

## CURRICULUM VITAE



### LUIS ENRIQUE NIETO-BARAJAS

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#### EDUCATION

- 1991 – 1995 ITAM, Mexico  
B. Sc. in Actuarial Science  
Graduated on September 22<sup>nd</sup> 1995
- 1995 – 1997 IIMAS-UNAM, Mexico  
M. Sc. in Statistics and Operational Research  
Graduated on July 26<sup>th</sup> 1998
- 1998 – 2001 University of Bath, England, UK  
Ph. D. in Statistics  
Graduated on July 25<sup>th</sup> 2001

#### PROFESSIONAL EXPERIENCE

- Jan – Sept 2010 CONEVAL (National Council for the evaluation of the social development of political decisions), Mexico  
Consultant to project of “Imputing poverty indicators in small areas 2009”
- Jan – Jul 2009 IFE (Electoral federal Institute), Mexico  
Assistant to the technical committee for the revision of the voters list
- Feb – Aug 2006 IFE (Electoral federal Institute), Mexico  
Assistant to the technical committee for the quick count in the presidential election
- March – Dec 2005 IPSOS – BIMSA, Mexico  
External Statistical Consultant
- Aug 2004 IEE (Electoral State Institute in Morelos), Mexico  
Consultant for the Survey in Political Culture
- Jun – Jul 1996 IFE (Electoral Federal Institute), Mexico  
Consultant in the project of defining the new districts
- Mar 1994 – Mar 1996 Applied Science and Marketing Research, S. C., Mexico  
Analyst

#### ACADEMIC EXPERIENCE

- Aug 2001 – Present ITAM, Mexico

	Full Time Professor of Statistics (Bayesian Analysis, Multivariate Analysis, Statistical Inference, Linear Regression Analysis)
Aug 2007 – Jul 2008	M. D. Anderson Cancer Center and University of Rice, USA Visiting Associate Professor, Department of Biostatistics / Statistics
Jan 1997 – Aug 1998	ITAM, Mexico Full Time Professor of Statistics
Jun – Dec 1996	ITAM, Mexico Part Time Professor

*DIPLOMA AND SPECIAL COURSES*

Jan 2002 – Present	BANXICO (Central Bank of Mexico), Mexico Lecturer of the course “Bayesian Methods”
Jan 2002 – Present	ITAM, Mexico Lecturer of the course “Multivariate Analysis” and “Bayesian Statistics”
Jun – Jul 2003	INE (National Ecological Institute), Mexico Lecturer of the course “Basic Statistics and Sampling Techniques”
Jul 2000	Bocconi University, Milan, Italy Lecturer of the summer course in “Bayesian Nonparametric Methods”

**EDITORIAL WORK, ASSOCIATIONS AND ADMINISTRATIVE POSITIONS**Editorial Work

Oct 2010 – Present	JASA A&CS (Journal of the American Statistical Association, applications and case studies section) Associate Editor
Jan 2008 – Oct 2010	Proceeding of the Mexican National Statistical Congresses XXII & XXIII Co-Editor
Aug 2001 – Present	Biometrics, Biometrical Journal, Biostatistics, Canadian Journal of Statistics, Journal of the American Statistical Association, Journal of Quality Technology, Lifetime Data Analysis, North American Actuarial Journal, Scandinavian Journal of Statistics, Statistics in Medicine Referee

Associations

Sept 2005 – Sept 2009	AME (Mexican Statistical Association) Board committee member
Jan – May 1995	Actuaries Student Association, ITAM Treasurer

Administrative positions

Feb – Sept 2006	“Francisco Aranda Ordaz Award” for the best undergraduate and masters
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dissertations in Statistics  
Co-Coordinator  
Jan 2002 – Present      Probability Calculus I & II and Statistics II  
Course coordinator at ITAM

### CONGRESSES AND EVENTS ORGANIZATION

- 3rd Research Week on Bayesian Nonparametrics. Library Unit of the University of Veracruz, Boca del Río, Veracruz, Mexico. July 1<sup>st</sup> – 8<sup>th</sup>, 2011  
Organizing and Scientific committee member
- 8th Workshop on Bayesian Nonparametrics. Empirio Hotel, Veracruz, Mexico. June 26<sup>th</sup> – 30<sup>th</sup>, 2011  
Organizing and Scientific committee member
- 3rd Mexican Workshop on Bayesian Statistics. Empirio Hotel, Veracruz, Mexico. June 25<sup>th</sup> – 26<sup>th</sup>, 2011  
Organizing and Scientific committee member
- XXII National Mexican Statistical Conference. Hacienda Jurica Hotel, Querétaro, Mexico. October 17<sup>th</sup> – 20<sup>th</sup>, 2007  
Scientific committee member
- 23rd International Symposium on Forecasting. Mérida, Yucatán, Mexico. June 15<sup>th</sup> – 18<sup>th</sup>, 2003

