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PERSONAL BACKGROUND

Full Name : Mohammad Nilkar	
Date of Birth : ۲۱/۰۹/۱۹۸۴	
Nationality: Iranian Civil Status: Tabriz	
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Cell Phone Number : +۹۸۹۱۴۳۱۴۷۲۰۲	
Education : M.Sc. on Power Electronic	

THESIS TITLES

Bachelor	: Wide Range Capacitance-Metering System Based on ۸۰۰۱ Microcontroller.
Master	: Multi-Level Converter Implementing Switched-Capacitor DC-DC Converter.
Master's Thesis Grade : (۲۰ (Full rating)) with Excellent Score	

Last educational status

۱- Master's Degree in Power Electric-Engineering from Islamic Azad University, Ahar Branch with an average score of ۱۷,۳۰

- ✓ **Supervisor and Advisor: Dr. Ebrahim Babaei – Dr. Mehran Sabahi (Faculty of Electrical and Computer Sciences of Tabriz University)**

Teaching Experience at Universities / Higher Education Centers

- ۱- Electric Machinery, PLC, Instrumentation, Power Electronic at Technical and Vocational University of Tabriz since ۲۰۰۸ until ۲۰۱۸.
- ۲- Electric Machinery, Power Electronic, Students Projects Supervisory at Roshdiyeh Higher Education Center of Tabriz since ۲۰۱۳ until ۲۰۱۰.
- ۳- Electric Measurement Systems, Computer-Based Electronic Circuits Simulation at University of Applied Science and Technology (Tabriz Telecommunication Center).
- ۴- Siemens PLC (S۷-۳۰۰, ۲۰۰, Logo), AVR Microcontroller and VFD at Tehran Institute of Technology (Tabriz Branch).

Carrier Overview

As an industrial automation and instrument engineer with more than 10 years, experience in the field of oil and gas, filling machine, mining industry, I obtained valuable working knowledge in the installation and commissioning of instrument devices, control systems mainly on S^V-PLC group from SIEMENS automation. I have a good experience in commissioning of different material handling sites in Bandar-Abbas and grain storage silos monitoring and automation and other industrial machines. Work as a maintenance engineer after commissioning the plants and factory.

Work history and positions

- 1- WinCC, PLC, Instrumentation engineer at “ImaPardaz” Co. since 2007 until 2011. Responsible for decommissioning of old factory as a part-time job.
- 2- Chairman of the board of directors of “Padideh Pardaz Sahand Co.” since 2011 to 2013.
- 3- Technical director and consular in the field of electrical, control and solar energy projects at “Samin Saial Co.” since 2011 until now as a part-time job.
- 4- Senior Consultant of “Arrabe Ilghar” industrial machine manufacturer company in the field of Electrical and Control Systems.
- Δ- **Director of Electrical and Instrumentation department of JAHAD TAHGHIGHAT SAHAND Co. since 2013 until 2019.**
- 6- **Arman Energy Ghaem Sirjan Co. Member of board.**

Honors

- ❖ First Ranked among graduates of Shahid Mostafa Khomeini Conservatory.
- ❖ Second place in entrance exam of Technical and vocational university of Tabriz.
- ❖ Top student during electronics course at Technical and vocational university of Tabriz.
- ❖ Third rank among graduate students at the Master’s course.

Research activities:

- 1- **Author of 4 books in the field of industrial automation and microcontrollers.**
- 2- **Presentation of 6 scientific research papers at the international conferences in the field of electrical and energy engineering.**
- 3- **Compilation and registration of 7 standards of training (skills) for the country's technical and vocational organization approved at 2009.**
- 4- **Supervisory, reviewing and editing 4 books before publishing in the field of electrical engineering and PLC.**
- Δ- **Work shop presentation on this topic at faculty of electric and computer of Tabriz university “PLC roles in demand side load monitoring and control”**

Membership and participation in courses and workshops:

- ۱- Member of the Young Researchers Club of Islamic Azad University since ۲۰۰۹ until now.
- ۲- Participating in the specialty of the Energy Efficiency Organization of Iran (Saba) in order to provide engineering methods for reducing energy costs.
- ۳- Member of the East Azarbaijan Building Engineering Organization and having License Grade ۲ in the field of building electrical designing, execution, and supervisory.
- ۴- Member of Iranian Engineering and Control Engineering Society
- ۵- Participating in a familiarization with BMS equipment training workshop (held by Legrand Co.)
- ۶- Presentation of Electrical Engineering Automation Workshop, ۲۱ Feb. ۲۰۱۶ at Tabriz University.
- ۷- Participation in the South Korean Autonics Automation Systems (Sensors and controller)
- ۸- Certificate in HSE from Occupational Healthcare Provincial East Azarbaijan Province.

