

Curriculum vitae.

1. Personal information:

Names and last names: Francisco Antonio Muntaner Batle.

ID number: 18225796 k.

Date of birth: 23/05/1974

Place of birth: Palma de Mallorca (Mallorca), Balears, Spain.

Sex: Male.

e-mail: famb1es@yahoo.es

Phone numbers: 656 87 09 85 / 971 75 42 53.

2. Academic background:

-Graduated student in mathematics by Western Michigan University (1992-1996).

-Master in mathematics by Western Michigan University (1996-1998).

Note: Both titles have been recognized in Spain officially.

-Doctor in mathematics by Catalanian Tech. (1998-2001).

-Thesis advisor: Dr. Anna Lladó Sánchez.

3. Brief description of my research line:

I am particularly interested in the area of graph theory. More specifically, in graph labelings.

In particular my work concentrates on edge magic labelings, super edge magic labelings, (k,d) -arithmetic labelings, harmonious labelings, graceful labelings, alpha labelings, equitable labelings and strong indexable labelings. The focus of my research concentrates in studying the relationship existing among labelings, the probability that a given labeling exists, extremal conditions on the graphs that admit such labelings, and counting non-isomorphic labelings. The enumeration techniques that I use are very related with the topic of graph products, and this has been the main focus of my research during the last years. Furthermore, I have studied structural graph theory, characterizations of certain types of degree sequences of graphs and questions related with the Spanish law.

4. Related positions:

-Teacher assistant , Western Michigan University (1996-1998).

-Department assistantship in Catalonian Tech (1999-2002).
(Ph.D. thesis completion).

- Catalonian Tech. (Escuela superior de ingenieros de telecomunicaciones.
Campus de castelldefels).

I taught the following courses:

2002-2003: Probability and Statistics for telecommunication engineering.

Brief description of the subject:

Classical combinatorial methods.

Bayes' theorem.

Dircrete and continuous probability distributions.

Random vectors.

Stadistics (confidence intervals).

Linear Regresion.

2003-2004: Foundations of mathematics I for aeronautical engineering.

Brief description of the subject: Diferential and integral calculus in several variables. Line and surface integrals.

2003-2004: Foundations of mathematics II for telcomunication engineering.

Brief description of thesubject: Laplace transformation, ordinary differential eaquations with and without initial values, Fourier series, Fourier transformation.

Note: In all courses I got excellent evaluations by students, and thanks to such evaluations the university sent me congratulation letters for all of my courses.

-Current Position

Graph theory and applications research group,
School of electrical engineering and computer Science,
Faculty of engineering and built envivornment
University of Newcastle,
NSW 2308 Australia.

(see the following web page:

www.graphtheorygroup.com)

5. Languages:

Catalán: spoken, written, read, understood.
Spanish: “ “ “ “
English: “ “ “ “

6. Participation in grants:

TITLE: Transporte y gestión de la información en sistemas distribuidos:
Modelización de redes y diseño de algoritmos (ref: TIC 2001-2171).
FINANCING INSTITUTION: CICYT.
PARTICIPATING INSTITUTIONS: Catalanian tech.
PERIOD OF TIME: 2000-2002.
MAIN RESEARCHER: Josep Fábrega Canudas.

TITLE: Transporte y gestión de la información en sistemas distribuidos:
Modelización de redes y diseño de algoritmos (ref: TIC 2000-1017).
FINANCING INSTITUTION: CICYT.
PARTICIPATING INSTITUTIONS: Catalanian tech.
PERIOD OF TIME: 2002-2004.
MAIN RESEARCHER: Josep Fábrega Canudas.

7. Ph.D. Students:

Name: Christian Barrientos Díaz.
Title of thesis: Difference Vertex Labelings.
Date of defense: 15/ 07/ 2004.
Ph.D. thesis directors: Francisco Antonio Muntaner Batle, Oriol Serra Albó.

8. Participations in other Ph.D. thesis and projects:

-Member of the examiner board for the thesis:
“Minimum metric dimension of certain interconnection networks.”
STUDENT: Mrs Chris Monica M.
SUPERVISOR: Dr. R. Bharati .
COUNTRY: India.

-Member of the examiner board for the thesis:
“Total labelings of some families of rees and graphs with chords.”
STUDENT: Mr M Hussain.
SUPERVISOR:
COUNTRY: Pakistan.

-Member of the examiner board for the thesis:

“Approximation algorithms for the achromatic number of graphs.”

STUDENT: Mrs. Sharmila Mary Arul.

SUPERVISOR: Dr. Indra Rajasingh

COUNTRY: India.

-“Face Labelings of Graphs.”

STUDENT: Mrs. Fozia Bashir.

SUPERVISOR: Dr. Martin Baca

COUNTRY: Pakistan.

-Member of the examiner board for the thesis:

“Studies on inverse domination parameters and related concepts in graphs.”

