

## DAVID HOMES

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## STUDIES

Ph.D. Candidate in Engineering and Applied Sciences. University of New Orleans.  
New Orleans, Louisiana, USA. 2004.

M.Sc. in Engineering, focus on Structural Engineering. University of New Orleans,  
New Orleans, Louisiana, 2002.

Civil Engineer. Rafael Urdaneta University. Maracaibo, Venezuela. 1997.

## PROFESIONAL EXPERIENCE

### - **IPHONE / IPOD PROGRAMMER. Maracaibo – Venezuela.**

March. 09 – present. Developed several applications for the Engineering /  
Architectural Market as well the Entertainment Category.

Under Development:

- **[sections]:** details available at

[mobile-engineering.com/sections.html](http://mobile-engineering.com/sections.html) . A parametric cross section and  
member property calculator.

- **[steel] android:** details available at

[mobile-engineering.com/android.html](http://mobile-engineering.com/android.html). [steel] app ported to the Android  
mobile OS.

Currently available on iTunes:

- **[steel hd]:** [itunes.com/apps/steelhd](http://itunes.com/apps/steelhd). The combination of all my  
[steel] applications into a single program optimized for the ipad.

- **[steel]:** [www.itunes.com/apps/steel](http://www.itunes.com/apps/steel) a sqlite3 database browser and utility containing the American Institute of Construction's database of Structural Steel Sections. [steel] has 4.5 rating average and excellent reviews on the US iTunes Store.

- **Metals and Materials Weight Calculator**

([www.itunes.com/apps/metalsandmaterialsweightcalculator](http://www.itunes.com/apps/metalsandmaterialsweightcalculator)) a calculator designed with the materials trade industry in mind, but useful as well in a wide range of applications commonly employed by engineers, architects, builders and material traders.

- **[steel] Canada** ([www.itunes.com/apps/steelcanada](http://www.itunes.com/apps/steelcanada)) same as [steel], but including the Canadian Institute of Steel Construction's Database.

- **GaugeFinder** (<http://www.itunes.com/apps/gaugefinder>) visual guide and reference to the most commonly used gauge standards used worldwide.

- **[steel] uk** ([itunes.com/apps/steeluk](http://itunes.com/apps/steeluk)). Waiting for review. Same as [steel] but using the BS EN 1993-1-1:2005 / BS 4-1:2005 Standards Database.

- **PROJECT ENGINEER (Contract). SEGACO / PDVSA.** Maracaibo – Venezuela. Dec.03/08 – March.03/09. "Evaluation, adaptation and installation of Babel Enterprise Security Assessment System". Project involved the use and modification of Babel Enterprise for Unix & Debian, as well as programming custom designed tools to automate security assessment tasks under these Operating Systems.
- **ENGINEER. IMPROCOME.** Maracaibo – Venezuela. April.01/07 – July.12/08 Supervised industrial projects for Polar and Cemex companies. Forensic Analysis of Residential Failure.

- **ENGINEER, STRUCTURAL AND THERMAL CONSULTING SERVICES. COMPUTATIONAL DYNAMICS – ADAPCO** ([www.cd-adapco.com](http://www.cd-adapco.com)).  
Melville – New York.  
Feb.14/06 – March.06/07. Worked as consultant providing structural and thermal analysis services to global clients such as Conoco-Phillips, Magna Closures, General Electric, Ford, Volvo/Mack. Use of engineering simulation tools such as ANSYS / APDL, ABAQUS, LS-Dyna, ADAPCO's Pro-fe under Unix/Linux.
- **PROGRAMMER.** Gainesville – Florida – USA.  
2003 & 2005 (Contracts). Developed the AISC Search Utility for Structural Steel Shapes. Version 3.1 (2003) & 13 (2005), The Utilities are now included in the AISC LRFD Manual of Steel Construction 3rd Edition (v 3.1) and AISC Manual of Steel Construction 13th Edition (v 13).
- **PROJECT ENGINEER (Contract). PDVSA.** Maracaibo – Venezuela.  
Aug.09/2004 – March.18/2005.  
Developed and maintained, as part of a team of consultants, the real time information system "Portal de Sala Situacional de PDVSA Occidente".
- **RESEARCH ASSISTANT.** University of New Orleans – New Orleans – USA.  
Jan.14/1999 – May.05/2004.  
Conducted analyses using Closed-form and Finite Element Methods (using ANSYS) of the Louisiana semi-integral abutment bridge system, inspection of sample integral bridges. Dynamic analysis of vehicular impact (using LS-Dyna) on temporary traffic barriers. Destructive tests of composite materials (Fiberglass reinforced panels). Development of mathematical models, Pc and mobile software to predict the behavior of secondary settling waste-water tanks.

## **SKILLS**

\* Bilingual (English / Spanish)

- \* Proficient in several Engineering Simulation tools (ANSYS / APDL / LS-Dyna / Pro- fe)
- \* Advanced technical skills: Programming in Objective-C / Cocoa Touch, BASH, C#, Visual Basic .Net, VB6, Fortran. Advanced experience with multiple Operating Systems (Unix / Linux / Debian / Windows, all versions / MAC OS.X)
- \* Very advanced skills in Photoshop, Illustrator, Dreamweaver, InDesign,

## **PRESENTATIONS, PUBLICATIONS AND EVENTS**

Evaluation of DOTD Semi-Integral Bridge and Abutment System.” Read Bakeer (Tulane), Basher Almalik (Tulane), Stacey Carr (Tulane), Norma Mattei (Universidad de New Orleans), Jesús David Homes (Universidad de New Orleans). Final report. Louisiana Transportation and Research Center, #01-3ST. Baton rouge, Louisiana, USA. 2004.

“Uniaxial bending and pull-out tests of Hangar Composite Materials.” Norma Mattei, Paul Herrington, Jesús David Homes. Universidad de New Orleans. Project report presented at the 9th International Conference of Composite Materials. 2001. San Diego, California, USA.

“An Urban Waste Management and Research Center Electronic Database and Newsletter.” Gianna Cothren, Jesús David Homes. Universidad de New Orleans. Project results presented at the 2000 National Conference of the American Society for Engineering Education. St Louis, MO, USA.

American Institute of Steel Construction’s National Steel Bridge Competition and Conference – Member of the University of New Orleans design and competition team. Anchorage, Alaska. 1999.

American Institute of Steel Construction’s Regional Steel Bridge Competition and Conference – Member of the University of New Orleans design and competition team. Jonesboro, Alabama. 1999.

## **SCHOLARSHIPS**

Recipient of the Organization of American States' International Regular Training Program Fellowship which provided with graduate studies in the USA. 1999-2001.

University of New Orleans' Marcus B. Christian Scholarship. 2002-2004.