

M. Salih KANBER

Innovation Enthusiast, Electrical & Electronics Engineer, Inventor, Promoter

Address:
Mobile Phone:
Email: mskanber@gmail.com

Profile:

Currently being occupied as R&D - Power Quality Manager in electricity distribution sector, innovation is my passion and my profession is electrical and electronics engineering with 9+ years of expertise.

I have hands-on engineering, project management and technical team lead experiences on creative problem solving, idea development, R&D, manufacturing, testing, installing and operation phases of LV to HV electrical & electronics systems, machine design, electrical infrastructures, control electronics, machinery and test benches.

After work, I deal with creative and functional art, photography and videography. I am a certified drone pilot (IHA-0) and licensed (HAREC) amateur radio operator.

Thank you for your time.

Key Achievements (Related Employment Summary Is In Page 2):

Mediterranean Electricity Distribution Company (Oct 2014 - Current): *2.7M \$ worth of 15 R&D projects *1.4M \$ worth of 6 R&D projects finished *Turkey's first and biggest smart metering project in cooperation with DNVGL/ Netherlands *Power quality of the grid is increased by %28 *Other divisions were served with innovative solutions. *A patented product with %100 granted project, Electricity theft was decreased by %60. *3.1M \$ worth of SCADA system (covering 162 substations) integrated to the grid. *SAIDI & SAIFI performance of company is increased *Recognised for initiative and achievements, promoted to manager position.

Pantera Systems Ltd (Apr 2011 - Jun 2013): *%100 funded R%D Project by the Turkish Government. *World's first "gunned go-kart race system". *Acquired the skills of business management, finance, HR, customer and subcontractor relations. *Fastest & most accurate automated electronic circuit test bench for energy sector, product fault rate decreased by %30.

Solitem GmbH (May 2009 - Mar 2011): *In cooperation with German R&D team, sensorless solar position tracker algorithm and motor driver electronics redesigned & mass manufactured, overall system efficiency was increased by %17 *Recognised for initiative and rapid progress, promoted to manager & team lead position.

Teknolus AŞ (Aug 2008 - Apr 2009): *Custom motor control electronics and BMS were designed, manufactured and installed on METU 1 solar car (winner of a 2009 local solar cup).

Turkay AŞ (Apr 2007- Aug 2008): *In cooperation with Conductix-Wampfler / Germany, electrical infrastructure was and installed on Turkey's first monorail with electric traction. *Energy efficiency was increased by %8. *Battery management electronics and cable harness were designed and installed on Turkey's first helicopter tug system with electric traction.

Skills & Experience:

Methodologies: Innovation (Brainstorming, design thinking, critical thinking, idea evaluation, triz, cost-benefit & swot & risk analysis) **Project management** (PMI PMBOK, Agile, Lean) **Technical Team Lead** (Personality inventory, Custom motivation tools). **System Design** (DFT-Design For Testing, DFM-Design For Manufacturing, FMEA-Failure Mods & Effects Analysis) **Power Quality** (EN50160 & beyond, waveform and data analysis).

Software Tools: Ms Project (Project management), **Redmine** (Project management), **Digsilent** (Power systems software), **Ms Power Bi** (Data visualization), **Advanced Excell** (Calculations & Data analysis), **Matlab** (Algorithms), **PYTHON** (Coding), **AutoCAD** (Electrical and mechanical 2D design), **Eplan** (Electrical Infrastructure), **Proteus-ISIS, Eagle** (Electronic circuit, PCB design, simulation and validation), **KEIL uVision** (ARM Embedded systems programming & debugging), **Solidworks** (3D mechanical design & simulation), **SolidCAM** (Mechanical manufacturing), **Cubicreator** (3D printing), **Photoshop** (Visualisation), **Premiere Pro** (Video Edit).

Equipment: Laboratory equipments (Digital storage oscilloscopes, signal generators, spectrum analysers, power supplies, PCB manufacturing, diagnosing and fixing equipment, CAN, LIN, RS485 modules & debuggers, handheld devices, test fixtures and probes, loggers, programmers & debuggers) **Electrical infrastructure** (Cabinet & cabling installation & test equipment, megers, HV-LV & connectivity test equipment) **Power Quality analysers** (ION7650, HIOKI PW 3198, ENTES MPR-475) **Thermal measurement** (Fluke IR thermometer, TIX 560 Thermal cam) **3D Prototyping** (Cubicon single 3D Printer, POYSAN 12080 CNC router)

Documentation: Business plans, Cost-Benefit - Swot - risk analysis reports, technical drawings, patent application documents, project reports, validation procedures, test procedures & reports, design & manufacturing files for electrical infrastructures and power systems, power quality reports, schematics and design files for electronics, user manuals, data analysis reports and visualizations, system documentation.