STUDENT: Mrs. K. Ameenal Bibi.

SUPERVISOR: Dr. R. Selvakumar

COUNTRY: India.

9. Member of editorial boards for mathematics international journals and other journal activities:

- Member of the editorial board for

“Pioneer journal of mathematics and mathematical sciences” (see <http://www.pspchv.com>)

- Referee for many international journals

Discrete Mathematics.

Utilitas Matematica.

Ars Combinatoria.

Journal of Combinatorial Mathematics and Combinatorial Computing.

Australasian Journal of combinatorics.

Discusiones Mathematicae Graph Theory

Bulletin of the ICA

10. Publications:

1. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.

TITLE: Bertrand’s postulate and magical product labelings.

REFERENCE: Bull. Inst. Combin. Appl. **30** (2000) 53-65.

2. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.

TITLE: The place of super edge-magic labelings among other classes of labelings.

REFERENCE: Discrete Math. **231** (2001) 153-168.

3. AUTHOR: F.A. Muntaner-Batle.
TITLE: Special super edge magic labelings of bipartite graphs.
REFERENCE: J. Combin. Math. Combin. Comput. **39** (2001)107-120.
4. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.
TITLE: On super edge magic graphs.
REFERENCE: Ars Combin. **64** (2002) 81-95.
5. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.
TITLE: Magical coronations of graphs.
REFERENCE: Australas. J. Combin. **26** (2002) 199-208.
6. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.
TITLE: Labeling the vertex amalgamation of graphs.
REFERENCE: Discuss. Math. Graph Theory **23** (2003) 129-139.
7. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.
TITLE: On the edge magic labelings of certain disjoint unions of graphs.
REFERENCE: Australas. J. Combin. **32** (2005) 225-242.
8. AUTHORS: F.A. Muntaner-Batle.
TITLE: A brief survey on graph labelings.
REFERENCE: Actas de las terceras jornadas de matemática discreta (Sevilla 2002), 198-203.
9. AUTHORS: C. Gómez, F.A. Muntaner-Batle.
TITLE: ¿Quién da más?.
REFERENCE: Indret (www.indret.com) 23 pages.
10. AUTHORS: F.A. Muntaner-Batle, M.Rius-Font.
TITLE: Some results about super edge magic and (k,d) -arithmetic graphs and labelings.
REFERENCE: Utilitas Math. **71** (2006) 57-64.
11. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.
TITLE: Some new results on the super edge magic deficiency of graphs.
REFERENCE: J. Combin. Math. Combin. Comput. **55** (2005) 17-31.
12. AUTHORS: A. Lladó, F.A. Muntaner-Batle.
TITLE: Any tree is a large subtree of a magic tree.
REFERENCE: J. Combin. Math. Combin. Comput. **35** (2006) 291-297.

13. AUTHORS: M. Baca, Y. Lin, F.A. Muntaner-Batle.
TITLE: Antimagic labelings of trees.
REFERENCE: Utilitas Math. To appear.
14. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.
TITLE: On the super edge-magic deficiency of graphs.
REFERENCE: Ars Combin. **78** (2006) 33-45.
15. AUTHORS: F.A. Muntaner-Batle, M. Rius-Font.
TITLE: Embedding trees into super edge magic trees.
REFERENCE: Bull. Inst. Combin. Appl. **52** (2008) 51-60.
16. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle.
TITLE: Two construction methods concerning the conjecture of Truszczynski.
REFERENCE: Preprint.
17. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle, M.
Rius-Font.
TITLE: Labeling generating matrices.
REFERENCE: J. Combin. Math. Combin. Comput. **67** (2008) 189-216.
18. AUTHORS: G. Arujo, R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-
Batle.
TITLE: How many graphs are super edge magic?. An asymptotical
approach.
REFERENCE: J. Combin. Math. Combin. Comput. **65** (2008) 33-40
19. AUTORS: M. Baca, Y. Lin, F.A. Muntaner-Batle.
TITLE: Super edge antimagic labelings of the path-like tress.
REFERENCE: Utilitas Math. **73** (2007) 117-128
20. AUTHORS: M. Baca, Y. Lin, F.A. Muntaner-Batle.
TITLE: Normalized embeddings of path-like tress.
REFERENCE: Utilitas Math. **78** (2009) 11-31.
21. AUTHORS: M. Baca, Y. Lin, F.A. Muntaner-Batle.
TITLE: A note on the even disjoint unions of paths.
REFERENCE: AKCE int. J. Graphs comb. **6** (2009) no 1 41-45.
22. AUTHORS: F.A. Muntaner-Batle, M. Rius-Font.
TITLE: On the structure of path-like tress.
REFERENCE: Discussiones mathematicae graph theory. **28** no 2 (2008).
249-265.

