anticanonical Rational Surfaces.  
Event: SEMINARIO DELLA SEZIONE DE STRUTTURE ALGEBRICHE, GEOMETRICHE, STORIA E FONDAMENTI.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: December 02, 2009.
  13. Title: The Cox Ring of Rational Surfaces.  
Event: SEMINARIO DELLA SEZIONE DE STRUTTURE ALGEBRICHE, GEOMETRICHE, STORIA E FONDAMENTI.  
Place: Mathematics Department of the University of Messina. Italy.  
Date: December 01, 2009.
  14. Title: On the Finite Generation of the Effective Monoid of Rational Surfaces.  
October 15, 2009.  
Event: Seminario temático. Singularidades, Geometría Algebraica, Computación e Información.  
15-16 de octubre de 2009. Segovia. Spain.
  15. Title: Sobre la Geometría de Puntos del Plano Proyectivo.  
June 17, 2009.  
Place: UNAM-Unidad Cuernavaca.  
See the web page: <http://www.matcuer.unam.mx/seminarios.php?mes=06>
  16. Title: Sobre las Superficies Racionales Platónicas y de Eckhard.  
April 03, 2009.  
Place: IFM-UMSNH. Morelia.
  17. Title: Sobre la geometría de las superficies racionales.  
March 24, 2009.  
Place: Departamento de Matemáticas, Universidad Autónoma Metropolitana-Unidad Iztapalapa.  
See the web page: <http://posmat.izt.uam.mx/test/sites/default/files/M-Lahyane.pdf>
  18. Title: Cohomología de Gavillas Invertibles sobre Superficies Racionales.  
Event: Seminario de Geometría Algebraica del IM-UNAM.  
Place: Instituto de Matemáticas de la UNAM. Ciudad Universitaria  
Date: March 23, 2009.
  19. Title: Superficies de Harbourne-Hirschowitz y aplicaciones a la teoría de códigos.  
March 06, 2009.  
Place: IFM-UMSNH. Morelia.
  - 2008 20. Title: Finite generation of Cox rings of rational surfaces.  
November 20, 2008 from 17h:00 till 18h:00.  
Place: ACCADEMIA PELORITANA DEI PERICOLANTI. Messina (Italy).
  21. Title: Cox rings of anticanonical rational surfaces.  
November 19, 2008 from 09h:30 till 10h:30.  
Event: Workshop on Rational Surfaces with Applications. Messina (Italy). November 18-19, 2008.
  22. Title: Some applications of rational surfaces.  
November 19, 2008 from 15h:35 till 16h:35.  
Event: Workshop on Rational Surfaces with Applications. Messina (Italy). November 18-19, 2008.

