

# — Curriculum vitae —

Number of pages: 14

Full name: **Jesús Yepes Nicolás**

Date: June 5, 2020

Signature:

A handwritten signature in red ink, appearing to be 'J. Yepes', written in a cursive style.

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**PERSONAL DATA**

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SURNAME, NAME: **Yepes Nicolás, Jesús** GENDER: **M**  
DATE AND PLACE OF BIRTH: **19.02.87, Molina de Segura, Spain** NATIONALITY: **Spanish**  
LANGUAGES: **Spanish (native), English (Cambridge First Certificate in English -B2 Level), French**

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**PRESENT PROFESSIONAL POSITION**

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INSTITUTION: **University of Murcia**  
PROFESSIONAL POSITION: **Postdoctoral contract from 13.07.18**  
POSTAL ADDRESS: **Departamento de Matemáticas, Universidad de Murcia, Campus de Espinardo, 30100 Murcia, Spain**  
TELEPHONE NUMBER: **+34 868 883538** E-MAIL: **jesus.yepes@um.es**  
WEB PAGE: **<https://webs.um.es/jesus.yepes>**

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**ACADEMIC DEGREES**

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<u>ACADEMIC DEGREE</u>	<u>INSTITUTION</u>	<u>DATE</u>
<b>Degree in Mathematics</b>	<b>University of Murcia</b>	<b>15.02.10</b>
<b>Master in Advance and Professional Mathematics</b>	<b>University of Murcia</b>	<b>25.07.11</b>
M.Sc. supervisor: Hernández Cifre, María de los Angeles Title: Brunn-Minkowski inequality, measure concentration on the sphere and other applications Mark: Matricula de Honor (Maximum)		
<b>Ph.D. in Mathematics</b>	<b>University of Murcia</b>	<b>17.11.14</b>
Ph.D. supervisor: Hernández Cifre, María de los Angeles Title: From Brunn-Minkowski type inequalities to roots of geometric polynomials Mark: Sobresaliente cum Laude (Maximum), with International Mention		

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**ACADEMIC AND RESEARCH POSITIONS**

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<u>DATES</u>	<u>POSITIONS</u>	<u>INSTITUTIONS</u>
<b>01.09.10 / 31.12.10</b>	<b>Starting research grant holder</b>	<b>University of Murcia</b>
<b>01.01.11 / 31.12.14</b>	<b>Predoct. research grant holder</b>	<b>University of Murcia</b>
<b>01.02.15 / 23.09.16</b>	<b>Postdoct. research grant holder</b>	<b>ICMAT (Institute of Mathematical Sciences)</b>
<b>19.10.16 / 04.12.16</b>	<b>Postdoct. research grant holder</b>	<b>University of Murcia</b>
<b>05.12.16 / 12.07.18</b>	<b>Assistant Professor</b>	<b>University of León</b>
<b>13.07.18 / Today</b>	<b>Postdoct. research grant holder</b>	<b>University of Murcia</b>

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## OFFICIAL QUALIFICATIONS

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Agencia Nacional para la Evaluación de la Calidad y Acreditación (National Agency for the Assessment of Quality and for Qualification). Positive qualification for:

**Profesor Contratado Doctor (Associate Professor) (July 2018)**

Agencia Nacional para la Evaluación de la Calidad y Acreditación (National Agency for the Assessment of Quality and for Qualification). Positive qualification for:

**Profesor Ayudante Doctor (Assistant Professor) (February 2015)**

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## TEACHING EXPERIENCE

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Calculus, Linear Algebra, Statistic, Differential Geometry, Convex Geometry and Brunn-Minkowski Theory. (University of Murcia, Spain).

Detailed information (Subject, Degree, Institution, Course and ECTS):

- *Geometría Convexa y Discreta*, Máster en Matemática Avanzada, Universidad de Murcia. Curso 2016-17, 3 créditos. Curso 2018-19, 4 créditos. Curso 2019-20, 4 créditos.
- *Matemáticas, Sociedad y Cultura*, Máster en Formación de Profesorado, Universidad de Murcia. Curso 2019-20, 2 créditos.
- *Seminar on Convex Geometric Analysis*, Bachelor/Master, Universität Bremen. Curso 2019-20, 2 créditos.
- *Fundamentos Matemáticos de la Biotecnología*, 1º de Biotecnología, Universidad de Murcia. Curso 2012-13, 1.2 créditos. Curso 2016-17, 4 créditos. Curso 2018-19, 2 créditos. Curso 2019-20, 2 créditos.
- *Geometría y Estadística*, 1º de Óptica y Optometría, Universidad de Murcia. Curso 2012-13, 4.8 créditos. Curso 2018-19, 2 créditos.
- *Aprendizaje y enseñanza de las materias correspondientes (Matemáticas)*, Máster en Formación de Profesorado, Universidad de León. Curso 2016-17, 7 créditos. Curso 2017-18, 7 créditos.
- *Matemáticas para las Finanzas*, 2º de Finanzas, Universidad de León. Curso 2016-17, 3.1 créditos. Curso 2017-18, 6 créditos.
- *Matemáticas I*, 1º de Economía, Universidad de León. Curso 2017-18, 4.5 créditos.
- *Matemáticas II*, 2º de Economía, Universidad de León. Curso 2017-18, 6 créditos.
- *Métodos Numéricos y Estadísticos*, 1º de Ingeniería Mecánica, Universidad de León. Curso 2016-17, 2 créditos.
- *Enseñanza y aprendizaje de las Matemáticas I*, 1º de Educación Primaria, Universidad de León. Curso 2016-17, 2 créditos.
- *Matemáticas*, 1º de Ciencias Ambientales, Universidad de Murcia. Curso 2013-14, 6 créditos. Curso 2014-15, 6 créditos.