23. AUTHORS: F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: A note on the degree sequences of graphs with restrictions.
 REFERENCE: AKCE international Journal of Graphs and Combinatorics.
 Submitted.
24. AUTHORS: M. Baca, Y. Lin, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: Strong labelings of linear forests.
 REFERENCE: Acta Mathematica Sinica English Series **25** no 12, 1951-1964.
25. AUTHORS: R. Ichishima, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: Bounds on the size of super edge magic graphs depending on the
 girth.
 REFERENCE: Ars Combin. To appear.
26. AUTHORS: M. Baca, F.A. Muntaner-Batle, A. Semanicova-Fenovcicova,
 M.K. Shafiq.
 TITLE: On super (a,2)-edge antimagic total labelings of disconnected graphs.
 REFERENCE: Ars Combin. To appear.
27. AUTHORS: S. C. López Massip, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: Magic coverings and the Kronecker product
 REFERENCE: Utilitas Mathematics. Submitted.
28. AUTHORS: G. Bloom, M. Lampis, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: Queen labelings.
 REFERENCE: AKCE int. J. Graphs comb. To appear.
29. AUTHORS: A. Ahmad, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: On the product $\vec{C}_m \otimes_h \{\vec{C}_n, \vec{C}_n\}$ and other topics.
 REFERENCE: Ars Combintoria. To appear.
30. AUTHORS: S. C. López Massip, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: Super edge magic models.
 REFERENCE: Graph theory and applications. To appear.
31. AUTHORS: S. C. López Massip, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: Problemas abiertos sobre etiquetamientos super edge-magic y temas
 relacionados.
 REFERENCE: VII jornadas de matemática discreta y algoritmica, Castro
 Urdiales.

32. AUTHORS: A. Ahmad, S. C. López Massip, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: "Enumerating super edge-magic labelings for the union of non-isomorphic graphs"
 REFERENCE: Bulletin of the Australian Mathematical Society. To appear.
33. AUTHORS: A. Ahmad, S. C. López Massip, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: "Bi-magic and other generalizations of super edge-magic labelings"
 REFERENCE: Bulletin of the Australian Mathematical Society. To appear.
34. AUTHORS: R. Ichishima, S. C. López Massip, F.A. Muntaner-Batle, M. Rius-Font.
 TITLE: "More labelings that can be transferred from the product \otimes_i work in progress."
 REFERENCE. Work in progress.
35. AUTHORS: R.M. Figueroa-Centeno, R. Ichishima, F.A. Muntaner-Batle, A. Oshima,
 TITLE: "A magical approach to some labeling conjectures"
 REFERENCE: *Discussiones Mathematicae Graph Theory* **31** 1(2011), 79-113.

10. Stays in other centers:

CENTER: Western Michigan University.
 PLACE: Kalamazoo (Michigan).
 COUNTRY: EEUU.
 DURATION: 6 years, (1992-1998).
 REASON OF STAY: Major, masters and research.

CENTER: University of Newcastle.
 PLACE: Newcastle.
 COUNTRY: Australia.
 DURATION: 1 month (2003).
 REASON OF STAY: Research.

CENTER: Universidad Pedro Ruíz Gallo.
 PLACE: Chiclayo.
 COUNTRY: Perú.
 DURATION: 1 month (2004).
 REASON OF STAY: Teaching a research course.

CENTER: Abdus Salam School of Mathematical Science.
PLACE: Lahore.
COUNTRY: Pakistan.
DURATION: 21 days (2008).
REASON OF STAY: Research.

11. Workshops and conferences:

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: Seminar of graph theory.
TITLE: On super edge magic graphs.
PLACE: Western Michigan University.
YEAR: 1996-1997

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: Seminar of graph theory.
TITLE: Results on edge magic graphs.
PLACE: Western Michigan University.
YEAR: 1997-1998.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: Seminar of history of mathematics.
TITLE: The Fields Medal.
PLACE: Western Michigan University.
YEAR: 1998.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: Seminar of algebra.
TITLE: Algebraic structures: loops.
PLACE: Western Michigan University.
YEAR: 1998.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: Seminario de teoría de grafos.
TITLE: On magic graphs.
PLACE: Universitat Politècnica de Catalunya.
YEAR: 1999.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: Seminario de teoría de grafos.
TITLE: Product magic labelings and the Bertrand's postulate.
PLACE: Universidad politécnica de Cataluña.
YEAR: 2000.