Applied Codes/Standards: **EN50160** (Power Quality), **IEC61000-2,3,4** (EMC, magnetic and current emissions, electrical measurements and testing) **IEC62271-1,100,102,200,202:** (medium voltage switchgear), **EN60204:** (Safety of machinery, Electrical Equipment of machines) **IEC60364** (Low voltage electrical installations) **IEE 142** (Grounding), **ASTM , MIL-STD, IEC, IEEE** (Electronics)

Certificates: Energy Management (25.06.2015, ISKRAEMECO), **Smart Metering** (24.03.2015, DNVGL), **PLC Programming** (03.2011, Schneider), **ISO 9001-2008** (12.2009, SOLITEM), **Distributed vehicle electronics** (01.2009, METU E&E), **PMP & Patent issues** (09.2007, METU Technopark), **Business management** (10.2006, KOSGEB).

Inventions:

Med. Elect. Dist. Company (Oct 2014 - Current):

- *3D Printed MV & LV insulator
- *Sound Dog sonic & ultrasonic fault locator & analyser
- *Clock synchronisation system
- *SMS (Smart Seal)

Pantera Systems Ltd (Apr 2011 - Jun 2013):

- *The Deathrace racing system
- *Dropdown gaming system
- *Action Hopper quick camera system
- *Auto-Test bench

Solitem GmbH (May 2009 - Mar 2011):

- *Solar quality analyser

Personal Inventions:

- *Cracker CV delivery drone
- *Password lamp
- *The appreciator
- *Handsome zapper
- *Infinite time mechanism
- *Micro zoom
- *Smartrigger

Education:

Bachelor Degree: (2002-2009) METU (Middle East Technical University) Ankara/TURKEY- Electrical & Electronics Engineering Department

Language:

Turkish: Native **English:** Intermediate

Employment Summary:

R&D - Power Quality Manager, Mediterranean Electricity Distribution Company (Antalya / Turkey), July 2017 - Current

Management on R&D Projects: *Preparing and conducting master plans for R&D division, supervising a great team of 3 engineers, 4 technicians and over 300 technical employees on the field, reporting to the grid operations director and to the general manager.

*In accordance with the management orders, planning and managing key R&D projects, setting up work breakdowns, supervising employees and subcontractors, successfully finished 2 R&D projects, currently conducting 15 R&D projects.

Management on Power Quality: *In accordance with government orders, preparing and conducting master plans for power quality actions, supervising engineers on data analysis and visualization, investigating reports, preparing and conducting presentations to the man-

R&D - Power Quality Engineer, Mediterranean Electricity Distribution Company (Antalya / Turkey, Oct 2014 - July 2017)

Engineering on R&D Projects: *Designed a complete electrical and electronics R&D and test Lab, including a 3D printer and a CNC router for mechanical prototyping, selected the equipment, supervised procurement and construction stages of the lab.

*Planned and managed 4 R&D projects and successfully finished them, designed electrical infrastructures in the projects, supervised the installations, conducted verification and confirmation studies, on-system tests, prepared test and project reports, provide technical assistance to the field engineers and technicians, conducted technical training courses. Conducted presentations for the management and the government.

*Conduct system-level design studies on unique solutions, coordinated R&D engineers, preparing patent documents and applied for it.

Engineering on Power Quality: *Conducted field operations, custom measurements, data collection and analysis, supervised recovery actions on the grid in the field, provide technical support to operational teams, preparing reports for the management and the government.

*Collecting malfunctioning power quality analyser devices from their locations, conducting diagnostics and various tests, detecting and fixing their problems and sending them back to the field.

Engineering on SCADA system: *Designed and supervised integration of control cabinets, DC system, electrical infrastructures.

*Provided technical assistance to field technicians, diagnosed malfunctioning systems and equipment, fixed problems.

*Examined installations and observed operations of 162 substations and 1 control center to ensure conformance to technical and operational requirements and standards.