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**SUPERVISED THESES**

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PH. D. STUDENT: **David Iglesias López**

TITLE OF THE THESIS: **On discrete Brunn-Minkowski type inequalities**

JOINTLY SUPERVISED WITH: **M. Ángeles Hernández Cifre**

UNIVERSITY: **Murcia**

FACULTY/INSTITUTE: **Mathematics**

DATE OF DEFENSE: **13th December 2019**

MARK: **Sobresaliente Cum Laude**

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**SUPERVISED WORKS**

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STUDENT: **Germán García López**

TITLE: **El problema isoperimétrico con restricciones a retículos**

TYPE: **Undergraduate thesis. Jointly supervised with M. Ángeles Hernández Cifre**

UNIVERSITY: **Murcia**

FACULTY/INSTITUTE: **Mathematics**

DATE OF DEFENSE: **June 2017**

MARK: **Sobresaliente - M. Honor**

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STUDENT: **Miriam Tárraga Navarro**

TITLE: **Desigualdades de tipo Brunn-Minkowski vía las medias de números reales**

TYPE: **Master's thesis. Jointly supervised with M. Ángeles Hernández Cifre**

UNIVERSITY: **Murcia**

FACULTY/INSTITUTE: **Mathematics**

DATE OF DEFENSE: **June 2017**

MARK: **Sobresaliente**

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STUDENT: **María Lucía Pérez Arias**

TITLE: **Actividades de refuerzo para la geometría de 2º ciclo de secundaria**

TYPE: **Master's thesis (Master's degree in Teacher Training for Secondary School)**

UNIVERSITY: **León**

FACULTY/INSTITUTE: **Industrial and Computer Sciences Engineerings**

DATE OF DEFENSE: **July 2017**

MARK: **Sobresaliente**

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STUDENT: **Pedro Guerra Suárez**

TITLE: **Matemáticas en contextos biológicos**

TYPE: **Master's thesis (Master's degree in Teacher Training for Secondary School)**

UNIVERSITY: **León**

FACULTY/INSTITUTE: **Industrial and Computer Sciences Engineerings**

DATE OF DEFENSE: **July 2017**

MARK: **Sobresaliente - M. Honor**

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STUDENT: **Eduardo Lucas Marín**

TITLE: **Superficies regladas**

TYPE: **Undergraduate thesis. Jointly supervised with M. Ángeles Hernández Cifre**

UNIVERSITY: **Murcia**

FACULTY/INSTITUTE: **Mathematics**

DATE OF DEFENSE: **September 2017**

MARK: **Sobresaliente**

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STUDENT: **Pedro Sánchez Legaz**

TITLE: **Un inicio a la teoría de politopos**

TYPE: Undergraduate thesis. Jointly supervised with M. Ángeles Hernández Cifre  
UNIVERSITY: Murcia FACULTY/INSTITUTE: Mathematics  
DATE OF DEFENSE: September 2017 MARK: Notable

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STUDENT: Raquel García Rodríguez  
TITLE: Cálculo infinitesimal en 2º de Bachillerato  
TYPE: Master's thesis (Master's degree in Teacher Training for Secondary School)  
UNIVERSITY: León FACULTY/INSTITUTE: Industrial and Computer Sciences Engineerings  
DATE OF DEFENSE: July 2018 MARK: Notable

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STUDENT: Eva Domínguez Arias  
TITLE:  $\pi$  es irracional  
TYPE: Master's thesis (Master's degree in Teacher Training for Secondary School)  
UNIVERSITY: León FACULTY/INSTITUTE: Industrial and Computer Sciences Engineerings  
DATE OF DEFENSE: July 2018 MARK: Notable

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STUDENT: David Martínez Suárez  
TITLE: Aplicaciones del cálculo diferencial e integral en Física  
TYPE: Master's thesis (Master's degree in Teacher Training for Secondary School)  
UNIVERSITY: León FACULTY/INSTITUTE: Industrial and Computer Sciences Engineerings  
DATE OF DEFENSE: July 2018 MARK: Sobresaliente

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STUDENT: Eduardo Lucas Marín  
TITLE: El teorema del elipsoide de John  
TYPE: Master's thesis. Jointly supervised with M. Ángeles Hernández Cifre  
UNIVERSITY: Murcia FACULTY/INSTITUTE: Mathematics  
DATE OF DEFENSE: July 2018 MARK: Sobresaliente

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STUDENT: Iván García Brao  
TITLE: Desigualdad de Brunn-Minkowski: resultados y consecuencias  
TYPE: Master's thesis. Jointly supervised with M. Ángeles Hernández Cifre  
UNIVERSITY: Murcia FACULTY/INSTITUTE: Mathematics  
DATE OF DEFENSE: September 2019 MARK: Notable

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**RESEARCH INTERESTS**

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Convex Geometry, Classical and Modern Brunn-Minkowski Theory, Convex Geometric Analysis, Functional Inequalities, Measure Theory.

