

# CURRICULUM VITAE

## Alvaro Arias Arenas

### EDUCATION

- PhD Complex Thinking, Multiversidad Mundo Real Edgar Morin, Sonora, Mexico, 2018.  
Doctoral Thesis: *A project for the design and development of prototypes of chairs, inside a classroom-laboratory. A look from the Complex Thinking* Advisor: PhD Carlos David Solorio Pérez
- MSc Integrated Management Systems, Universidad Internacional de la Rioja, La Rioja, Spain, 2014.  
Thesis: Implementation of the quality management system based on ISO 9001: 2008 in the company Induarcont Ltda.  
Advisor: PhD Sergio Enrique Arce Garcia
- PGDip Manufacturing Automation systems, Serviço Nacional de Aprendizagem Industrial SENAI, SaoPaulo, Brasil 2007
- Master studies Materials and manufacturing processes, Universidad Nacional de Colombia, Bogotá, Colombia 1994-1998.
- PGDip Certificate of professional aptitude in milling and lathe, Servicio Nacional de aprendizaje SENA, Bogotá, Colombia 1993.
- B.S Mechanical Engineering, Universidad Nacional de Colombia, Bogotá, Colombia, Sept. 1991  
Thesis: Design of a machine molding with sand  
Advisor: MSc Hector Mosquera

### APPOINTMENTS

#### NATIONAL UNIVERSITY OF COLOMBIA

Associate Professor, School of Industrial Design, 2014-present. Director of the Prototypes and Products Laboratory, 2009-2015.

Assistant Professor, School of Industrial Design, 2002-2014.

Associate Lecturer, Industrial Design School, 1997-2002.

#### INDIANA UNIVERSITY-PURDUE UNIVERSITY, IUPUI

Visiting Scholar  
Indianapolis, Indiana  
2018

#### UNIVERSIDAD JORGE TADEO LOZANO

Adjunct Professor 2002-2003

#### INDUARCONT LTDA

Production manager, 1992-Present.

#### GEME LTDA.

Production manager and Designer of Molds and Dies, 1992.

### RESEARCH NATIONAL

#### UNIVERSITY OF COLOMBIA

- The design methodology since the praxis. A study of the methodology obtained in the design and elaboration of prototypes of chairs in wood, by student work teams, in the industrial design classroom, 2013-2017.
- Development and application of a reusable polymer-based material, a mixture of polymers, for the creation and elaboration of models and prototypes. 2013-2017.
- Networks for innovation in Colombian companies. 2007- 2009. (Co-researcher).
- Typologies of innovative organizations in the petrochemical sector. A complex approach. Study of the plastic chain. 2004-2005. Colciencias-Research Division of Bogotá. (Co-researcher.)
- Typologies of innovative organizations in the manufacturing sector. A complex approach Study of the Moroccan chain. 2003-2004. Bogotá Research Division, (Co-researcher).
- Organizations for creation. A look from the complexity. Case of the National University. Headquarters Bogotá. 2002-2003. Research Division of Bogotá, (Co-researcher).
- Studies of Complexity. 2001-2002. Bogotá Research Division, (Co-researcher).

### **HONORS AND AWARDS**

1. Scholar Visitor. In the Mechanical and Energy Engineering Department at the Purdue School of Engineering and Technology, Indiana University Purdue University Indianapolis, IUPUI, Fall 2018, Indianapolis, Indiana, USA.
2. Scholarship: Third Country Training Programme Em Sistemas de Automacao da Manufatura, JICA-Japan. 2007
3. Scholarship: Primera Escuela Panamericana de Materiales, OEA-México. 1994

### **TEACHING**

#### NATIONAL UNIVERSITY OF COLOMBIA

(Taught 3 undergraduate level courses and 2 graduate level courses, respectively as follow)