General Manager, Pantera Systems Ltd (Ankara / Turkey, Apr 2011 - Jun 2013)

Business Management: *Planned and executed actions on business management, human resources, finance, customer, shareholder and subcontractor relations.

Project Management: *Planned and conducted RnD projects in accordance to customer needs, coordinated and supervised design engineers and technicians, communicated with customers, managed crisis, solved bottlenecks.

Engineering: *Designed and fast-prototyped key electronics and mechanisms, supervised engineers on test benches and on-system tests.

*Prepared technical documentation and training courses for customers, supervised engineers during training.

R&D Manager - System Design Team Leader, Solitem GmBh (Ankara / Turkey-Aachen / Germany, Jan 2010 - Mar 2011)

System Design Team Lead: *Planned and executed installation projects, defined requirements for the deliverables, coordinated and supervised subcontractors, fixed problems and bottlenecks, managed crisis, directly reported to the general manager.

*Observed installation operations and inspected installed systems, supervised on-system tests to ensure conformance to the requirements

*Prepared technical reports, user manuals and trained technicians for the operation stages of the systems.

Management on R&D Projects: *Selected ideas, planned and conducted projects to decrease overall cost and increase the efficiency of the system. Supervised design engineers, investigated technical, coordinated subcontractors and solved bottlenecks.

R&D Engineer, Solitem GmBh (Ankara / Turkey- Aachen / Germany, May 2009 - Jan 2010)

Engineering on R&D Projects: *Planned and conducted a revision project about solar tracker algorithms and motor control electronics, in cooperation with German R&D team, re-constructed positioning part of the algorithm and improved the design of motor controller part on the controller board, conducting DFT,DFM and FMEA studies, designed and builded a test bench for the whole system and supervised technicians during tests and analysis to ensure conformance to overall requirements, fixed the bugs and all other technical problems, prepared technical documentation, test reports, technical drawings, user manuals.

* Conducted tenders for the electronic controller cards and also for related mechanical parts, supervised procurement department for electronic components, prepared test benches and tested the manufactured controller cards to ensure conformance to the requirements.

Engineering on Solar Thermal Power Systems: *Designed the HMI, electrical infrastructure of the control cabinets, CAN-BUS network between PLC and controller cards, supervised technicians during manufacturing and installations, solved problems and bottlenecks.

R&D Technician (Part-time), Teknolus AŞ (METU Tech. Valley - Ankara / Turkey, Aug 2008 - Apr 2009)

Tech. tasks on Solar Racing Cars: *In accordance to the requirements and standards, designed and manufactured the control electronics and battery management system for METU solar car, conducted system-on tests, diagnosed and fixed malfunctionings and problems.

*Designed a test bench for PM motors and related electronics, supervised the technicians during system tests and data analysis stages.

*Provided technical support and trained 5 key members from racing team.

Tech. tasks on PV Systems: *According to the requirements of customers, I did the sizing of photovoltaic panels, deep cycle lead acid batteries, designed DC electrical infrastructures and planned the installations for off-grid systems.

*Supervised the technicians during installations, diagnosed and fixed problems, provided technical support and training to the customers.

*Designed and prototyped high-efficiency MPPT electronics for PV systems, prototyped and tested them according to the standards.

R&D Technician (Part-time), Turkray AŞ (METU Tech. Valley - Ankara / Turkey, Apr 2007-Aug 2008)

Tech. tasks on Turkey's first monorail train system: *In coordination with vendors, designed electrical infrastructure, selected components, verified and supervised manufacturing and installation of hi-speed busbars, remote cabinets and related electrical infrastructures, diagnosed problems and fixed them.

Tech. tasks on Turkey's first helicopter tug system: *Investigated the Eurocopter EC-135 electrical system and related standards, designed and manufactured battery management electronics and cable harness for helicopter tug system. Provided technical support to the technicians, supervised them during system tests.

Intern, Yenel Elektronik AS. (METU Tech. Valley - Ankara / Turkey, June 2006)

Tasks on embedded electronics: *Investigated embedded sys. and worked on uPSD microcontrollers, small programming tasks.

Intern, Turk Telekom AS. (Antalya / Turkey, July 2005)

Tasks on network systems: *Investigated how network systems work, how malfunctioning parts detected and problems were fixed.