- 1 M. A. Hernández Cifre, M. Tárraga, J. Yepes Nicolás: On the roots of polynomials with log-convex coefficients. *Submitted*.
- 2 D. Alonso Gutiérrez, M. A. Hernández Cifre, J. Yepes Nicolás: Further inequalities for the (generalized) Wills functional. To appear in *Commun. Contemp. Math*.  
<https://doi.org/10.1142/S021919972050011X>
- 3 D. Iglesias, J. Yepes Nicolás, A. Zvavitch: Brunn-Minkowski type inequalities for the lattice point enumerator. To appear in *Adv. Math*.
- 4 J. Yepes Nicolás: On a Brunn-Minkowski inequality for measures with quasi-convex densities. To appear in *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM*.
- 5 E. Saorín Gómez, J. Yepes Nicolás: On a reverse isoperimetric inequality for relative outer parallel bodies. To appear in *Proc. Amer. Math. Soc*.
- 6 D. Alonso-Gutiérrez, M. A. Hernández Cifre, M. Roysdon, J. Yepes Nicolás, A. Zvavitch: On Rogers-Shephard type inequalities for general measures. To appear in *Int. Math. Res. Not. IMRN*.  
<https://doi.org/10.1093/imrn/rnz010>
- 7 D. Iglesias, J. Yepes Nicolás: On discrete Borell-Brascamp-Lieb inequalities. To appear in *Rev. Mat. Iberoam*.  
<https://doi.org/10.4171/rmi/1145>
- 8 M. A. Hernández Cifre, D. Iglesias, J. Yepes Nicolás: On a discrete Brunn-Minkowski type inequality. *SIAM J. Discrete Math.* **32** (3) (2018), 1840–1856.
- 9 M. Ritoré, J. Yepes Nicolás: Brunn-Minkowski inequalities in product metric measure spaces. *Adv. Math.* **325** (2018), 824–863.
- 10 M. A. Hernández Cifre, J. Yepes Nicolás: Brunn-Minkowski and Prékopa-Leindler’s inequalities under projection assumptions. *J. Math. Anal. Appl.* **455** (2) (2017), 1257–1271.
- 11 J. Yepes Nicolás: Characterizing the volume via a Brunn-Minkowski type inequality. G. Bianchi, A. Colesanti, P. Gronchi (eds), *Analytic Aspects of Convexity*. Springer INdAM Series 25, 103–120.
- 12 J. Yepes Nicolás: On characterizations of sausages via inequalities and roots of Steiner polynomials. *Adv. Geom.* **17** (4) (2017), 441–452.
- 13 A. R. Martínez Fernández, E. Saorín Gómez, J. Yepes Nicolás:  $p$ -difference: A counterpart of Minkowski difference in the framework of the Firey-Brunn-Minkowski theory. *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM* **110** (2) (2016), 613–631.
- 14 A. Colesanti, E. Saorín Gómez, J. Yepes Nicolás: On a linear refinement of the Prékopa-Leindler inequality. *Canad. J. Math.* **68** (4) (2016), 762–783.

- 15 M. A. Hernández Cifre, J. Yepes Nicolás: On Brunn-Minkowski type inequalities for Polar Bodies. *J. Geom. Anal.* **26** (1) (2016), 143–155.
- 16 M. A. Hernández Cifre, J. Yepes Nicolás: On the roots of generalized Wills  $\mu$ -polynomials. *Rev. Mat. Iberoam.* **31** (2) (2015), 477–496.
- 17 E. Saorín Gómez, J. Yepes Nicolás: Linearity of the Volume. Looking for a characterization of sausages. *J. Math. Anal. Appl.* **421** (2) (2015), 1081–1100.
- 18 J. Yepes Nicolás: Convex Geometry and its Applications. *Oberwolfach Reports (OWR)* **56** (2015), 3179–3269.
- 19 M. A. Hernández Cifre, J. Yepes Nicolás: Refinements of the Brunn-Minkowski inequality. *J. Convex Anal.* **21** (3) (2014), 727–743.
- 20 J. Yepes Nicolás: On properties for  $\mathbf{m}$ -polynomials of unit  $p$ -balls. *Math. Ineq. Appl.* **17** (3) (2014), 1171–1182.
- 21 M. A. Hernández Cifre, J. Yepes Nicolás: On the roots of the Wills functional. *J. Math. Anal. Appl.* **401** (2013), 733–742.