### DISSERTATIONS' DIRECTION

1. Blanca Rosa Zepeda Lara. *Comparación de métodos de graduación en tablas de rotación*. BSc in Actuarial Sciences, ITAM. Graduated on: 20<sup>th</sup> of June, 2011.
2. Mónica Nava Osorio. *Evaluación de la gestión de las administradoras locales de recaudación del SAT*. BSc in Actuarial Sciences, ITAM. Graduated on: 1<sup>st</sup> April, 2011.
3. Daniel Iván Ugalde Gutiérrez. *Análisis de siniestralidad de gastos médicos usando árboles de regresión*. BSc in Actuarial Sciences, ITAM. Graduated on: 25<sup>th</sup> February, 2011.
4. Elizabeth Aquino Pérez. *Construcción de una tabla de mortalidad con un enfoque Bayesiano*. BSc in Actuarial Sciences, ITAM. Graduated on: 16<sup>th</sup> December, 2010.
5. Sofía López Lizarraga. *Segmentación binaria circular: Una técnica para detectar pérdidas y ganancias en el ADN*. BSc in Actuarial Sciences, ITAM. Graduated on: 10<sup>th</sup> December, 2009.  
AWARD: First place in the "XVI Premio de investigación Ex ITAM 2011".
6. Andrea del Castillo Zabalgoitia. *Análisis de factores: Método clásico y Bayesiano*. BSc in Applied Mathematics, ITAM. Graduated on: 10<sup>th</sup> October, 2008.
7. Horacio González Duhart Muñoz de Cote. *Análisis Bayesiano de modelos de supervivencia con riesgos competitivos*. BSc in Actuarial Sciences and Applied Mathematics, ITAM. Graduated on: 22<sup>th</sup> August, 2008.

8. Sahari Cabello Galicia. *Análisis de supervivencia: Modelos frailty*. BSc in Actuarial Sciences and Applied Mathematics, ITAM. Graduated on: 12<sup>th</sup> June, 2008.
9. Héctor González Villatoro. *Análisis de series de tiempo con un modelo dinámico lineal con varianzas desconocidas y distintas*. BSc in Applied Mathematics, ITAM. Graduated on: 20<sup>th</sup> June, 2007.
10. Sergio Ulises Andraca Castillo. *Análisis de series de tiempo con un modelo dinámico lineal con varianzas desconocidas y distintas*. BSc in Actuarial Sciences, ITAM. Graduated on: 20<sup>th</sup> June, 2007.
11. José Antonio Parra Téllez. *Análisis Bayesiano semiparamétrico de regresión*. BSc in Applied Mathematics, ITAM. Graduated on: 18<sup>th</sup> May, 2007.
12. Omar García Vázquez. *Análisis de las reclamaciones de gastos médicos del plan nacional 20*. BSc in Actuarial Sciences, ITAM. Graduated on: 24<sup>th</sup> April, 2007.
13. María de los Angeles Rodríguez Barrera. *Estimación de la probabilidad de incumplimiento de bonos corporativos mexicanos*. BSc in Applied Mathematics, ITAM. Graduated on: 25<sup>th</sup> February, 2005.
14. Grelida Yazmín Juárez Caballero. *Análisis de supervivencia en niños con leucemia*. BSc in Actuarial Sciences, ITAM. Graduated on: 3<sup>rd</sup> February, 2005.
15. Agustín Laguerena Carreño. *Análisis de supervivencia Bayesiano para pacientes con VIH*. BSc in Actuarial Sciences, ITAM. Graduated on: 9<sup>th</sup> October, 2003.
16. Lyn Pizano Rodríguez. *Una aplicación de las cadenas de Markov : Algoritmo de Metropolis-Hastings*. BSc in Applied mathematics, ITAM. Graduated on: 31<sup>st</sup> August, 1998.

## PUBLICATIONS

### Articles:

1. Nieto-Barajas, L. E., Müller, P., Ji, Y., Lu, Y. and Mills, G. (2011). A time series DDP for functional proteomics profiles . *Biometrics*. To appear.
2. Nieto-Barajas, L.E. and Müller, P. (2011). Rubbery Polya Tree. *Scandinavian Journal of Statistics*. To appear.
3. Baladandayuthapani, V., Ji, Y., Talluri, R., Nieto-Barajas, L. E. & Morris, J. S. (2010). Bayesian random segmentation models to identify shared copy number aberrations for array CGH data. *Journal of the American Statistical Association* **105**, 1358-1375.
4. Mena, R. and Nieto-Barajas, L. E. (2010). Exchangeable claim sizes in a compound Poisson type process. *Applied Stochastic Models in Business and Industry* **26**, 737-757.
5. López-Lizarraga, S. and Nieto-Barajas, L. E. (2010). Segmentación binaria circular: Una técnica para detectar regiones dañadas del ADN. *Actuarios Trabajando CONAC*, **2** (4), 94-110. (In Spanish).
6. Yin, G. and Nieto-Barajas, L. E. (2009). Bayesian cure rate model accommodating multiplicative and additive covariates. *Statistics and Its Interface* **2**, 513-521.