23. Title: Sobre la finitud de generadores del monoide efectivo de las superficies racionales.  
October 23, 2008 from 12h:00 till 12h:20.  
Event: XLI Congreso Nacional, Sociedad Matemática Mexicana.  
Valle de Bravo del 20 al 24 de octubre 2008, Mexico.
24. Title: "Superficies Racionales: un Mundo Fabuloso."  
29 Octubre 2008 from 13:15 till 14:15.  
Facultad de Ciencias Físico-Matemáticas. Universidad Michoacana de San Nicolás de Hidalgo.
25. Title: Superficies Racionales Nodales.  
29 Octubre 2008 from 17:15 till 18:15.  
Event: Segundo Encuentro de Matemáticas Colima - Morelia. Morelia. 29-31 Octubre 2008.
26. Title: El plano proyectivo y uno de sus muchísimos problemas.  
31 May 2008 from 11:30am till 01:00pm.  
Event: Primer Simposio de Matemáticas Colima - Morelia. Colima. 29-31 May 2008.
27. Title: El monoide efectivo de superficies racionales básicas.  
31 octubre 2008 from 13:00 till 13:20.  
Event: Cuatro Congreso Estatal de Ciencias y Tecnología.  
Organized by el Consejo Estatal de Ciencias y Tecnología del Estado de Michoacán. 30-31 octubre 2008.
28. Title: Posgrado Conjunto en Ciencias Matemáticas del UMSNH-UNAM.  
23 Octubre 2008 from 10h:00am till 10h:20am.  
Event: XLI Congreso Nacional, Sociedad Matemática Mexicana.  
Valle de Bravo del 20 al 24 de octubre 2008, Mexico.
- 2007 29. Title: On the vanishing of cohomology of divisors on rational surfaces.  
October 15, 2007 from 13h:00 till 14h:00.  
Event: XL Congreso Nacional, Sociedad Matemática Mexicana.  
Universidad Autónoma de Nuevo León. Monterrey, Mexico.
30. Title: Rational surfaces with rational polyhedral cones of curves.  
September 13, 2007 from 16h:00 till 16h:30.  
Event: Workshop on commutative algebra, algebraic geometry and applications to different fields.  
Brolo (Messina), Sicily, Italy. September 12-15, 2007.
31. Title: On the Vanishing of the Cohomology of Divisors on Rational Surfaces.  
August 31, 2007 from 17h:10 till 18h:10.  
Instituto de Matemáticas-Unidad D.F., UNAM.  
Mexico, D.F., Mexico.
32. Title: Un paseo por el reino de las superficies racionales.  
July 4, 2007 from 11h:00 till 12h:00.  
Departamento de Álgebra, Geometría y Topología de la Universidad de Valladolid.  
Valladolid, Spain.
33. Title: On Basic Rational Surfaces.  
May 29, 2007 from 18h:00 till 19h:00.  
Instituto de Física y Matemáticas de la Universidad Michoacana de San Nicolás de Hidalgo.  
Morelia, México.
34. Title: On Basic Rational Surfaces.  
May 24, 2007 from 8h:30 till 9h:30.  
VII Joint Meeting AMS-SMM. Unidades Académicas de Matemáticas y Física de la Universidad Autónoma de Zacatecas.  
Zacatecas, México.
35. Title: Un paseo por el reino de las superficies racionales.  
May 09, 2007 from 16h:00 till 17h:00.  
Centro de Investigación en Matemáticas (CIMAT).  
Guanajuato, México.
36. Title: On Basic Rational Surfaces.  
May 03, 2007 from 10h:00 till 11h:00.

Facultad de Ciencias de la Universidad de Colima.  
Colima, México.

37. Title: On Basic Rational Surfaces.  
March 21, 2007 from 15h:30 till 16h:30.  
Department of Mathematics of the University of Nebraska-Lincoln.  
Lincoln, United States of America.
- 2006 38. Title: On the finite generation of the monoid of effective classes on rational surfaces.  
November 30, 2006 from 13h:15 till 13h:45.  
CIMAT-CIMPA School  
Vector Bundles  
27<sup>th</sup> November - 8<sup>th</sup> December, 2006. CIMAT, Guanajuato, México.
39. Title: The finite generation of the monoid of effective classes on Platonic rational surfaces.  
November 17, 2006 from 12h:30 till 13h:30.  
Centro de Investigación en Matemáticas (CIMAT).  
Guanajuato, México.
40. Title: Monoid of effective classes on rational surfaces.  
July 03, 2006 from 11h:30 till 12h:30.  
Department of Mathematics of the University of Catania.  
Catania, Italy.
41. Title: On the finite generation of the monoid of effective divisor classes: A survey.  
June 23, 2006 from 15h:00 till 16h:00.  
Mathematics Department of the University of Messina.  
Messina, Italy.
42. Title: Rational surfaces of Kodaira type *IV*.  
June 23, 2006 from 09h:00 till 10h:00.  
Mathematics Department of the University of Messina.  
Messina, Italy.
43. Title: On the generalized rational surfaces of type  $S(n, m)$ .  
June 16, 2006 from 11h:00 till 12h:00.  
Mathematics Department of the University of Messina.  
Messina, Italy.
44. Title: Some Applications of the Set of Curves on Rational Surfaces.  
SIMAI 2006-VIII Congress of the Italian Society for Applied and Industrial Mathematics. Italy.  
Date of the seminar: May 24, 2006.
- 2005 45. Title: Rational surfaces of type  $(n, m)$ .  
December 14, 2005.  
Mathematics Department of the University of Messina.  
Messina, Italy.
46. Title: The number of  $(-1)$ -curves on an extremal rational surface.  
December 13, 2005.  
Mathematics Department of the University of Messina.  
Messina, Italy.
47. Title: Complete linear systems on an rational surface.  
December 12, 2005.  
Mathematics Department of the University of Messina.  
Messina, Italy.
48. Title: Irreducibility of  $(-1)$ -classes.  
December 10, 2005.  
Mathematics Department of the University of Messina.  
Messina, Italy.
49. Title: On triangulated rational surfaces.  
December 09, 2005.