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## PARTICIPATION IN CONFERENCES

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- 1 Young Researchers RSME Conference 2020 (Session on Convex Geometry and related aspects). Castellón (Spain). From 27th till 31st January 2020. **Invited communication:** J. Yepes Nicolás. *On a Brunn-Minkowski inequality for product measures with quasi-convex densities.*
- 2 Conference on Convex, Discrete and Integral Geometry. Jena (Germany). From 16th till 20th September 2019. **Communication:** D. Iglesias, J. Yepes Nicolás (speaker). *On discrete Borell-Brascamp-Lieb type inequalities.*
- 3 Asymptotic Geometric Analysis 2019. Tel Aviv University (Israel). From 29th July till 2nd August 2019. **Attendance.**
- 4 2019 Szeged Workshop on Convexity. Szeged (Hungary). From 5th till 6th April 2019. **Communication:** D. Iglesias, J. Yepes Nicolás (speaker). *On discrete Borell-Brascamp-Lieb inequalities.*
- 5 RSME Conference 2019 (Session on Convex Geometric Analysis). Santander (Spain). From 4th till 8th February 2019. **Invited communication:** M. A. Hernández Cifre, D. Iglesias, J. Yepes Nicolás (speaker). *On discrete Borell-Brascamp-Lieb inequalities.*
- 6 Convex Geometry and its Applications. Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach (Germany). From 9th till 15th December 2018. **Invited communication:** D. Alonso Gutiérrez, M. A. Hernández Cifre, M. Roysdon, J. Yepes Nicolás (speaker), A. Zvavitch. *On Rogers-Shephard type inequalities for general measures.*
- 7 New perspectives on Convex Geometry, Summer School 2018. Centro Internacional de Encuentros Matemáticos en Castro Urdiales (Spain). From 3rd till 7th September 2018. **Invited communication:** M. Ritoré, J. Yepes Nicolás (speaker). *On Brunn-Minkowski inequalities in product metric measure spaces.*

- 8 XII Meeting on Approximation Theory Research, 2017. Panticosa (Huesca), Spain. From 27th till 29th October 2017. **Invited lecture:** M. A. Hernández Cifre, D. Iglesias, M. Ritoré, J. Yepes Nicolás (speaker). *On Brunn-Minkowski type inequalities.*
- 9 Workshop on Convex, Discrete and Integral Geometry. Bedlewo Conference Center, Bedlewo, Poland. From 4th till 10th June 2017. **Invited communication:** M. A. Hernández Cifre, J. Yepes Nicolás (speaker). *On Brunn-Minkowski's inequalities under projection assumptions.*
- 10 Jörgshop TU Berlin: Convex and Discrete Geometry. TU Berlin, Berlin (Germany). From 2nd till 3rd June 2017. **Attendance.**
- 11 RSME Conference 2017 (Session on Convex Geometric Analysis). Zaragoza (Spain). From 30th January till 3rd February 2017. **Invited communication:** M. Ritoré, J. Yepes Nicolás (speaker). *On Brunn-Minkowski type inequalities.*
- 12 Analytic aspects of convexity. INdAM Workshop, Rome (Italy). From 10th till 14th October 2016. **Invited communication:** M. Ritoré, J. Yepes Nicolás (speaker). *On Brunn-Minkowski inequalities for product measures on  $\mathbb{R}^n$ .*
- 13 Workshop of young researchers from the Spanish Net of Geometric Analysis. IEMath, Granada (Spain). From 27th till 28th September 2016. **Invited lecture:** M. A. Hernández Cifre, J. Yepes Nicolás (speaker). *Brunn-Minkowski inequalities under assumptions on projections and sections.*
- 14 Conference on Convex and Discrete Geometry. TU Wien, Vienna (Austria). From 4th till 8th July 2016. **Attendance.**
- 15 Second joint Conference of the Belgian, Royal Spanish and Luxembourg Mathematical Societies. Universidad de Logroño (Spain). From 6th till 8th June 2016. **Poster:** J. Yepes Nicolás. *On linear refinements of geometric inequalities.*
- 16 Convex Geometry and its Applications. Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach (Germany). From 6th till 12th December 2015. **Attendance. Invited participant.**
- 17 Convexity, probability and discrete structures, a geometric view point. Université Paris-Est Marne-la-Vallée, Paris (France). From 26th till 30th October 2015. **Attendance.**
- 18 Affine Geometric Analysis. CMO-BIRS, Oaxaca (Mexico). From 21st till 25th September 2015. **Invited lecture:** A. Colesanti, E. Saorín Gómez, J. Yepes Nicolás (speaker). *On a linear refinement of the Prékopa-Leindler inequality under projection assumptions.*
- 19 Young Researchers RSME Conference 2015 (Session on Convex Geometry). Murcia (Spain). From 7th till 11th September 2015.
- **Invited communication:** M. A. Hernández Cifre, J. Yepes Nicolás (speaker). *On Brunn-Minkowski type inequalities for polar bodies.*
  - **Invited communication:** A. R. Martínez Fernández (speaker), E. Saorín Gómez, J. Yepes Nicolás. *Is there a  $p$ -version of the Minkowski difference? A survey.*
- 20 Convex Geometry - Discrete and Computational (Summer School). Berlin Mathematical School (BMS), Berlin (Germany). From 29th June till 10th July 2015. **Attendance.**



