**ANA BEATRIZ ACEVEDO**

**Date of birth:** August 30th, 1976

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Ana Beatriz Acevedo is a Full Professor in the Civil Engineering Department at EAFIT University in Medellin, Colombia. She received the B.S. degree in Civil Engineering from the National University of Colombia; and the M.S and Ph.D degrees on Earthquake Engineering from the ROSE School—University of Pavia, Italy. She has worked as a consultant on structural design and as a Professor of Civil Engineering at Antioquia University (Medellin, Colombia). Her current research interest includes seismic risk assessment, seismic structural performance and disaster mitigation.

**EDUCATION**:

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| Degree | Institution name and country | Dissertation | Date of award |
| B.S. in Civil Engineering | Universidad Nacional de Colombia | N/A | 06/04/2001 |
| M.S in Earthquake Engineering | Universita degli Studi de Pavia | Seismological criteria for selecting and scaling real accelerograms for use in engineering analysis and design. | 24/06/2003 |
| Ph.D in Earthquake Engineering | Universita degli Studi de Pavia | Influence of clamping stresses on the shear strength of concrete slabs under uniform loads. | 03/12/2007 |

**PROFESSIONAL EXPERIENCE**:

**Full Professor of Civil Engineering, Universidad de EAFIT, Medellin, Colombia (10/07/2009 – Present)**

* Teaching of graduate and postgraduate courses on Civil Engineering: seismic engineering, structural dynamics, solid mechanics, computational modelling, structural analysis, engineering materials.
* Administration of the graduate program of Civil Engineering (2009 - 2012): curriculum administration, leader of the accreditation process of the program of Civil Engineering.
* Research activities: participation in projects related to concrete technology, structural engineering and earthquake engineering.
* Coordination of the seminar and workshop “Seismic risk evaluation and its use for decision-makers”: 06/06/2017 – 07/06/2017. Organized by EAFIT University and GEM Foundation.

**Professor of Civil Engineering, Universidad de Antioquia, Medellin, Colombia (01/01/2008 – 09/07/2009)**

* Teaching of graduate courses on Civil Engineering: seismic engineering, structural dynamics, bridge design, solid mechanics, structural analysis, engineering statics.

**Structural engineer consultant, Luis Gonzalo Mejia y CIA, Medellin, Colombia (01/03/2001 – 30/04/2002)**

* Analysis and design of reinforced concrete structures.

**Administrative assistant of the graduate program of Structures, Department of Civil Engineering, Universidad Nacional de Colombia, Medellin, Colombia (01/09/2000 – 29/02/2001)**

* Teaching assistant for the postgraduate course of “Design of Reinforced Concrete Structures”.

**PUBLICATIONS AT INTERNATIONAL PEER-REVIEWED JOURNALS**:

* Prieto, J. A., Journeay, M., Acevedo, A. B., Arbelaez J. D. and Ulmi M. (2018). Development of structural debris flow fragility curves (debris flow buildings resistance) using momentum flux rate as a hazard parameter. Engineering Geology, 239:144-157.
* Villar-Vega, M., Silva, V., Crowley, H., Yepes, C., Tarque, N. Acevedo, A. B., Hube, M., Coronel, G. and Santa Maria, H. (2017). Development of a fragility model for the residential building stock in South America. Earthquake Spectra, 33(2):581-604 (10 cites).
* Yepes-Estrada, C., Silva, V., Valcarcel, J., Acevedo A. B., Tarque, N., Hube, M. A., Coronel, G. and Santa Maria, H. (2017). Modeling the residential building inventory in South America for seismic risk assessment. Earthquake Spectra, 33(1):299-322 (7 cites).
* Acevedo, A. B., Jaramillo, J. D., Yepes, C., Silva, V. and Villar M. (2016). Evaluation of the seismic risk of the unreinforced masonry building stock in Antioquia, Colombia. Natural Hazards, 86(1):31-54 (4 cites).
* Acevedo, A. B., Bentz, E. C. and Collins, M. P. (2009). Influence of clamping stresses in the shear strength of concrete slabs under uniform loads. Journal of Earthquake Engineering, 13(1):1-17 (4 cites).
* Bommer, J. J. and Acevedo, A. B. (2004). The use of real accelerograms as input to dynamic analysis. Journal of Earthquake Engineering, 8:43-92 (432 cites).

**INTERNATIONAL CONFERENCE PROCEEDINGS:**

* Silva, V., Crowley, H., Jaiswal, K., Acevedo, A. B., Pittore, M. and Journey M. (2018). Developing a global earthquake risk model. Proceedings of the 16th European Conference on Earthquake Engineering. Thessaloniki, Greece.
* Acevedo, A. B., Jaramillo, J. D., Yepes, C., and Silva, V. (2017). Seismic damage scenarios for unreinforced masonry structures of Bogota, Medellin and Cali (Colombia). Proceedings of the16th World Conference on Earthquake Engineering. Santiago, Chile.
* Bommer, J. J., Acevedo, A. B., and Douglas, J. (2003). The selection and scaling of real earthquake accelerograms for use in seismic design and assessment. Proceedings of ACI International Conference on Seismic Bridge Design and Retrofit. La Jolla, California, American Concrete Institute.

**RESARCH MONOGRAPHS:**

* Acevedo, A. B., Bentz, E. C., and Collins, M. P. (2008). Influence of clamping stresses on the shear strength of concrete slabs under uniform loads. Research Report Rose 2008/05. IUSS Press. Italy.
* Acevedo, A. B. (2007). Influence of clamping stresses on the shear strength of concrete slabs under uniform loads. Doctoral dissertation. Advisors: Michael P. Collins and Evan C. Bents. University of Pavia, Italia.
* Acevedo, A. B. (2005). Critical review of seismic hazard assessments and seismic codes of Colombia. Individual study. Julian J. Bommer. University of Pavia, Italy.
* Acevedo, A. B. (2003). Seismological criteria for selecting and scaling real accelerograms for use in engineering analysis and design. Master dissertation. Advisor: Julian J. Bommer. University of Pavia, Italia.