Accepted and Presented Research Papers at International Conferences:

- ۱- M. Sadeghi, S. H. Hosseoni, **M. Nilkar**, "A New Mixed Stacked Multicell Converter with Interesting Advantages," *PEDSTC 2011*, Tehran-Iran, PP. ۴۴-۴۹.
- ۲- E. Babaei, **M. Nilkar**, M. Sadeghi, "Development of Switching Peak Current Reduction Method in Switched-capacitor dc-dc Converters to n-level Converters," *IEEE Canadian Conference on Electrical and Computer Engineering, CCECE2011*, ۸-۱۱ May, pp. ۶۳۴-۶۴۰.
- ۳- **Mohammad Nilkar**, Ebrahim Babaei, Mehran Sabahi "A New Reduced Switch Topology of Switched-Capacitor DC-DC Converter for Unidirectional Application," in *Proc. 2011 International power systems conference, PSC 2011*, Tehran-Iran ۲۰۱۱, p.p. ۱-۸.
- ۴- **Mohammad Nilkar**, Ebrahim Babaei and Mehran Sabahi, "A New Single-Phase Cascade Multilevel Inverter Topology Using Four-Level Cells," *ICEE2012*, Tehran-Iran ۲۰۱۲.
- ۵- **Mohammad Nilkar**, Ebrahim Babaei and Mehran Sabahi, "A Multilevel Inverter Topology Based on Switched-Capacitor DC-DC Converter with Advantages of Asymmetrical Multilevel Inverters," *PSC2012*, Tehran-Iran.
- ۶- Meysam Sadeghi, **Mohammad Nilkar**, Farhad Ghaderi, Davood Amir-Haghighian, "Consuming Managing and Dispatching of irrigation Pumping Station of Tabriz Municipality," ۹th International Energy Conference, Tehran-Iran, Power Research Center, ۲۰Feb. ۲۰۱۳.
- ۷- **Mohammad Nilkar**, Ebrahim Vahedi, "Smart Houses and Their Control and Monitoring Systems (BMS)", *Journal of Building Engineering Organization of East Azarbaijan Province*, ۲۰۱۱.

Execution of projects at Tabriz ImaPardaz Engineering Co.

- ۱- Installation and commissioning of two ۱۱۰Kw inverters in Horand water pumping station and monitoring system for municipal water pumping stations.
- ۲- Installation and calibration of programmable thermocouple transmitters in Tabriz power plant and performing the relevant check loops.
- ۳- Installation and calibration of temperature and pressure transmitters (ifm-Germany) for Nejadi industrial group (ANATA).
- ۴- Installing and calibrating the ifm-Germany Sensors for the soap-water path in the Charkheshghar gear production line.
- ۵- PLC panel design, install and programming in order to Upgrading of an old high Pressure Compressor Control System for Koshghovar (CocaCola) Co. Tabriz
- ۶- Participation in the project of updating the pharmaceutical autoclaves of Shahid Ghazi Tabriz (Disposal of the old control system and the implementation of the control system based on SY-۳۰۰ PLC and the installation , calibration of temperature measurement equipment and performing process loop checks.
- ۷- Modification of the network based, Advantech data acquisition systems in IranMayeh Company.
- ۸- Participation in PLC-SY-۳۰۰ Programming Project and WinCC Monitoring interface for Pegah Zanzan Dairy industrial Co.
- ۹- Solving of hardware and network defects and apply modification in Zenon monitoring software for Azarshahr Nepheline-Sinet Aluminum pilot Company.
- ۱۰- Implementation of PLC-SY-۳۰۰ Monitoring and Control Project in the Tabriz Bonyan Motor Engineering Industries.
- ۱۱- Performing of Pegah Tabriz Dairy industrial Co. utility plant automation in order to energy consumption reduction.
- ۱۲- Installing electro-pneumatic actuator (I / P) and performing loop checks at Tabriz Acid Charban Company.