- 21 Intuitive Geometry, László Fejes Tóth Centennial. Alfréd Rényi Institute of Mathematics and Central European University, Budapest (Hungary). From 22nd till 28th June 2015. **Communication:** A. Colesanti, E. Saorín Gómez, J. Yepes Nicolás (speaker). *On a linear refinement of the Prékopa-Leindler inequality.*
- 22 Workshop on Analysis and Geometry in Metric Spaces. ICMAT, Madrid (Spain). From 1st till 5th June 2015. **Communication:** A. Colesanti, E. Saorín Gómez, J. Yepes Nicolás (speaker). *On a linear refinement of the Prékopa-Leindler inequality.*
- 23 RSME Conference 2015 (Session on Convex and Integral Geometry). Granada (Spain). From 2nd till 6th February 2015. **Invited communication:** M. A. Hernández Cifre, E. Saorín Gómez, J. Yepes Nicolás (speaker). *On Brunn-Minkowski type inequalities.*
- 24 Combinatorial and Algorithmic Aspects of Convexity (Winter School). Institut Henri Poincaré (I.H.P.), Paris (France). From 19th till 23th January 2015. **Attendance.**
- 25 Isoperimetric Problems Between Analysis and Geometry 2014. Scuola Normale Superiore, Pisa (Italy). From 16th till 20th June 2014. **Attendance.**
- 26 Meeting on Tomography and Applications-Discrete Tomography and Image Reconstruction 2014. Politecnico di Milano (Italy). From 7th till 9th May 2014. **Communication:** M. A. Hernández Cifre, E. Saorín Gómez, J. Yepes Nicolás (speaker). *Unique reconstruction of convex bodies by projection data via refinements of the Brunn-Minkowski inequality.*
- 27 Sachsen-anhaltinischer Geometrietag & Friends 2013. Magdeburg (Germany). From 5th till 6th December 2013. **Communication:** E. Saorín Gómez, J. Yepes Nicolás (speaker). *About characterizations of sausages via the linearity of the volume.*
- 28 Researchers Meeting of the REAG 2013. IEMath, Granada (Spain). From 10th till 11th October 2013. **Invited lecture:** M. A. Hernández Cifre (speaker), J. Yepes Nicolás. *On Brunn-Minkowski inequality.*
- 29 Conference on Convex Geometry 2013. Centro Internacional de Encuentros Matemáticos en Castro Urdiales (Spain). From 23rd till 27th September 2013.
- **Invited communication:** M. A. Hernández Cifre, J. Yepes Nicolás (speaker). *About refinements of the Brunn-Minkowski Inequality.*
  - **Invited lecture:** M. A. Hernández Cifre (speaker), J. Yepes Nicolás. *On the roots of  $\mu$ -polynomials.*
- 30 Young Researchers RSME Conference 2013. Sevilla (Spain). From 16th till 20th September 2013. **Communication:** M. A. Hernández Cifre, J. Yepes Nicolás (speaker). *On roots of generalized Wills  $\mu$ -polynomials.*
- 31 RSME Conference 2013 (Session on Discrete Mathematics). Santiago de Compostela (Spain). From 21st till 25th January 2013.
- **Invited lecture:** M. A. Hernández Cifre (speaker), J. Yepes Nicolás. *The Wills Functional in the Geometry of Numbers.*
  - **Poster:** M. A. Hernández Cifre, J. Yepes Nicolás. *On the roots of the generalized Wills Functional.*
- 32 Convex Geometry and its Applications, Mathematisches Forschungsinstitut Oberwolfach. Oberwolfach (Germany). From 9th till 15th December 2012. **Communication (invited participant):** M. A. Hernández Cifre (speaker), J. Yepes Nicolás. *On the roots of the Wills Functional.*

- 33 II Research Meeting on Convexity. La Zenia (Spain). From 26th till 31st March 2012. **Invited lecture:** M. A. Hernández Cifre, J. Yepes Nicolás (speaker). *Brunn-Minkowski type inequalities under assumptions on projections.*

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■■■■■ INVITED CONFERENCES ■■■■■

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- 1 On discrete Brunn-Minkowski type inequalities. ALTA Institute of the Department of Mathematics and Computer Science, Universität Bremen (Germany). November, 2019.
- 2 On discrete Brunn-Minkowski type inequalities. Fachgebiet Diskrete Mathematik/Geometrie, Technische Universität Berlin (Germany). October, 2019.
- 3 On Brunn-Minkowski type inequalities for product measures. Privatissimum of the research units for “Convex and Discrete Geometry” and “Geometric Analysis”, Institut für Diskrete Mathematik und Geometrie, Technische Universität Wien (Austria). September, 2019.
- 4 On Brunn-Minkowski and Rogers-Shephard type inequalities. Seminario del Departamento de Matemáticas, Universidad de León (Spain). July, 2019.
- 5 On Rogers-Shephard type inequalities for general measures. ALTA Institute of the Department of Mathematics and Computer Science, Universität Bremen (Germany). December, 2018.
- 6 A characterization of the volume via the Brunn-Minkowski inequality. Seminario del Departamento de Geometría y Topología, Universidad de Granada (Spain). June, 2016.
- 7 On linear refinements of geometric inequalities. Institut für Algebra und Geometrie, Otto-von-Guericke Universität Magdeburg (Germany). April, 2016.
- 8 On Brunn-Minkowski type inequalities for polar bodies. Institut für Algebra und Geometrie, Otto-von-Guericke Universität Magdeburg (Germany). April, 2015.
- 9 Wills type functionals and the Geometry of Numbers. Fachgebiet Diskrete Mathematik/Geometrie, Technische Universität Berlin (Germany). December, 2014.
- 10 On Brunn-Minkowski type inequalities for polar bodies. Seminario di Calcolo delle Variazioni & Equazioni alle Derivate Parziali, Dipartimento di Matematica e Informatica “Ulisse Dini”, Florence (Italy). June, 2014.
- 11 Sobre la desigualdad de Brunn-Minkowski (On Brunn-Minkowski inequality). Seminario Rey Pastor, Universidad de Murcia (Spain). November, 2013.
- 12 Looking for characterizations of sausages via the linearity of the volume. Institut für Algebra und Geometrie, Otto-von-Guericke Universität Magdeburg (Germany). October, 2013.
- 13 On the linearity of Brunn-Minkowski and its connection with the sausage problem. Institut für Algebra und Geometrie, Otto-von-Guericke Universität Magdeburg (Germany). June, 2013.
- 14 Brunn-Minkowski type inequalities. Institut für Algebra und Geometrie, Otto-von-Guericke Universität Magdeburg (Germany). April, 2013.
- 15 On the roots of the Wills functional. Institut für Algebra und Geometrie, Otto-von-Guericke Universität Magdeburg (Germany). June, 2012.