- Advanced manufacturing processes.
- Technology of materials
- Fundamentals of manufacturing • Integrated product development, I.
- Product development feasibility II
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- Resources for the development of the Colombian North Coast 2010-2016
- Industrial factors I, (Introduction to manufacturing)1997-2008
- Industrial factors II (Technology of materials) 1997-2008
- Industrial factors III (Technology of manufacturing processes) 1997-2008
- CNC and Design 2002-2008
- Seminar of technology for design, 2002-2006

#### UNIVERSIDAD JORGE TADEO LOZANO

- Technology of Processes, 2002-2003

### **RESEARCH MENTORING AND ADVISING**

#### NATIONAL UNIVERSITY OF COLOMBIA

##### **Undergraduate students**

- David Alfonso Mantilla Mejia, Resemantization of a wooden furniture from the Middle Ages belated, B.S. Industrial Design, 2020.
- José Samuel Torres Gutierrez, Modular position light (Lum-on), B.S. Industrial Design, 2019.

- Goyeneche Arias, Adrián Leonardo, InMortal, Technical help to prevent the risk of occupational disease in manual cutting of roses, B.S. Industrial Design, 2019.
- David Arturo Cortes López, Modular office furniture design as a product online using Studio Signo's production capabilities, B.S. Industrial Design, 2019.
- Jennifer Andrea Guillen López, Analysis of design method and prototyping of chairs in Woods, B.S. Industrial Design, 2019.
- Luis Fernando Castro, Contingency furniture for industrial designers and architects, B.S. Industrial Design, 2017.
- Silvia Juliana Tovar Quintero, *Design proposal for bio-inspired dialysis on the principle of suction of the throchilidae family*, B.S. Industrial Design, 2017
- Ivan Dario Rojas, *Bicycle furniture inside the home*, B.S. Industrial Design, 2017 ,
- Nicolas Felipe Ramirez Sarmiento, *Modular system design for the assembly of portable and storable obstacles for the training of cyclomontanism technique*, B.S. Industrial Design, 2016
- Daniel Arturo Malaver Bogotá, *Development of a material based on marble powder for its application in the design of products*, B.S. Industrial Design, 2016.
- Juan Camilo Velandia Florez, *Instructional guide for the development of models and prototypes in cardboard*, B.S. Industrial Design, 2015.
- Jefersson Andres Ramos Macias, *Instructional guide for the development of models and prototypes in cardboard*, B.S. Industrial Design, 2015.
- Paula Andrea Carvajal Prada, *Development of human traction vehicle manufactured in wood, customized by using cnc machinery* , B.S. Industrial Design, 2015
- Sebastian Miguel Moreno Torres, *Wheelchair design under participatory strategies, applied to adults who do not require a companion*, B.S. Industrial Design, 2015
- Andrés Mauricio García León, *Design, development and production of the commercial space 'La hora' in the El Retiro shopping center in Bogotá, Colombia,* , B.S. Industrial Design, 2014.
- Manolo Andrés Suárez Muñoz, *Development of multifunctional furniture for private spaces of low-income housing*, B.S. Industrial Design, 2014.
- Julio César Augusto Cortázar Cifuentes, *Furniture for homes with limited space*, B.S. Industrial Design, 2014.
- Julio Cesar Naranjo, *Design of equipment for mixing and preparation of a reusable material with polymeric base that can be use in model and prototype elaboration.* B.S. Industrial Design, 2013.
- Jhon Jairo Guerrero Abella, "Amplexo": *Rotomolded boat design for passenger transport*, B.S. Industrial Design, 2013.
- Roberto Arturo Gómez Mora, "Amplexo": *Rotomolded boat design for passenger transport*, B.S. Industrial Design, 2013.
- Jonathan Richard Dueñas Garcés, *Furniture for kindergartens, early childhood.* B.S. Industrial Design, 2013.
- Juan Pablo Torres Alzate, *Displacement as an energy source for computer systems in exhibition spaces and events.* B.S. Industrial Design, 2013.
- Pilar Andrea Ortiz Sanabria, *Displacement as an energy source for computer systems in exhibition spaces and events.* B.S. Industrial Design, 2013.
- Valencia Ramos Carlos Ivan, *Urban furniture: new proposal for informal sellers in Bogotá*, B.S. Industrial Design, 2012. .
- Juan Manuel Orjuela Lamprea, *"Barracuda" Laminated Guadua applied to a type of Longboard*, B.S. Industrial Design, 2012
- Jairo Arturo Sanchez Rios, *Hybrid materials paraffin*, B.S. Industrial Design, 2011
- Ortega Uribe Juan Esteban, *Design of the body and trim of an electric vehicle for tourist buses from an existing platform technological*, B.S. Industrial Design, 2011.