7. Nieto-Barajas, L. E. and Prünster, I. (2009). A sensitivity analysis of Bayesian nonparametric density estimators. *Statistica Sinica* **19**, 685-705.
8. de Alba, E. and Nieto-Barajas, L. E. (2008). Claims reserving: A correlated Bayesian model. *Insurance: Mathematics and Economics* **43**, 368-376.
9. Müller, P. and Nieto-Barajas, L. E. (2008). Discussion on the paper: The nested Dirichlet process by Rodriguez, Dunson and Gelfand. *Journal of the American Statistical Association* **103**, 1146-1147.
10. Nieto-Barajas, L. E. and Yin, G. (2008). Bayesian semiparametric cure rate model with an unknown threshold. *Scandinavian Journal of Statistics* **35**, 540-556.
11. Nieto-Barajas, L. E. (2008). A Markov gamma random field for modeling disease mapping data. *Statistical Modelling* **8**, 97-114.
12. Nieto-Barajas and Walker, S. G. (2007). Gibbs and autoregressive Markov processes. *Statistics and Probability Letters* **77**, 1479-1485.
13. Nieto-Barajas, L. E. & Walker, S. G. (2007). A Bayesian semi-parametric bivariate failure time model. *Computational Statistics and Data Analysis* **51**, 6102-6113.
14. Mendoza, M. and Nieto-Barajas, L. E. (2006). Bayesian solvency analysis with autocorrelated observations. *Applied Stochastic Models in Business and Industry* **22**, 169-180.
15. Nieto-Barajas, L. E. and Walker, S. G. (2005). A semi-parametric Bayesian analysis of survival data based on Lévy-driven processes. *Lifetime Data Analysis* **11**, 529-543.
16. Nieto-Barajas, L. E., Prünster, I. and Walker, S. G. (2004). Normalized random measures driven by increasing additive processes. *Annals of Statistics* **32**, 2343-2360.
17. Nieto-Barajas, L. E. and Walker, S. G. (2004). Bayesian nonparametric survival analysis via Lévy driven Markov processes. *Statistica Sinica* **14**, 1127-1146.
18. Gutiérrez-Peña, E. and Nieto-Barajas, L. E. (2003). Bayesian nonparametric inference for mixed Poisson processes. *Bayesian Statistics 7*, J. M. Bernardo, et al. (Eds.), 163-179.
19. Nieto-Barajas, L. E. (2003). Discrete time Markov gamma processes and time dependent covariates in survival analysis. *Bulletin of the International Statistical Institute 54<sup>th</sup> Session*. Berlin (CD-ROM).
20. Nieto-Barajas, L. E. and Walker, S. G. (2002). Markov beta and gamma processes for modelling hazard rates. *Scandinavian Journal of Statistics*, **29**, 413-424.

#### Chapters in Books:

1. Nieto-Barajas, L. E. e Islas-Camargo, A. (2006). Estimación por intervalos (Capítulo 7). In *Fundamentos de Probabilidad y Estadística*, 2nd. edition. Jit Press: Mexico.
2. Nieto-Barajas, L. E. e Islas-Camargo, A. (2003). Estimación por intervalos (Capítulo 7). In *Fundamentos de Probabilidad y Estadística*. Jit Press: México.

#### Manuscripts:

1. Beckele, B. N., Nieto-Barajas, L.E. and Munsell, M. F. (2008). Estimating the distribution of breast cancer patients' characteristics with a Markov Dirichlet process.
2. Nieto-Barajas, L.E., Müller, P., Ji, Y., Lu, Y. and Mills, G. (2008). Time series dependent Dirichlet process.
3. Barrios, E., Nieto-Barajas, L. E. & Prünster, I. (2011). A study of normalized random measures mixture models.