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## RESEARCH STAYS (outside the working center)

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- 1 Otto-von-Guericke Universität Magdeburg (Institut für Algebra und Geometrie), Magdeburg (Germany). 5 months in 2013. Research subject: On the linearity of the volume and sausages.
- 2 Otto-von-Guericke Universität Magdeburg (Institut für Algebra und Geometrie), Magdeburg (Germany). 2 weeks in 2013. Research subject: The Prékopa-Leindler Inequality.
- 3 Università degli Studi di Firenze (Dipartimento di Matematica “U. Dini”), Florence (Italy). 3 months in 2014. Research subject: On linear refinements of the Prékopa-Leindler Inequality.
- 4 University of Murcia (Área de Geometría y Topología), Murcia (Spain). 1 month in 2016. Research subject: Brunn-Minkowski type inequalities.
- 5 University of Murcia (Área de Geometría y Topología), Murcia (Spain). 1 month in 2017. Research subject: Brunn-Minkowski type inequalities.
- 6 University of Murcia (Área de Geometría y Topología), Murcia (Spain). 3 months in 2018. Research subject: Rogers-Shephard type inequalities.
- 7 Universität Bremen (ALTA Institute of the Department of Mathematics and Computer Science), Bremen, (Germany). 1 week in 2018. Research subject: Inequalities for outer parallel bodies.
- 8 Universität Bremen (ALTA Institute of the Department of Mathematics and Computer Science), Bremen, (Germany). 3 months in 2020. Research subject: Extensions of the Minkowski difference in the context of the  $M$ -addition.

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## RESEARCH PROJECTS

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- **Reference:** PGC2018-097046-B-I00. **Title:** Análisis Global en Geometría Diferencial y Convexa. **Supported by:** MICIU. **From** 01.19 till 12.21. **Type of participation:** Cooperating researcher. **Amount:** 51.788 €
- **Reference:** 19901/GERM/15. **Title:** Global Analysis in Differential and Convex Geometry. Ayudas a los Grupos de Excelencia Científica de la Región de Murcia. **Supported by:** Fundación Séneca, CARM (Programa de Ayudas a Grupos de Excelencia de la Región de Murcia). **From** 01.16 till 12.20. **Type of participation:** Cooperating researcher. **Amount:** 250.000€
- **Reference:** MTM2015-65430-P. **Title:** Análisis Global en Geometría Diferencial y Convexa. **Supported by:** MINECO. **From** 01.16 till 12.18. **Type of participation:** Cooperating researcher. **Amount:** 107.000€
- **Reference:** MTM2014-57309-REDT. **Title:** Red Española de Análisis Geométrico. **Supported by:** MEC. **From** 01.15 till 12.16. **Type of participation:** Cooperating researcher. **Amount:** 10.000€
- **Reference:** SEV-2011-0087. **Title:** Subprograma de Apoyo a Centros y Unidades de Excelencia Severo Ochoa. **Supported by:** MINECO. **From** 01.12 till 12.15. **Type of participation:** Cooperating researcher. **Amount:** 4.000.000€

- **Reference:** MTM2012-34037. **Title:** Análisis Global en Geometría Diferencial y Convexa. **Supported by:** MINECO. **From** 01.13 till 12.15. **Type of participation:** Cooperating researcher. **Amount:** 143.000€
- **Reference:** AIB2010DE-00082. **Title:** Roots of Steiner polynomials. **Supported by:** MCI and DAAD. **From** 01.11 till 12.12. **Type of participation:** Cooperating researcher. **Amount:** 8.000€
- **Reference:** MTM2009-10418. **Title:** Geometría diferencial y convexa: Problemas variacionales y de optimización. **Supported by:** MICINN. **From** 01.10 till 12.12. **Type of participation:** Cooperating researcher. **Amount:** 174.239,98€
- **Reference:** 04540/GERM/06. **Title:** Problemas variacionales y de optimización en Geometría Diferencial y Convexa. Ayudas a los Grupos de Excelencia Científica de la Región de Murcia. **Supported by:** Fundación Séneca, CARM. **From** 01.08 till 07.14. **Type of participation:** Cooperating researcher. **Amount:** 312.000€

