

**Maria Patricia Guerra-Escobar**  
 BSc CEng MICE, Chartered Civil Engineer  
 MSc Civil Engineer, MSc Geotechnical Engineer

**PROFESSIONAL EXPERIENCE**

<b>Dates: September 2015 – present</b>	<b>Role: Principal Engineer</b>
<b>September 2013 – September 2015</b>	<b>Role: Senior Design Engineer</b>
<b>March 2010 – September 2013</b>	<b>Role: Design Engineer</b>
<b>Company: Geosynthetics Ltd</b>	<b>Location: Hinckley, United Kingdom</b>

**Main Responsibilities as Principal Engineer:**

- Management of the engineering department ensuring continued development and growth in technical knowledge and applications using Geosynthetics for the team and the company.
- Part of the management team of the company.
- Innovation through research and development of new methods, applications and geosynthetic solutions to use in civil and geotechnical engineering.
- To provide support and direction to the team.
- Responsible for the designs, calculations and recommendations of the department.
- To provide technical support to consultants, contractors and specifiers in all the stages of the projects, from planning and design to construction.
- Delivery of technical seminars to consultants, contractors and government agencies
- Delivery of lectures to Universities about Geosynthetics and their applications.
- Creation and implementation of the engineering department.
  
- Member of the Committee of the International Geosynthetics Society IGS UK Chapter since 2014.
- Chair of IGS UK Chapter for the 2years period 2020-2022.
- Currently member of IGS International Council
- Chair of the European Regional Activities Committee ERAC
- Member of the Technical Committee TC218 of the ISSMGE (International Society for Soil Mechanics and Geotechnical Engineer), which is responsible for the guidelines, technical recommendations and best practices of reinforced fill structures.

<b>Dates: August 2002 – November 2009</b>	<b>Role: Technical manager Geosistemas for CA</b>
<b>Company: Mexichem (Amanco)</b>	<b>Location: Costa Rica, Central America (CA)</b>

**Main Responsibilities:**

- Based in Costa Rica with responsibility for projects across Central America
- Responsible for the development and implementation of the Geosistemas strategy in Central America
- Management of the regional budget ensuring continued growth in sales and maintenance of adequate profit margins
- To provide technical and commercial leadership of 50 AMANCO staff working across CA
- To provide personal development (through training and coaching) to 7 Civil Engineers in the Geosistemas Department in Central America
- Responsible for the establishment and growth of the geosynthetics market in CA, through promotion of their capabilities and identification of new business opportunities
- To provide technical support to consultants and contractors in all the stages of projects (planning, tender stage, detailed design and construction)
- To deliver lectures at Universities in the different countries of Central America

<b>Dates: March 2001 – August 2002</b>	<b>Role: Design Engineer</b>
<b>Company: Soletanche Bachy</b>	<b>Location: Paris, France</b>

**Main Responsibilities:**

- Designs and calculations of retaining structures
- Calculations of different type of foundations, both shallow and deep foundations
- Hydraulic analysis and calculation of drainage systems
- Calculations using method of finite elements « PLAXIS »

<b>Dates: July 1997 – June 2000</b>	<b>Role: Design Engineer</b>
<b>Company: PAVCO S.A. – AMANCO/MEXICHEM GROUP</b>	<b>Location: Bogota, Colombia</b>

**Main Responsibilities:**

- Create and develop the design manuals for Geosynthetic applications
- Perform calculations and designs of roads, pavements, retaining structures, hydraulic structures, impermeable structures using Geosynthetics
- Design and Construction drawings using AutoCad
- Technical and commercial coordination of the Geosynthetics department for the southern region of Colombia and exports

<b>Dates: February 1996 – July 1997</b>	<b>Role: Graduate Engineer</b>
<b>Company: S.V.P. INGENIERIA LTDA.</b>	<b>Location: Bogotá, Colombia</b>

**Main Responsibilities:**

- Design of pavements: design of asphalt layers and granular layers based on traffic, ground conditions and design life, using semi-empirical and rational methods.
- Calculations of the roads geometry and detailed CAD Drawings with horizontal and vertical sections and layouts.
- Calculation of traffic for the design of pavements

## EDUCATION

<b>Sep. 2000 – Apr. 2002</b>	<b>ECOLE CENTRALE DE PARIS (FRANCE): MSc in SOIL MECHANICS and Geotechnics</b> MSc Eng in Soil Mechanics and Engineering Works in their Environment ( <i>DEA : Mécanique des sols et ouvrages dans leur environnement</i> ), awarded in April 2002
<b>Jun. 2000 – Aug. 2000</b>	<b>UNIVERSIDAD JAVERIANA (COLOMBIA): Higher Dipl. in CONCRETE PAVEMENT</b> Diploma in Management of Concrete Pavement
<b>Jan. 1998 – Sep. 1999</b>	<b>UNIVERSIDAD DE LOS ANDES (COLOMBIA): MSc in CIVIL ENGINEERING</b> Msc Eng in Civil Engineering with emphasis in Road Infrastructure and Transport, awarded in September 1999
<b>Oct. 1996 – Nov. 1996</b>	<b>UNIVERSIDAD DE ROSARIO (ARGENTINA): Higher Dipl. in ROAD DESIGN</b> Diploma in Geometric Road Design, awarded in November 1996
<b>Sep. 1991 – Jul. 1996</b>	<b>UNIVERSIDAD JAVERIANA (COLOMBIA): BScEng in CIVIL ENGINEERING</b> BSc Eng in Civil Engineering, awarded in October 1996
<b>- Jun. 1991</b>	<b>LYCEE FRANÇAIS LOUIS PASTEUR (COLOMBIA) : Baccalauréat</b>

## MEMBERSHIPS & AFFILIATIONS

- Chartered member of the Institution of Civil Engineers in UK (ICE)
- Member of the British Geotechnical Association (BGA)
- Member of the International Geosynthetic Society (IGS)
- Member of the Committee of the IGS Chapter UK
- Member of the Technical Committee TC218 of the ISSMGE (International Society for Soil Mechanics and Geotechnical Engineer)

## LANGUAGES

- **Spanish:** fluent - native language
- **French:** fluent (spoken and written)
- **English :** excellent (spoken and written)

## COMPUTING SKILLS

**Office Programs :**     ▪ MS Word, MS Excel, MS PowerPoint , MS Project, MS Visio

**Technical Programs :**

- **PLAXIS :** software for finite element modelling
- **PARO12 , PARIS :** software for modelling of reaction coefficients for deep foundations
- **CACAO, PROVERBE, BUTONS, KRANZ, :** software tools to assist in design of retaining structures
- **TALREN:** software for soil stability
- **DEPAV, INPACO, CEDEM, VISAR, PAS :** software for paving design
- **PCSTABLE, RRCC, RESLOPE, SLIDE, OASYS :** software for slope stability
- **GEOSOFT:** software for use of Geosynthetics
- **GEO5:** Gabion, MSE Wall and Slope Stability
- **AUTOCAD**

**Others :**

- **Access CRM**
- **A-Cloud**