## CONFERENCES

1. A general sampling scheme for NRM1 mixture models: BNPdensity, an R package. Invited speaker at *8th Workshop on Bayesian nonparametrics (Research Week)*. Veracruz, Mexico. 1–9 of July 2011.
2. A Markov gamma random field for modeling respiratory infections in Mexico. Invited speaker at *Conference on Nonparametric Statistics and Statistical Learning*. The Ohio State University, Columbus, Ohio, USA. 19–22 of May 2010.
3. Rubbery Polya Tree. Invited speaker at *7th Workshop on Bayesian Nonparametrics*. Colegio Carlo Alberto, Moncalieri, Italy. 21–25 of June 2009.
4. Bayesian Biostatistics. Nine hours Course at *Encontro de Pós-Graduação e Pesquisa e XIV Seminário de Iniciação Científica*. University of Pernambuco, Recife, Pernambuco, Brazil. 8 – 10 of October 2008.
5. Rubbery Polya tree. Poster at *Modern semiparametric methods in action*. SRCS 2008, South Carolina, U.S.A. 8 – 11 of June 2008.
6. Some good news about nonparametric priors in density estimation. Invited Speaker at *Bayesian Nonparametric Regression: Theory, Methods and Applications*. Isaac Newton Institute for Mathematical Sciences, Cambridge, UK. 6 – 10 of August 2007.
7. Mixture of normalised weighted increasing additive processes for density estimation. Invited speaker at *5th Workshop on Bayesian Nonparametrics*. Jeju Grand Hotel, Korea. 18 – 21 of June 2006.
8. A semiparametric Bayesian analysis of failure time data. Invited speaker and organizer at *2nd Latin American Bayesian Congress (COBAL 2)*. San Jose del Cabo, Mexico. 6 – 10 of February 2005.
9. Lévy-driven processes in Bayes Nonparametrics. Invited speaker at *IVth Workshop on Bayesian Nonparametrics*. Rome, Italy. 13 – 16 of June 2004.
10. A Bayesian nonparametric bivariate survival model. Invited speaker at *ISBA World Meeting 2004*. Viña del Mar, Chile. 23 – 27 de mayo de 2004.
11. Bayesian nonparametric survival analysis via Markov processes. Invited speaker at *IX Congreso Latinoamericano de Probabilidad y Estadística Matemática*. Punta del Este, Uruguay. 22 – 26 of March 2004.
12. Discrete time Markov gamma processes and time dependent covariates in survival analysis. Invited speaker at *24th Session of the International Statistical Institute (ISI)*. Berlin, Germany. 13 – 20 of August 2003.

13. Bayesian nonparametric survival analysis via Markov processes. Invited speaker at *Joint Statistical Meeting*. San Francisco, California, USA. 3 – 7 of August 2003.
14. Bayesian solvency analysis with autocorrelated observations. Poster at *Bayesian Statistics 7*. Tenerife, Canary Islands, Spain. 1 – 6 of June 2002.
15. Lévy driven Markov processes in survival analysis. Invited speaker at *III Bayesian Nonparametric Summit*. University of Michigan Business School, Ann Arbor, USA. 27 of July – 2 of August 2001.
16. Semi-parametric Bayesian analysis of heart transplant data. Contributed talk at *24th. Research Students' Conference in Probability and Statistics*. University of New Castle, England, UK. 26 - 29 of March 2001.
17. Markov beta process for modelling hazard rates. Contributed talk at 23rd. Research Students' Conference in Probability and Statistics. University of Cardiff, Wales, UK. 11 - 14 of April 2000.

## HONORS AND AWARDS

- Winner of the "Award to the Professional Merit" for at least 15 years of outstanding professional career in the Academia. Awarded on 8<sup>th</sup> November 2011.
- Member of the National System of Researchers, Mexico (Level II). From January 2009.
- Fulbright-García Robles grantee from August 2007 to July 2008.
- Winner of the "Latin American Francisco Aranda Ordaz Award" for the best doctoral thesis in Statistics 2002-2004. Awarded on 23<sup>rd</sup> March 2004.
- Winner of the "Savage Award" in the category of Theory and Methods for the best doctoral thesis on Bayesian Statistics. Awarded on 15th August 2002.
- "Alfonso Caso Medal" for the best graduate in 1998 in the Masters program in Statistics. Awarded on 30th January 2004.
- Winner of the "National Francisco Aranda Ordaz Award" for the best Masters thesis in Statistics. Awarded in October 1998.
- Honorary Mention at the Masters degree in Statistics. Given on 26th June 1998.
- Special Mention at the Bachelors degree in Actuarial Science. Given on 22nd September 1995.

## GRANTS

- Jan – Dec 2002                      CONACYT project I39357-E. Amount: \$6,000 USD.
- Jul 2005 – Jun 2007                CONACYT project J48072-F. Amount: \$15,000 USD.
- Jan 2011 – Jan 2013                CONACYT project I130991. Amount: \$16,000 USD.

**Last Updated:** November 18<sup>th</sup>, 2011.