**ADDITIONAL WORKS:**

* V. Silva, D. Amo-Oduro, A. Calderon, J. Dabbeek, V. Despotaki, L. Martins, A. Rao, M. Simionato, D. Vigano, C. Yepes-Estrada, A. Acevedo, H. Crowley, N. Horspool, K. Jaiswal, M. Journey, M. Pittore (2018). Global Earthquake Model (GEM) Seismic Risk Map (version 2018.1), DOI: 10.13117/GEM-GLOBAL-SEISMIC-RISK-MAP-2018.

**PARTICIPATION ON RESEARCH PROJECTS and RECEIVED FUNDING**:

* 2018 – ongoing. (7,814 EUR). Seismic risk assessment of thin wall reinforced concrete buildings in Colombia –Leading House for the Latin American Region, as part of the project Recent building typology puts Colombia at earthquake risk? From large-scale structural laboratory tests to city-scale assessment. Researcher. Generation of exposure models for thin wall reinforced concrete buildings for main cities of Colombia. Performance of seismic risk assessment of studied building typology.
* 01/15/2018 – ongoing (110,802 EUR). Experimental evaluation of unreinforced masonry walls subjected to seismic loading –Area Metropolitana del Valle de Aburra, Universidad EAFIT. Researcher. Experimental and analytical evaluation of unreinforced masonry walls in-plane and out-of-plane seismic capacity.
* 18/01/2016 – 18/12/2016 (14,247 EUR). Development of an exposure model for residential buildings of Medellin (Colombia) –Universidad EAFIT. Coordinator of the exposure model development.
* 22/04/2015 – 22/10/2015 (6,302 EUR). Exposure model for residential buildings of Bogota and metropolitan area of Cali (Colombia) –GEM Foundation, Universidad EAFIT. Coordinator of th development of and exposure model for seismic risk analysis of the residential buildings of Bogota and metropolitan area of Cali (Colombia).
* 28/01/2014 – 28/01/2015 (33,670 EUR). Development of an exposure model for Antioquia (Colombia) –GEM Foundation, as part of the South America Risk Assessment (SARA) project: Researcher. Development of exposure models for Antioquia Department (Colombia). Development of fragility curves for Colombian unreinforced masonry structures.
* 15/01/2013 – 15/12/2013 (12,237 EUR). Seismic vulnerability assessment of schools in Medellin (Colombia). Coordinator of data analysis and collection and definition of assessment methodology.
* 13/02/2012 – 13/12/2012 (45,243 EUR). Formulation of mix proportion for Colombian high strength concretes –Cementos Argos, Universidad EAFIT. Researcher. Definition of concrete mix proportion and materials for high strength concretes in Colombia.
* 17/01/2011 – 17/02/2012 (8,250 EUR). Formulation of mix proportion for lightweight concrete. –Cementos Argos, Universidad EAFIT. Researcher. Definition of concrete mix proportion and materials for lightweight concretes in Colombia.
* 01/03/2010 – 01/03/2012 (14,648 EUR). Seismic analysis and assessment of shear critical structures –COLCIENCIAS, Universidad de Medellin, Universidad EAFIT. Researcher. Experimental and analytical evaluation of shear capacity of reinforced concrete frames.
* 10/01/2009 – 10/07/2009 (15,682 EUR). Material selection for Colombian high strength concretes –Cementos Argos, Universidad EAFIT. Researcher. Characterization of Colombian materials to be used in high strength concrete.

**SUPERVISION OF MSc STUDENTS (Universidad EAFIT)**:

* Jose Baena (2018 – ongoing). Experimental evaluation of out-of-plane behaviour of unreinforced masonry walls.
* Marco Zapata (2018). Assessment of earthquake-induced landslides in Quito, Ecuador.
* Juan Hienstroza (2018). Analysis of building typology uncertainties in the seismic risk assessment of Barrancabermeja (Colombia).
* Susana Galeano (2018). Seismic risk assessment of electric substations owned by Interconexion Electrica SA. E.S.P in Colombia transmission system.
* Daniela Gonzalez (2017). Exposure model of the residential buildings of Medellin (Colombia).
* Natalia Cardona (2017). Comparison of structural behaviour using different analysis methods included in the Colombian seismic code.
* Fernando Osorio (2015). Exposure model of residential buildings of Antioquia Department (Colombia).
* David Cardona (2014). Characterization of bamboo leaves ashes and its influence as a pozzolan material in concrete.
* Faver Zora (2014). Seismic vulnerability index of schools in Medellin (Colombia).
* Alejandro Pardo (2014). Selection criteria for real accelerograms to be used in dynamic analysis in Medellín.
* Oscar Carmona (2012). Experimental evaluation of the shear capacity of reinforced concrete frames with shear insufficiency.

**SUPERVISION OF PhD STUDENTS (Universidad EAFIT)**:

* Fernando Osorio (2015 – ongoing). Seismic vulnerability of unreinforced masonry buildings in the Aburra Valley, Antioquia (Colombia).
* Daniela Gonzalez (2017 – ongoing). Seismic risk assessment of main wAter system of Medellin (Colombia).

**AWARDS**:

* 2018 Outstanding Contribution Award. GEM Foundation. December, 2018.
* Ph.D scholarship. ROSE School, University of Pavia, 2004-2006.
* M.S scholarship. ROSE School, University of Pavia, 2003-2004.