- Mathematics Department of the University of Messina.  
Messina, Italy.
50. Title: Complete linear systems on an rational surface.  
December 02, 2005.  
Mathematics Department of the University of Reggio Calabria.  
Reggio Calabria, Italy.
51. Title: On rational surfaces.  
December 01, 2005.  
The Academy of the University of Messina.  
Messina, Italy.
52. Title: The number of  $(-1)$ -curves on an extremal rational surface.  
November 25, 2005.  
Mathematics Department of the University of Reggio Calabria.  
Reggio Calabria, Italy.
53. Title: The number of  $(-1)$ -curves on an extremal rational surface.  
October 11, 2005.  
Departamento de Álgebra, Geometría y Topología de la Universidad de Valladolid.  
Valladolid, Spain.
54. Title: Monoid of effective divisor classes on rational surfaces.  
2nd EMS Summer School: Braid Groups and Related Topics - Applications to Geometry, Cryptography and Computation.  
September 22 - October 02 (2005). Israel.  
Date of the seminar: September 28, 2005.
55. Title: Irreducibility of  $(-1)$ -classes on rational surfaces.  
2nd EMS Summer School: Braid Groups and Related Topics - Applications to Geometry, Cryptography and Computation.  
September 22 - October 02 (2005). Israel.  
Date of the poster: September 24, 2005. Time: 09h:30-11h:30.
- 2004 56. Title: On rational surface *II*.  
September 30, 2004.  
Departamento de Álgebra, Geometría y Topología de la Universidad de Valladolid.  
Valladolid, Spain.
57. Title: Anticanonical Rational Surfaces.  
Workshop on Commutative Algebra and Algebraic Geometry.  
September 20-24, 2004.  
Piraino (Messina), Italy.
- 2004 58. Title: On Rational Surfaces.  
July 15, 2004.  
Departamento de Álgebra, Geometría y Topología de la Universidad de Valladolid.  
Valladolid, Spain.
- 2003 59. Title: Exceptional Curves on Smooth Rational Surfaces.  
January 24, 2003.  
Mathematics Department of Barcelona University.  
Barcelona, Spain.
- 2002 60. Title: Irreducibility of  $(-1)$ -Divisors on Smooth Rational Surfaces.  
May 03, 2002.  
Dipartimento di Scienze Matematiche, University of Trieste.  
Trieste, Italy.
61. Title: Complete Linear Systems on Smooth Rational Surfaces.  
May 02, 2002.  
Departmental Seminar, The Abdus Salam International Centre for Theoretical Physics (ICTP).  
Trieste, Italy.