- Sergio Andrés Ruiz Valencia, *Sucursal: System design that contributes to dance learning*, B.S. Industrial Design, 2010.
- Jorge Andres Ayarza Lemus, Internship -as a degree option. Quest International Company. B.S. Industrial Design, 2010
- Jimenez Triana Nicolas Giovanni, Model for the creation of a company focused on the production of autoparts of the tunnig sector, B.S. Industrial Design, 2008
- Javier Hernando Quintero Pastor, B.S. Industrial Design, Selection of materials for product development from the complexity, B.S. Industrial Design, 2007.
- Juana Andrea Lemes Cruz, Exploration of the industrial process in the design of a line of promotional products in plastics for liquors. , B.S. Industrial Design, 2006.
- Giovanni Maldonado Cuevas, Management model for academic practice laboratories, B.S. Industrial Design, 2006.
- Carolina Castañeda Sossa, *Salt on rock, as material applied to an ionizing system*, B.S. Industrial Design, 2005.
- Jorge Eduardo Criollo, *Salt on rock, as material applied to an ionizing system* B.S. Industrial Design, 2005.
- Javier Bogotá Modera, *Design of table accessories from tagua and totumo for marketing in Miami, Florida*, B.S. Industrial Design, 2005.
- Elvis Martin Rozo, Design of table accessories from tagua and totumo for marketing in Miami, Florida, B.S. Industrial Design, 2005.
- Andres Fernando Castro Ovalle, *Comprehensive design solution for earthworm cultivatio*, B.S. Industrial Design, 2005.
- Fabian Andres Buitrago, *Multimedia information point*, B.S. Industrial Design, 2005.
- Fernando Salazar, Adaptation project and transfer of the laboratories of the Faculty of Arts, B.S. Industrial Design, 2005.
- Donald Javier Fonseca, *Design of portable signage for road repair and construction*, B.S. Industrial Design, 2005.
- Nelson Enrique Navarrete, *Modeling and prototyping guide. RapidPro*, B.S. Industrial Design, 2004.
- Andres Vasquez, *Diffraction, portable infrastructure for photography workshops*, B.S. Industrial Design, 2004.
- Hernan Dario Herrera, *Die cutting equipment for the elaboration of logic blocks*, , B.S.. Industrial Design, 2001.

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### **Visiting students and interns**

- Viviam Caroline Walezca Montoya Echeverry, Universidad Nacional de Colombia, Branch Palmira.

### **UNIVERSITY SERVICE**

#### UNIVERSIDAD NACIONAL DE COLOMBIA

School of Industrial Design

- Committee Advisor Member of Industrial Design 2009-Present
- Committee Advisor of the Prototypes and Products Laboratory 2015-present
- Founder and director of the Prototypes and Products Laboratory 2004-2015
- Coordinator of twelve Shows of prototypes chairs, 2011-2016
- Technical Committee Advisor of IMOCON 1998-2002

