

## James Forkan, Senior Structural Engineer

PE, CEng MIEI, ME, BSc, Structural Engineering with Architecture

### Personal Details:

Name: James Forkan

Date of Birth: August 21<sup>st</sup> 1988

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US Visa Status: H1b visa holder

### Employment Record

- 2015 - Present: Senior Structural Engineer BuroHappold Engineering Inc. New York.
- 2014 - 2015: Senior Structural Engineer, O'Connor Sutton Cronin, Dublin
- 2011 - 2014: Structural Engineer Thornton Tomasetti, New York
- 2008 - 2009: Graduate Engineer Laing O'Rourke. Dublin

### Notable Experience

#### March 2015 – Present - Senior Structural Engineer BuroHappold Inc.

##### Hudson Tower Detroit

- Design and Analysis on a 900ft Tower in Detroit
- Coordination and Management within the design Team

#### Atlanta Falcons Stadium - Senior Structural Engineer BuroHappold Inc.

- Coordination and Management including regular site meetings through the CA phase
- Design and Analysis of the Retractable Roof

#### March 2014 – March 2015 - Senior Structural Engineer O'Connor Sutton Cronin Consulting Engineers

**Royal Wharf Phase 1** – Currently involved in the design of 7, primarily residential, concrete plots ranging from 5-16 stories. ([www.royalwharflondon.com](http://www.royalwharflondon.com)) Personal tasks include;

- Coordination and Management, attending regular client and design team meetings in London
- Development of full 3D finite element models of each of the plots, to be used for analysis of columns, slabs, concrete cores and foundations
- Design and RC Detailing of all Structural Elements
- BIM coordination

#### 2011 -2014 Thornton-Tomasetti Structural Engineers

**Hudson Yards** - Involved in the design of two mixed use towers in the West side of Manhattan. Personal tasks included;

- Reinforced Concrete Beam and Slab design
- Reinforced Concrete Column and Steel Column design
- Floor Framing - Geometry and sizing of Tower A and Tower C steel floor beams and girders designed using RAM finite element software.
- Truss design - Design of trusses at various areas in Tower A and Tower C using SAP2000 finite element software.
- Architectural Sketches - Use of Revit, AutoCAD and Bluebeam in the process of relaying structural design to the Architect.



### Professional Qualifications:

- 1<sup>st</sup> Class Honours Degree in Structural Engineering with Architecture – 2009
- ME in Structural Engineering with Architecture from University College Dublin/Universidad de Cantabria, Spain -2011

### Professional Memberships:

- Professional Engineer (PE- New York)
- Chartered Member of Engineers Ireland CEng (MIEI).
- Member of AISC, SEoNY

### Personal Merits and Awards:

- Publication of Structural Dynamics Paper at an International Civil Engineering Conference in Varenna, Italy
- Speak Spanish to a conversational level. Completed Masters Studies in Universidad de Cantabria, Santander, Spain.
- Selected as UCD University Ambassador for Engineering, Mathematics and Science Department
- Foreign Language Coordinator - Chosen to act as an event & activity organiser for foreign language students in Spain
- ACE Mentor Programme – Worked as mentor to high school students interested in careers in Engineering and Architecture
- Innovation Coordinator – Involved in mentoring students in developing new and innovative engineering products at UCD
- Selected as High School Prefect – Awarded to students based on exceptional academic achievement and involvement in school activities

**West 57 Street** - A landmark 44 storey residential tower located on the west side of Manhattan. Personal tasks included;

- Design of concrete flat slabs using SAFE finite element software
- Design of concrete columns, beams and piers
- Analysis and design of steel tower top. This also included provision for a window washing rig
- Coordination with architect regarding column and beam design

**Edmonton Arena** - A 20,500 capacity ice hockey arena located in Edmonton in Canada. Personal Tasks included;

- Development of a 3D SAP2000 finite element model of the entire arena
- Full Dynamic analysis of the arena including completion of Dynamic Properties report detailing natural frequencies, mode shapes and centre of rigidity of arena.
- Seismic and wind analysis of the entire arena
- Design of wind girts, bent raker beams and steel columns in the arena.

**Roosevelt Field Mall** - The expansion and renovation of a 270 store Mall in Garden city, New York. Personal tasks included;

- Footing design- Sizing new footings and detailing reinforcement for existing footings
- Design of Steel Canopy using SAP200 finite element software
- Steel and composite column design
- Steel Framing
- Completion of Probe Report involving the examination and analysis of various structural elements in the existing structure following a field investigation.

**7 Bryant Park** - A 36 Storey tall tower in Manhattan. Personal Tasks included ;

- Design of window washing Rig at the top of the tower
- Steel Floor framing at various locations
- Design of wind Girts

**Summer 2008 & 2009 - Laing O'Rourke Engineering Enterprise**

Working as a member of the engineering team on the Luas Green Line - (Tram) - Dublin City Centre, responsibilities included;

- Pour inspection & Concrete Testing - Inspecting formwork, concrete cover and reinforcement design, cube testing and slump tests
- Site Management - Calculation of concrete volume and delivery scheduling
- Record Keeping and As-Built drawings - Site allocation sheets, site diaries, updating CAD As-Built Drawings
- Setting out - Rail lines using digital level and EDM (electronic theodolite)

- Academic Scholarship achieved on basis of secondary school results on entry to UCD

**Key Skills :**

- Excellent knowledge of RAM, SAP, ETABS, SAFE FE software.
- Working knowledge of Revit, AutoCAD, Bluebeam, Rhino, Grasshopper
- Competent in use of Excel, Excel VBA, MATLAB, and Microsoft Office

**Interests and Hobbies :**

- Playing music - Classical and Acoustic Guitar
- Web Development - Built and operate an ecommerce website
- Foreign Language Studies - Completed University level Spanish to advanced level. Regularly attend classes and conversation workshops to maintain fluent level.
- Playing soccer - regularly play soccer at various locations around the city
- Playing Gaelic football

**Referees :**

On Request