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## FELLOWSHIPS

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- 1 Two *Grants for high level academic achievements*. Consejería de Universidades Empresa e Investigación, CARM. Courses 2006/2007 and 2008/2009. Amount: 1500€.
- 2 *Collaboration Grant*. MEC. Course 2009/2010. Amount: 2700€.
- 3 *Research starting Grant*. University of Murcia. From 01.09.10 to 31.12.10. Amount: 3000€.
- 4 *Master Fellowship*. University of Murcia. Course 2010/2011. Amount: 2400€.
- 5 *Pre-doctoral Fellowship/Contract*. University of Murcia. From 20.01.2011 to 20.01.2015. Amount: approx. 15000€/year.
- 6 *Postdoctoral Fellowship/Contract*. ICMAT. From 01.02.2015 to 31.12.2015. Amount: approx. 24000€/year.
- 7 *Postdoctoral Fellowship/Contract*. ICMAT. From 01.02.2016 to 31.08.2016. Amount: approx. 14000€.
- 8 *Postdoctoral Fellowship/Contract*. University of Murcia. From 19.10.2016 to 04.12.2016. Amount: approx. 2000€.
- 9 *Postdoctoral Fellowship/Contract*. University of Murcia. From 13.07.2018 until Today. Amount: approx. 26000€/year.
- 10 *Short stays in foreign centers Grant for young researchers*. University of Murcia. From 20.08.2019 until 20.11.2019. Amount: approx. 4500€.

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## AWARDS AND DISTINCTIONS

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- 1 *Ph.D. Extraordinary Award (Mathematics 2014-2016)* by the University of Murcia.
- 2 *Vicent Caselles Mathematical Research Award 2016* granted jointly by the BBVA Foundation and the Royal Spanish Mathematical Society.
- 3 *2nd National Award* by the Ministry of Education to the most outstanding graduate in Sciences degrees (2005-2010).
- 4 *Valedictorian* of the (5 years) degree in Mathematics (2005-2010) by the University of Murcia.
- 5 *Distinction* of the University of Murcia for the high level academic achievements, November 2013.
- 6 3rd prize in the (Regional) *XLI Mathematical Olympiad*. 2005.

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## OTHER PROFESSIONAL ACTIVITIES

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- Ph.D. Thesis Committee Member for:
  - A. R. Martínez Fernández, “Going further in the  $L_p$ -Brunn-Minkowski theory: a  $p$ -difference of convex bodies”, 2016. (Universidad de Murcia).
  - E. Dubon, “Sobre los ceros de polinomios de Dirichlet, en general, y los de las sumas parciales de la función zeta de Riemann, en particular”, 2015. (Universidad de Murcia).
- Undergraduate/Master’s thesis Committee Member of:
  1. *Elaboración de actividades para bachillerato con recursos informáticos*, University of León, Course 2016-2017.
  2. *Atención y potenciación del talento matemático*, University of León, Course 2016-2017.
  3. *Recursos educativos para la enseñanza de las matemáticas. Uso de Edmodo en el aula*, University of León, Course 2016-2017.
  4. *El aprendizaje basado en problemas en la enseñanza de las matemáticas*, University of León, Course 2017-2018.
  5. *Observación sistemática del proceso de aprendizaje*, University of León, Course 2017-2018.
  6. *Teorías constructivistas del aprendizaje en el sistema educativo mexicano*, University of León, Course 2017-2018.
  7. *Aprendizaje cooperativo en matemáticas*, University of León, Course 2017-2018.
  8. *Enseñanza y aprendizaje de las ecuaciones en la ESO*, University of León, Course 2017-2018.
  9. *Análisis comparativo del sistema educativo de secundaria y bachillerato en Alemania y España para el caso de la enseñanza de las matemáticas*, University of León, Course 2017-2018.
  10. *Sistemas de educación secundaria obligatoria*, University of León, Course 2017-2018.
  11. *Límites de funciones para 1º de bachillerato*, University of León, Course 2017-2018.