62. Title: Irreducibility of  $(-1)$ -Divisors on Rational Surfaces.  
 April 18, 2002.  
 Departamento de Álgebra, Geometría y Topología de la Universidad de Valladolid.  
 Valladolid, Spain.
63. Title: Irreducibility of  $(-1)$ -Divisors on Anticanonical Rational Surfaces.  
 January 29, 2002.  
 Departmental Seminar, The Abdus Salam International Centre for Theoretical Physics (ICTP).  
 Trieste, Italy.
- 2001 64. Title: Optimal Bound for the Number of  $(-1)$ -Curves on Extremal Rational Surfaces.  
 Algebra Weekend, April 21-22, 2001. University of Missouri-Columbia, U.S.A.
- 2001 65. Title: Optimal Bound for the Number of  $(-1)$ -Curves on Extremal Rational Surfaces.  
 AMS special session in Algebraic Geometry, March 30-31, 2001. University of Kansas, U.S.A.
66. Title: Bound for the Set of Exceptional Curves On Extremal Rational Surfaces with  $K^2 = 0$ .  
 February 27, 2001.  
 Departmental Seminar, The Abdus Salam International Centre for Theoretical Physics (ICTP).  
 Trieste, Italy.
- 2000 67. Title: About Exceptional Curves in Rational Surfaces.  
 November 10, 2000.  
 Departmental Seminar, McGill University.  
 Montreal, Canada.
68. Title: Some Rational Surfaces Having Only a Finite Number of Exceptional Curves.  
 March 14, 2000.  
 Departmental Seminar, The Abdus Salam International Centre for Theoretical Physics (ICTP).  
 Trieste, Italy.
- 1999 69. Title: Some Results on Rational Surfaces.  
 The Third Annual Midwest Algebraic Geometry Conference, October 8-10, 1999. Missouri-Columbia  
 university. U.S.A.
- 1998 70. Title: Effective Cone of Rational Surfaces with  $K^2 = 0$ .  
 March 25, 1998.  
 Departmental Seminar, Laboratoire Jean-Alexandre Dieudonné, University of Nice Sophia-Antipolis.  
 Nice, France.
71. Title: Exceptional Curves on Rational Surfaces with  $K^2 = 0$ .  
 February 04, 1998.  
 Departmental Seminar, Laboratoire Jean-Alexandre Dieudonné, University of Nice Sophia-Antipolis.  
 Nice, France.
- 1997 72. Title: The Mordell-Weil Group of Elliptic Surfaces *II*.  
 July 1997.  
 Departmental Seminar, Laboratoire Jean-Alexandre Dieudonné, University of Nice Sophia-Antipolis.  
 Nice, France.
73. Title: The Mordell-Weil Group of Elliptic Surfaces *I*.  
 July 1997.  
 Departmental Seminar, Laboratoire Jean-Alexandre Dieudonné, University of Nice Sophia-Antipolis.  
 Nice, France.

#### Professional Activities before February 2011:

- September 2010- January 2011: Co-organizer of the seminars of the Algebraic Geometry Seminar at the “Instituto de Física y Matemáticas” of the University of Michoacán. Morelia, Mexico.
- March 2010- July 2010: Co-organizer of the monthly seminars of the Algebraic Geometry Seminar at the “Instituto de Física y Matemáticas” of the University of Michoacán. Morelia, Mexico.

- September 2009- February 2010: Co-organizer of the monthly Algebraic Geometry Seminar at the “Instituto de Física y Matemáticas” of the University of Michoacán. Morelia, Mexico.
- August 2008 –July 2009: Organizer of the weekly Mathematics Colloquium at the “Instituto de Física y Matemáticas” of the University of Michoacán. Morelia, Mexico.
- January 2008 –February 2009: The organizer of the weekly Algebraic Geometry Seminar at the “Instituto de Física y Matemáticas” of the University of Michoacán. Morelia, Mexico.
- September-December 2007: Co-organizer of the weekly Algebraic Geometry Seminar at the “Instituto de Física y Matemáticas” of the University of Michoacán. Morelia, Mexico.
- January 2008 – : The organizer of the Algebraic Geometry Seminar at the “Instituto de Física y Matemáticas” of the University of Michoacán. Morelia, Mexico.
- September-December 2007: Co-organizer of the Algebraic Geometry Seminar at the “Instituto de Física y Matemáticas” of the University of Michoacán. Morelia, Mexico.
- 2003 – 2005    October 09, 2003-July 21, 2005:  
Organizer of the “Geometría Algebraica y Singularidades” seminars at the “Álgebra, Geometría y Topología” Department of the University of Valladolid (see <http://www.cie.uva.es/algebra/singacom>). Valladolid, Spain.
- 2004            February 2004-May 2004:  
Organizer of the new seminars: Doctoral seminars at the “Álgebra, Geometría y Topología” Department of the University of Valladolid. Valladolid, Spain.
- 2001            June 15- August 15, 2001:  
A dissertation advisor of Mr. Aryal, a mathematics diploma course student. His dissertation title is: Schemes and Rational Surfaces.  
The Abdus Salam International Centre for Theoretical Physics (ICTP).  
Trieste, Italy.
- 2001            February-May, 2001:  
Tutor of the students of Diploma Course for the Algebraic Geometry Course, The Abdus Salam International Centre for Theoretical Physics (ICTP).  
Trieste, Italy.