TYPE OF PARTICIPATION: Oral presentation
CONFERENCE: Seminario de teoría de grafos
TITLE: On the super edge magic deficiency of graphs
PLACE: Universidad Politécnica de Cataluña
YEAR: 2001.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: Seminario de teoría de grafos
TITLE: Super edge magic graphs and matrices
PLACE: Universidad Politécnica de Cataluña
YEAR: 2001.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: The Joint Mathematics Meeting.
TITLE: On edge magic graphs.
PLACE: Baltimore.
YEAR: 1998.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: 17th British Combinatorial Conference.
TITLE: The place of super edge magic labelings of graphs among other classes of labelings.
PLACE: University of Kent at Canterbury.
YEAR: 1999.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: 9th quadrenial international conference on graph theory, combinatorics, algorithms and applications.
TITLE: On the super edge magic deficiency of graphs.
PLACE: Western Michigan University, Kalamazoo.
YEAR: 2000.

TYPE OF PARTICIPATION: Oral presentation.
TITLE: Terceras jornadas de matemática discreta.
TÍTULO: A brief survey on graph labelings.
PLACE: Sevilla.
YEAR: 2002.

TYPE OF PARTICIPATION: Invited speaker.
CONFERENCE: Australian Workshop on graph labelings (AWOGL'03).
TITLE: Super edge magic graphs and matrices.
PLACE: University of Newcastle (Australia).
YEAR: 2003.

TYPE OF PARTICIPATION: Invited speaker.
CONFERENCE: Seminar of discrete math.
TITLE: Labeling path-like trees.
PLACE: University of newcastle. Newcastle (Australia).
YEAR: 2003.

TYPE OF PARTICIPATION: Invited speaker.
TITLE: Path-like trees.
PLACE: Universidad Nacional de Trujillo (Perú).
YEAR: 2004.

TYPE OF PARTICIPATION: Invited speaker.
TITLE: Intoducción a los etiquetamientos de grafos.
PLACE: Universidad Señor de Sipán (Perú).
YEAR: 2004.

TYPE OF PARTICIPATION: 1.Oral presentation.
2. Member of the program committee.
CONFERENCE: International Workshop on Graph Labelings 2005 (IWOLG 2005).

TITLE: Embedding graphs into super edge magic graphs.
PLACE: Slovak Republik.
YEAR: 2005.

TYPE OF PARTICIPATION: 1.Oral presentation.
2. Member of the program committee.
CONFERENCE: International Workshop on Graph Labelings (2004) (IWOLOG 2004).
TITLE: Some new results on the super edge magic deficiency of graphs.
PLACE: Indonesia.
YEAR: 2004.

TYPE OF PARTICIPATION: Invited speaker (two talks).
CONFERENCE: International Conference on Applied Mathematics.
TITLE: 1) Embedding graphs into super edge magic graphs.
2) Results on path-like trees.
PLACE: Indonesia.
YEAR: 2005.

TYPE OF PARTICIPATION: Assistant of direction.
CONFERENCE: 8th International Conference In Graph Theory and Combinatorics.
PLACE: Western Michigan University (USA).
YEAR: 1996.

TYPE OF PARTICIPATION: Assistant of direction.
CONFERENCE: 11th International Conference on Formal Power Series and Algebraic Combinatorics.
PLACE: Barcelona.
YEAR: 1999.

TYPE OF PARTICIPATION: Oral presentation.
CONFERENCE: BLED 2007 6th slovenian international conference on graph theory.
TITLE: Labeling generating matrices.
PLACE: Bled, Slovenia.
YEAR: 24-30 Juny, 2007.

TYPE OF PARTICIPATION: Invited speaker.
CONFERENCE: International conference on applied mathematics (ICAM05).
TITLE: Two talks 1. Embedding graphs into super edge magic graphs.
2. On the structure of path-like trees.
PLACE: ITB, Bandung Indonesia.
YEAR: 22-26, August, 2005.

TYPE OF PARTICIPATION: Invited speaker.
CONFERENCE: IWOGL 2008. 4th international workshop on graph labelings.
TITLE: Labeling generating matrices.
PLACE: Harbin, China.
YEAR: 7-10, January 2008.

TYPE OF PARTICIPATION: 1.Oral presentation.

2. Member of the program commetee.

CONFERENCE: ICGTIS 2007. International conference on graph theory and information systems.

TITLE: On the structure of path-like trees.

PLACE: Bandung, Indonesia.

YEAR: 10-13, February, 2007.

TYPE OF PARTICIPATION: 1.Invited speaker.

2. Member of the scientific commitee.

CONFERENCE: International conference on mathematics and computer science.

TITLE: Labeling generating matrices.

PLACE: Loyola College, Chennai, India.

YEAR: 1-3, March, 2007.

TYPE OF PARTICIPATION: Member of the scientific commitee.

CONFERENCE: International conference on mathematics and computer science.

PLACE: Loyola College, Chennai, India.

YEAR: 2010.

TYPE OF PARTICIPATION: Poster presentation.

CONFERENCE: 19 International workshop on combinatorial algorithms

PLACE: Nagoya, Japan.

YEAR: 2008.

12. Related things:

-Member of ICA (Institute of Combinatorics and its Applications) with the rank of associated fellow.