

MEHRDAD MOSTAFAVI

R&D Electrical Engineer · EPLAN Expert · Electrical Designer · Operational Engineering & Management

Brussels, Belgium | LinkedIn | Website

PROFESSIONAL PROFILE

R&D Electrical Engineer with 3+ years of experience at IBA (Ion Beam Applications), world leader in particle accelerator technology. Specialised in the full electrical design workflow, from 2D schematics and 3D panel layouts in EPLAN to conformity calculations, wiring list management, and factory acceptance. Single Point of Contact for electrical design activities in IBA's Industrial Business Unit and NHA project, working within multidisciplinary teams. Certified in Safety for Operational Supervisors (SCC/VCA). Holds a Google Project Management Specialisation and is actively developing leadership skills.

PROFESSIONAL EXPERIENCE

R&D Electrical Engineer

April 2023 – Present

Ion Beam Applications (IBA)

World leader in particle accelerator technology (40+ countries)

📍 Louvain-la-Neuve, Belgium

Appointed Point of Contact for all electrical design activities within IBA's Industrial Business Unit, responsible for design coordination, technical consistency, and cross-project engineering standards.

- ▶ **Cabinet & Rack Design:** Designed complete electrical cabinet and rack systems for particle accelerator infrastructure, covering power distribution, control interfaces, safety/interlock circuits, and BOM preparation across the Normandy Hadrontherapy (NHA), Proton Therapy, and Industrial business units.
- ▶ **EPLAN 2D/3D:** Produced full electrical schematics (EPLAN Electric P8) and 3D panel layouts (EPLAN Pro Panel) ensuring mechanical fit, routing constraints, and installation requirements.
- ▶ **Wiring List:** Defined and managed complete wiring list, terminal allocation, signal/power cross-referencing, wiring list generation, and documentation packages traceable from design to production.
- ▶ **Conformity & Verification:** Performed electrical conformity calculations and circuit validation, and internal quality standards. Carried out factory acceptance reviews of cabinets at supplier sites prior to delivery.
- ▶ **Systems Integration:** Coordinated electrical, mechanical, and control domain interfaces within multidisciplinary R&D teams. Supported on-site system integration including schematic clarification and wiring troubleshooting.
- ▶ **Design Standardisation:** Led optimisation of engineering workflows, modular design approaches, schematic reuse, and process improvements reducing design iteration cycles.
- ▶ **Technical Specifications:** Authored technical specifications for electrical systems and equipment and provided technical onboarding to new engineers on EPLAN workflows and schematic standards.
- ▶ **PLM & Project Tools:** Managed document lifecycle using Siemens Teamcenter and ENOVIA; coordinated engineering tasks via Jira in an Agile environment.

2023 – 2024

Consultant R&D Electrical Engineer

SThree (engineering staffing — seconded to IBA)

Contracted through SThree's engineering division and placed with IBA as the client. Performed all R&D electrical design activities described above while transitioning to a direct employment contract with IBA.

📍 Brussels, Belgium

EDUCATION

M.Sc. Electromechanical Engineering

2019–2020 · 2021–2023

Vrije Universiteit Brussel (VUB) & Université Libre de Bruxelles (ULB) — Brussels, Belgium

Advanced coursework in power systems, energy conversion, electromechanical design, and numerical simulation.

B.Sc. Electrical Power Engineering

2013 – 2018

Azad University of Iran — Arak Branch (IAUA) — Arak, Iran

Google Project Management Specialisation (6 courses, Capstone included)

2024

Google / Coursera — Foundations · Initiation · Planning · Execution · Agile PM · Capstone

TECHNICAL SKILLS

Electrical Design (EPLAN): Electric P8 (2D schematics) · Pro Panel (3D layouts) · Fieldsys

Electrical Engineering: Cabinet & Rack Design · Wiring List Management · Conformity Calculations · Factory Acceptance Test · BOM

Simulation & Analysis: Elec Calc / Caneco · MATLAB Simulink · ANSYS Fluent · SMA Sunny Design

PLM & Project Tools: Siemens Teamcenter · ENOVIA · Jira · Confluence · SAP

Programming: Python · MATLAB

Productivity: Microsoft Office

LICENCES & CERTIFICATIONS

- ▶ SCC / VCA (VOL) Safety for Operational Supervisors - Valid until 2033
- ▶ Google Project Management Specialisation
- ▶ Coaching & Developing Employees
- ▶ Performance Management
- ▶ BA4/BA5
- ▶ Intermediate Python – DataCamp
- ▶ Intermediate SQL – DataCamp
- ▶ PLC Programming (Logo!)

LANGUAGES

Persian (Farsi)	English	Dutch	French
Native / Mother Tongue	Excellent (C1)	Basic (A1) — In Progress	Basic (A1) — In Progress

SELECTED PROJECTS

- ▶ Normandy Hadrontherapy (NHA): Lead electrical designer for a strategically significant French hadrontherapy cancer treatment facility. Delivered complete cabinet schematics, 3D panel layouts, wiring lists, and IEC conformity documentation.
- ▶ IBA Industrial Business Unit: Ongoing multi-project electrical design responsibility as appointed SPOC - ensuring design coordination and technical consistency across parallel projects.

- ▶ **IBA Proton Therapy Systems:** Electrical cabinet and rack design for proton accelerator control infrastructure - power distribution, signal wiring, and full documentation packages.
- ▶ **Hydrogen Safety CFD Study:** Modelled flammability and explosion zones around hydrogen pipeline leaks under varying wind conditions using ANSYS Fluent.

PUBLICATION & RECOGNITION

- ▶ **IEEE Publication (2017):** Mostafavi et al., "Evaluation of the Effect of Wind Farms with Doubly-Fed Induction Generators on Steady State Voltage," IEEE IEEEIC & I&CPS Europe, Milan, Italy.
- ▶ **Scholarship Award:** Munich Conference Series on Ethics in Innovation - invited by Max Planck Institute & International Association for Human Values.

PROFESSIONAL MEMBERSHIPS

- ▶ **IEEE:** Member of the Institute of Electrical and Electronics Engineers since 2017.
- ▶ **IAEEE:** Associate Member of the Iranian Association of Electrical and Electronics Engineers — Tehran & Markazi Province Branches, since 2017.