12. *Aplicación de la impresión 3D en la enseñanza de la geometría en la educación secundaria*, University of León, Course 2017-2018.
  13. *Conjuntos de anchura constante*, University of Murcia, Course 2018-2019.
- Organizer of the session on Convex and Integral Geometry of the *Young Researchers RSME Conference* 2017, held in Valencia (Spain) from 4th to 8th September 2017.
  - Member of the Organizing Committee of the *Young Researchers RSME Conference* 2015, held in Murcia (Spain) from 7th to 11th September 2015.
  - Reviewer for Zentralblatt MATH from 2012.
  - Reviewer for AMS MathSciNet from 2016.
  - REFEREE for the journals:
    - Mathematical Inequalities and Applications.
    - Advances in Applied Mathematics.
    - RACSAM.
    - Journal of Mathematical Analysis and Applications.
    - Mediterranean Journal of Mathematics.
    - Analysis and Geometry in Metric Spaces.
    - Open Mathematics.
- CITATIONS:
    - 1 A. Marsiglietti: *Geometry of convex measures and links with the Information theory*. Doctoral Thesis, École Doctorale Mathématiques et Sciences et Technologie de L'Information et de la Communication, Université Paris-Est Marne-la-Vallée 2014. Work: 19).
    - 2 P. Dulio, A. Frosini, G. Rozenberg: Tomography and applications [Preface]. *Fund. Inform.* **141** (2-3) (2015), no. 2-3, i–xxi. Works: 17) and 19).
    - 3 M. Ludwig, A. Stancu, E. Werner: Affine Geometric Analysis, Report-Publication of the BIRS-CMO Workshop *Affine Geometric Analysis 2015*. Work: 14).
    - 4 H. Chen: On isoperimetric inequality in Arakelov Geometry, *Archive Ouverte Hal-Inria: 01152356* (2015) Work: 19).
    - 5 A. Marsiglietti: On the improvement of concavity of convex measures, *Proc. Amer. Math. Soc.* **144** (2) (2016), 775–786. Work: 19).
    - 6 C. Saroglou: More on logarithmic sums of convex bodies, *Mathematika* **62** (2016), 818–841. Work: 15).
    - 7 A. Marsiglietti: Borell's generalized Prékopa-Leindler inequality: A simple proof, *J. Convex Anal.* **24** (3) (2017) (final page numbers not yet available). Works: 14) and 19).
    - 8 Y. Wang, Q. Huang: Orlicz-Brunn-Minkowski inequality for polar bodies and dual star bodies, *Math. Ineq. Appl.* **20** (4) (2017), 1139–1144. Work: 15).
    - 9 L. Ji, Z. Zeng, J. Zhong: On Brunn-Minkowski type inequality, *J. Nonlinear Sci. Appl.* **11** (2018), 762–769. Work: 15).

- 10 E. Saorín Gómez: Modern Aspects of classical Convex Geometry. Habilitation thesis, Fakultät für Mathematik Otto-von-Guericke-Universität Magdeburg 2018. Work: 17).
- 11 D. Alonso Gutiérrez: A reverse Rogers-Shephard inequality for log-concave functions, *J. Geom. Anal.* **29** (1) (2019), 299-315. Work: 15).
- 12 D. Alonso Gutiérrez, S. Artstein Avidan, B. González Merino, C. H. Jiménez, R. Villa: Rogers-Shephard and local Loomis-Whitney type inequalities, *Math. Ann.* **374** (3-4) (2019), 1719–1771. Work: 14).
- 13 D. Barilari, L. Rizzi: Sub-Riemannian interpolation inequalities: ideal structures, *Invent. Math.* **215** (3) (2019), 977–1038. Work: 9).
- 14 K. J. Böröczky, M. Matolcsi, I. Z. Ruzsa, F. Santos, O. Serra: Triangulations and a discrete Brunn-Minkowski inequality in the plane, *Discrete Comput. Geom.* (2019).  
<https://doi.org/10.1007/s00454-019-00131-9>. Work: 8).
- 15 J. Pozuelo: A direct proof of the Brunn-Minkowski inequality in Nilpotent Lie groups, *arXiv:1904.12541*. Work: 9).
- 16 M. Roysdon: Marginal inequalities of the Rogers-Shephard type, *arXiv:1904.03255*. Work: 9).
- 17 S. L. Berg, M. Henk: Discrete analogues of John’s theorem, *Mosc. J. Comb. Number Theory.* **8** (4) (2019), 367–378. Work: 8).
- 18 B. González Merino: On Orlicz-Jensen-Hermite-Hadamard inequalities and their applications in Convex Geometry, *arXiv:1908.06426*. Work: 6).
- 19 D. Halikias, B. Klartag, B. A. Slomka: Discrete variants of Brunn-Minkowski type inequalities, *arXiv:1911.04392*. Work: 3).
- 20 Lewen Ji: On Brunn-Minkowski type inequalities and overdetermined problem for  $p$ -capacity, *Results Maths.* **75** (2) (2020). Work: 15).
- 21 Fangwei Chen, Jianbo Fang, Miao Luo, Congli Yang: Extension of the total mass of log-concave functions and related inequalities, *arXiv:2003.11367* . Work: 10).
- 22 Alexandros Eskenazis, Geogios Moschidis: The dimensional Brunn-Minkowski inequality in Gauss space, *arXiv:2004.07146*. Work: 9).
- 23 Peter van Hintum, Hunter Spink, Marius Tiba: Sets in  $\mathbb{Z}^k$  with doubling  $2^k + \delta$  are near convex progressions, *arXiv:2004.07264*. Work: 8).
- 24 Michael Roysdon, Sudan Xing: On  $L_p$ -Brunn-Minkowski type and  $L_p$ -isoperimetric type inequalities for general measures, *arXiv:2004.09737*. Work: 9).
- 25 Ansgar Freyer, Martin Henk: Bounds on the lattice point enumerator via slices and projections, *arXiv:2004.14097*. Works: 8) and 3).
- 26 Lijuan Liu: The polar Orlicz-Brunn-Minkowski inequalities, *Math. Ineq. Appl.* Work: 15).