#### International Meetings before 2011:

- July 2010        Title of the Event: **International Workshop on Coding Theory and Cryptography**.  
July 14-16, 2010. Universidad Michoacana de San Nicolás de Hidalgo. Morelia. Mexico. See the web page: <http://www.ifm.umich.mx/itzel/IWCTC10/>
- June 2010        Title of the Mini-symposium: **New Trends in Algebraic Geometry and Its Applications**.  
Event: SIMAI Congress 2010. University of Cagliari. Cagliari. Italy.  
Dates of the Event: June 21-25, 2010. Italy.
- December 2009 Participation in the “PREMIERE RENCONTRE ITALIENNE-AFRICAINE DE MATHEMATIQUE” (First Italian-African Meeting of Mathematics).  
November 30-December 05, 2009. University of Messina. Italy.
- November-December 2009 Participation in the “Seminario Della Sezione Di Strutture Algebriche, Geometriche, Storia Fondamenti” .  
November 30-December 05, 2009. University of Messina. Italy.
- October 2009    Participation in the “Seminario Temático. Singularidades, Geometría Algebraica, Computación e Información” .  
15-16 de octubre de 2009. Segovia. Spain.
- September 2009 Participation in the “Workshop on Coding Theory and Geometry of Rational Surfaces” .  
September 23th to 26th. IFM-UMSNH. Morelia, Michoacán, Mexico.  
See the web page: <http://www.ifm.umich.mx/itzel/WCTGRS09/>
- November-December 2008 Participation in the “International School and Conference on Coding Theory” .  
November 28th to December 4th 2008, CIMAT. Guanajuato, Mexico.  
See the web page: <http://www.matem.unam.mx/coding/>
- November 2008 Participation in the “Workshop on Rational Surfaces with Applications” . University of Messina, Faculty of Sciences. November 18-19, 2008. Messina (Sicily), Italy.

