Eckersley O'Callaghan

Job Description

Job Title: Computational Designer / Computational Engineer
Reports to: Digital Design Lead

Eckersley O'Callaghan is one of the most innovative engineering design firms in the world, with a global reputation cultivated through a commitment to research and creative thinking. We enjoy working with a range of materials, forms and building types across diverse sectors and project scales to deliver imaginative solutions. Our multiple award-winning collaborations with forward-thinking architects such as Foster + Partners, Zaha Hadid Architects and Heatherwick Studio, for clients that include Apple, Google, Vitsoe and Bulgari, have placed us at the forefront of design in structures and facades. Our commitment to sustainability, digital design, and continuous research and development remains at the core of our approach.

We offer a stimulating work environment with enthusiastic, intelligent, hard-working colleagues, and support personal development through training and project opportunities. Our principal office is in London, with other offices in Manchester, Paris, Milan, New York, Los Angeles, San Francisco, Delhi, Hong Kong, Shanghai and Sydney.

DESCRIPTION

Our growing DD team in London is seeking a **Computational Designer or Computational Engineer** with strong parametric design expertise, whether at the graduate level or beyond. The successful candidate will contribute to computational design projects supporting our clients directly and providing assistance to our four London teams: facades, structural engineering, advanced materials, and access and maintenance engineering. The role offers the opportunity to work on a diverse range of projects, both local and international, varying in scale and complexity.

Our new colleague will be placed in a creative engineering environment operating in constant knowledge exchange with complementary AEC disciplines. As a Computational Designer, you will have the opportunity to work on cutting-edge projects, using your skills in programming and parametric design to develop solutions that are both aesthetically compelling and technically robust.

JOB KNOWLEDGE, SKILLS AND EXPERIENCE

— A strong degree, certification or equivalent in an AEC-related discipline (STEM backgrounds are also welcome)
— Demonstrated experience in robust parametric modelling and scripting (graphical or/and text-based programming – Python, C#)
— Experience in workflow planning, including integration and interoperability for analysis and documentation
— Experience with architectural geometry (knowledge of differential geometry is a plus)
— Experience with production of geometry for manufacturing and assembly – production of geometry method statements and drawing extraction automation
— Excellent proficiency in Rhino and Grasshopper
— Familiarity with key Grasshopper plugins such as Karamba3D, Kangaroo, Ladybug/Honeybee, Octopus/Wallacei, Speckle, BEAM, Rhino.Inside.Revit, Human UI and ShapeDiver
— Familiarity with optimisation techniques such as genetic algorithms, multi-objective optimisation to refine designs based on performance metrics such as structural integrity, energy efficiency, or material sustainability.
— Familiarity with data analysis and visualization (Power BI preferably): translate complex datasets into comprehensible visualisations to guide design decisions and present them to stakeholders
— Ability to collaborate effectively with other computational designers and engineers internally and externally through scripts and workflows
— Strong communication and presentation skills in English
— Some experience with machine learning or artificial intelligence techniques applied to design would be preferable.
— Ideally some experience in scripting within BIM environments like Dynamo, Revit, Navisworks, or other construction-oriented platforms.
— Some familiarity with finite element analysis (FEA)
— Some familiarity with digital fabrication methods such as 3D printing, CNC milling, or robotic fabrication.

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EOC

KEY RESPONSIBILITIES

— Report directly to the Digital Design Lead in London
— Develop digital workflows for delivery of complex projects from concept to completion
— Contribute to production of internal tools together with software developers and R&D initiatives
— Represent EOC at design team meetings
— Collaborate with architects, other engineering consultants and contractors as part of the team
— Apply theory to practice and in a logical way
— Highlight potential problems and look for a solution
— Script and model validation for construction and as part of quality assurance
— Assist in creation of design presentations and reports
— Fast track development of early concept scripts in parametric format to facilitate the work of engineers
— Able to prioritise workload, meet tight deadlines and work effectively with and within a team

PERSONAL QUALITIES

— Team-oriented mindset
— Positive attitude and willingness to learn and teach computational methods
— Great organisational skills
— A flexible, positive approach and the ability to work as part of a team in a busy, creative atmosphere
— Excellent interpersonal skills with the ability to communicate with people of all levels

WE OFFER

— A stimulating work environment with a smart, diverse and motivated set of colleagues
— A competitive benefits package
— Volunteer and outreach opportunities
— Flexible working around core hours
— Opportunities for continuing professional development including mentoring to chartership
— Training opportunities
— Opportunities for career growth
— Opportunities to take part in internal R&D activities
— Collaboration opportunities with our international offices
— World-class projects with leading architects, contractors and collaborators

Please email your CV, samples of work and covering letter with subject line 'EOC-IN-COM' to:
recruitment@eocengineers.com

EOC