### **PUBLICATION LIST**

Conferences Paper

1. A Arias Arenas. Design and development of prototypes within the design classroom National Research Meeting of the National University of Colombia. ENID 2015. ISSN: 2390-0148 v.2
2. A Arias Arenas, D Cifuentes et al. Prototype "Elysian chair" Design and development of prototypes within the design classroom National Research Meeting of the National University of Colombia. ENID 2015. ISSN: 2390-0148 v.2
3. A Arias Arenas, L Escorcía et al. Prototype "Summer Chair". National Research Meeting of the National University of Colombia. ENID 2015. ISSN: 2390-0148 v.2
4. A Arias Arenas, J C Dueñas et al. Prototype chair "Flux". National Research Meeting of the National University of Colombia. ENID 2015. ISSN: 2390-0148 v.2
5. A Arias Arenas, A M Fonseca et al. Llain Kushe. National Research Meeting of the National University of Colombia. ENID 2015. ISSN: 2390-0148 v.2
6. A Arias Arenas, L Ribero et al. Chair "Zague Quye". National Research Meeting of the National University of Colombia. ENID 2015. ISSN: 2390-0148 v.2
7. A. Arias Arenas .Study of the methodology obtained in the design and elaboration of wooden chair prototypes by designers in training. National Research Meeting of the National University of Colombia. ENID 2014. ISSN: 2390-0148 v.1
8. A. Arias Arenas, A Ramos et al. Prototype chair "Albura. National Research Meeting of the National University of Colombia. ENID 2014. ISSN: 2390-0148 v.1
9. A. Arias Arenas, L V Quiroga et al. Prototype chair "Aura". National Research Meeting of the National University of Colombia. ENID 2014. ISSN: 2390-0148 v.1
10. A. Arias Arenas, P Lozano et al. Prototype chair "Bow Tie". National Research Meeting of the National University of Colombia. ENID 2014. ISSN: 2390-0148 v.1
11. A. Arias Arenas, E Barragan et al. Prototype chair "Vacoom". National Research Meeting of the National University of Colombia. ENID 2014. ISSN: 2390-0148 v.1
12. A. Arias Arenas, M A Borbón et al. Prototype chair "La petite". National Research Meeting of the National University of Colombia. ENID 2014. ISSN: 2390-0148 v.1

#### BOOKS

1. Arias Arenas, C Cubillos Leal, J M Rodríguez Devis and L C Torres Soler. Typologies of innovative organizations in the manufacturing sector a complex approach. Study of the plastic chain . (Ed): Siglo XXI impresores. ISBN: 9583379700.
2. Arias Arenas, C Cubillos Leal, J M Rodríguez Devis and L C Torres Soler, C Caicedo, N Albis. Creativity Innovation and Complexity. (Ed) Grama Editores ISBN: 9583374288 v. 1

#### CHAPTERS IN BOOKS

1. A Arias Arenas, A. Chapter: The prototype and product development. (Ed)Universidad Nacional de Colombia: Percepciones, Unidad en la diversidad, Bogotá. 2006.
2. A. Arias Arenas. The design methodology from the praxis. Study of the methodology obtained in the design and development of wooden chairs prototypes. (Ed.) Universidad Nacional de Colombia: National Research Meeting of the National University of Colombia, ISBN: 978-958-761-740-5, 2013.
3. A. Arias Arenas, E. Muñoz et al. Prototype Chair Chaine. (Ed.) Universidad Nacional de Colombia: National Research Meeting of the National University of Colombia, ISBN: 978-958-761-740-5, 2013.
4. A Arias Arenas, J Jackson et al. Hard Jobs Chair. (Ed.) Universidad Nacional de Colombia: National Research Meeting of the National University of Colombia, ISBN: 978-958-761-740-5, 2013.
5. A Arias Arenas, J C Lievano et al. Prototype Floating Chair. (Ed.) Universidad Nacional de Colombia: National Research Meeting of the National University of Colombia, ISBN: 978-958-761-740-5, 2013

6. A. Arias Arenas, A Cadena et al. Hard Jobs Chair. (Ed.) Universidad Nacional de Colombia: National Research Meeting of the National University of Colombia, ISBN: 978-958-761-740-5, 2013.
7. A. Arias Arenas, L Marín. et al. Bermuda prototype chair. (Ed.) Universidad Nacional de Colombia: National Research Meeting of the National University of Colombia, ISBN: 978-958-761-740-5, 2013.