- October, 2007: Participation in the “Algebraic Geometry, Coding and Computing.” University of Valladolid-Campus of Segovia, October 8-10, 2007. Spain.
- September, 2007: Participation in the “Workshop on commutative algebra, algebraic geometry and applications to different fields.” Brolo (Messina), Sicily, Italy. September 12-15, 2007.
- May, 2007: Participation in the VII Joint Meeting AMS-SMM. Unidades Académicas de Matemáticas y Física de la Universidad Autónoma de Zacatecas. May 23-26, 2007. Zacatecas, México.
- December, 2006: Participation in the CIMAT-CMI-VBAC Conference on Moduli Spaces and Vector Bundles, held at CIMAT. Period: 11-15 December. 2006. CIMAT. Guanajuato, Mexico.
- Nov.-Dec., 2006: Participation in the CIMAT-CIMPA School: Vector Bundles. From the 27<sup>th</sup> of November till the 18<sup>th</sup> of December, 2006. CIMAT. Guanajuato, Mexico.
- May, 2006: Participation in the SIMAI 2006-VIII Congress of the Italian Society for Applied and Industrial Mathematics, held at the Hotel Village Baia samuele, Scicli (Ragusa), Italy from 22<sup>nd</sup> to 26<sup>th</sup> of May 2006.
- Sept.-October, 2005: Participation in the “2nd EMS Summer School: Braid Groups and Related Topics - Applications to Geometry, Cryptography and Computation.” September 22-October 02 (2005). Israel.
- June, 2005: Participation in “Biomat. Mathematics and life sciences: Models of development,” Universidad de Granada. June 06-17, 2005. Spain.
- January, 2005: Participation in the “Conférence générale de singularités,” Jaunuary 31, 2005 - February 04, 2005. Centre International de Rencontres Mathématiques. Marseille, France.
- February, 2005: Participation in the “Applications des singularités,” February 07-11, 2005. Centre International de Rencontres Mathématiques. Marseille, France.
- September, 2004: Participation in the “Workshop on Commutative Algebra and Algebraic Geometry,” September 20-22, 2004. Piraino (MESSINA), Italy.
- September, 2004: Participation in the “IST Courses on Algebraic Geometry,”  
Second series: Degeneration techniques in algebraic geometry.  
September 13-17, 2004. Departamento de Matemática, Instituto Superior Técnico. Lisbon. Portugal.  
Organizer: Margarida Mendes Lopes (mmlopes@math.ist.utl.pt)
- June, 2004: Participation in the “III Iberoamerican Congress on Geometry,”  
June 08-12, 2004. Salamanca, Spain.
- May, 2004: Participation in the “IST Courses on Algebraic Geometry,”  
First series: Techniques in algebraic geometry.  
May 03-05, 2004. Departamento de Matemática, Instituto Superior Técnico. Lisbon. Portugal.  
Organizer: Margarida Mendes Lopes (mmlopes@math.ist.utl.pt)
- May, 2003: Participation in the “First Russian-Spanish Meeting on Arithmetic and Geometry,”  
May 5th-9th, 2003, Mathematics Department of Salamanca University. Salamanca, Spain.
- December, 2002: Participation in the “Workshop on Global Geometry of Algebraic Varieties,”  
December 19-21, 2002, Facultad de Matemáticas, Universidad Complutense de Madrid. madrid, Spain.
- October, 2001: Participation in the “Workshop on Algebraic Geometry,”  
October 1-5, 2001, International School for Advanced Studies. Trieste, Italy.
- August, 2001: Participation in the “Conference on Modular Elliptic Curves,”  
August 08-12, 2001, University of Central Florida, Orlando. Florida, U.S.A.
- May-June, 2001: Participation in the “School on High-Dimensional manifold Topology,”  
May 21-June 8, 2001, International Centre for Theoretical Physics (ICTP).  
Trieste, Italy.
- July-August, 2000: Participation in the “School on automorphic forms on  $GL(n)$ ,”  
July 31-August 18, 2000, International Centre for Theoretical Physics (ICTP).  
Trieste, Italy.
- April-May, 2000: Participation in the “School on vanishing theorems and effective results in Algebraic Geometry,”  
April 25-May 12, 2000, International Centre for Theoretical Physics (ICTP).  
Trieste, Italy.

- July-August, 1999: Participation in the “School on Algebraic Geometry,”  
July 22-August 13, 1999, International Centre for Theoretical Physics (ICTP).  
Trieste, Italy.
- March, 1999: Invitation to GAEL VII (Géométrie algébrique en liberté),  
March 22-26, 1999, C.I.R.M., Luminy, Marseille, France.
- March, 1997: Participation in GAEL V, March 1997, C.I.R.M., Luminy, Marseille, France.
- June, 1993: Participation in the School on Computational Aspects of Algebraic Geometry, June 7-10, 1993,  
Nice Sophia-Antipolis, France.
- June, 1993: Participation in the School on Vector Bundles on Surfaces, June 14-18, 1993, Nice Sophia-  
Antipolis, France.

### Teaching Activities before 2011:

- August-December 2010: Teaching a master course at the Institute of Physics and Mathematics of the University  
of Michoacán. Morelia, Mexico.  
The title of the course is: Geometría Algebraica. Es un curso básico.
- August-December 2010: Teaching a master course at the Institute of Physics and Mathematics of the University  
of Michoacán. Morelia, Mexico.  
The title of the course is: Geometría (Teoría de Esquemas). Es un curso avanzado.
- February 2010-June 2010: Teaching a master course at the Institute of Physics and Mathematics of the Uni-  
versity of Michoacán. Morelia, Mexico.  
The title of the course is: Commutative Algebra. Es un curso básico.
- August 2009-January 2010: Teaching a master course at the Institute of Physics and Mathematics of the Uni-  
versity of Michoacán. Morelia, Mexico.  
The title of the course is: Commutative Algebra . Es un curso básico.
- February-July 2009: Teaching a master course at the Institute of Physics and Mathematics of the University  
of Michoacán. Morelia, Mexico.  
The title of the course is: Geometría (Teoría de Singularidades). Es un curso avanzado.
- February-July 2009: Teaching a master course at the Institute of Physics and Mathematics of the University  
of Michoacán. Morelia, Mexico.  
The title of the course is: Seminario de Geometría (Superficies).
- September 2008-February 2009: Teaching a master course at the Institute of Physics and Mathematics of the  
University of Michoacán. Morelia, Mexico.  
The title of the course is: Complex Variable.
- September 2008-February 2009: Teaching a master course at the Institute of Physics and Mathematics of the  
University of Michoacán. Morelia, Mexico.  
The title of the course is: Algebraic Geometry.
- September 2008-February 2009: Teaching a master course at the Institute of Physics and Mathematics of the  
University of Michoacán. Morelia, Mexico.  
The title of the course is: Seminario de Geometría I.
- August 2008-February 2009: Teaching an undergraduate course at the Facultad de Ciencias Físico Matemáticas  
of the University of Michoacán. Morelia, Mexico.  
The title of the course is: Algebraic Curves.
- March 2008-August 2008: Teaching a master course at the Institute of Physics and Mathematics of the Uni-  
versity of Michoacán. Morelia, Mexico.  
The title of the course is: Topology.
- March 2008-August 2008: Teaching a master course at the Institute of Physics and Mathematics of the Uni-  
versity of Michoacán. Morelia, Mexico.  
The title of the course is: Algebraic Geometry.
- February 2008-July 2009: Teaching an undergraduate course at the Facultad de Ciencias Físico Matemáticas  
of the University of Michoacán. Morelia, Mexico.  
The title of the course is: Algebraic Curves.
- February 2008-July 2009: Teaching a course (de Licenciatura) at the Facultad de Ciencias Físico Matemáticas  
of the University of Michoacán. Morelia, Mexico.  
The title of the course is: Topología.



- September 2007-February 2008: Teaching a master course at the Institute of Physics and Mathematics of the University of Michoacán. Morelia, Mexico.  
 The title of the course is: Complex Variable.
- August 2007-December 2007: Teaching a master course at CIMAT. Guanajuato, Mexico.  
 The title of the course is: Selected themes on Riemann Surfaces.
- June 2006: Teaching a Ph.D. course at the Department of Mathematics of Messina University, Messina, Italy.  
 The title of the course is: The geometry of rational surfaces.
- November 2005: Teaching a Ph.D. course at the Department of Mathematics of Messina university, Messina, Italy.  
 The title of the course is: Introduction to the theory of rational surfaces.
- Feb.-May 2001: Tutor of the students of Diploma Course for the Algebraic Geometry Course. The Abdus Salam International Centre for Theoretical Physics (ICTP). Trieste, Italy.
- 1998-1999: Teaching mathematics, Nice, France.
- 1993-1996: Teaching Assistant, University of Nice Sophia-Antipolis. Nice, France.
- 1991-1993: Responsible for remedial homework at AGORA, Nice-Est. France.

**Computer Skills and Languages:**

Latex. Linux. Maple. Unix.

**Knowledge of Languages:**

Read: Arabic, French, English, Spanish.

Write: Arabic, French, English, Spanish.

Read: Arabic, French, English, Spanish.