Execution of projects at Tabriz Padideh-Pardaz-Sahand Engineering Co:

- ۱- Design and implementation of the remote control automation system of the municipal pumping stations of ۷th zone of Tabriz municipality in order to optimize energy consumption.
- ۲- Design and production of DSM system which is ordered by Tabriz electric power distribution company

Execution of projects by myself in factories, Plants

- ۱- Installation and calibration of medium voltage (۷۰kV) multi-tariff digital meters which is servicing for induction furnaces in the casting unit of Tabriz Machine Manufacturing Co. (Mashinsazi Tabriz.)
- ۲- Designing and implementation of the remote control automation system for pumping stations of the ۸th Zone of Tabriz municipality irrigation line in order to optimize energy consumption (The main contractor is Samin Sial Co.)
- ۳- OC + EF Parameter setting of (ABB) secondary Protective Relay in Tabriz Machine Manufacturing Co. (Mashinsazi Tabriz.)
- ۴- Designing of the distribution panels of the ATIGH project at th Dr. Beheshti (Mansour) four-way district.
- ۵- Programing and completing PCS based control system in Tabriz oil refinery company (my client was O.D.C.Co.)
- ۶- Simens HMI panel changing on SIAD high pressure compressors at Tabriz oil refinery company ITR (my client was O.D.C.Co.)
- ۷- Consulting of over head power transmission line in Shahid Ghazi pharma. Industries.
- ۸- Power and control panel assembling and PLC programming in Shahid Ghazi pharma. Industries. (main contractor is IMA Ind. Co.)
- ۹- Commissioning of Can producing machine in Tara Nabe Iranian Co.
- ۱۰- Plasic roll tension control system realizing in Hedye Plastic Co.

Projects under management and supervision of the Electrical and Instrumentation Department of Jahad Tahghighat Sahand Co:

- ۱- Electric and control system design and execution of Persian Gulf Special metal and mining industrial zone unloading and loading bulk materials (material handling expansion program) based on the high-tech. Equipment AEG and MODICON control of the company Schneider Electric and monitoring environment FACTORY LINK.
- ۲- Silos project of Golestan province includes ۳۰,۰۰۰ tons Ali Abad Katoul silo, ۴۰,۰۰۰ tons Ghonbad-Kavous and ۲۰,۰۰۰ tons of Kalale based on SIEMENS PCS control system.
- ۳- Sirjan ۵۰,۰۰۰ tons silo Project (Client: Cereal and Commercial Services Company of District ۶ of Kerman Province)
- ۴- Bokan ۷۰,۰۰۰ ton silo (Mechanized-warehouse) project (Client: Iranian State Trading Company)
- ۵- Project of Implementation of the Monitoring and Record System for Temperature and Pressure and Humidity at the Metallurgy and Concrete Laboratory of Sahand Research Institute.
- ۶- Vacuum dryer project.
- ۷- Design, supply and installation of electrical equipment and instrumentation for all of Mahabad petrochemical plants.
- ۸- Installation of electrolysis boilers line No.۳ at Arak Aluminum. (IRALCO)
- ۹- Design of Siemens S۷-۱۲۰۰ based control system for ۳۰۰ tons Concrete pressing tset equipment of Sahand Laboratory and Implementation on ELE English Machine (Restoration old testing system).
- ۱۰- Heat / Cool system design based on P & ID for Sahand laboratory testing tubes.
- ۱۱- Italian AEP load cell measurement system for Sahand laboratory for tensile and pressure testing.

OTHER SKILLS AND KNOWLEDGE

۱. High level computer skills including Word, Excel, PowerPoint, AutoCad, Proteus, PSCAD.
۲. Siemens **PLC S۷** and **WinCC**, Developing, maintenance and troubleshooting.
۳. Working experience in PLC based control system such as compressor and packing machine.
۴. Have a good knowledge in **Electrical and control Panels Designing**, commissioning and configuration.
۵. Familiar with plenty industrial network protocols such as Modbus, Profibus, Fieldbus.
۶. Experience in ordering and purchasing instrument devices.
۷. Valuable experiences in field instrument's, (Transmitter's, Control valves and etc.) installation and commissioning.
۸. Good knowledge in instrument documentation such as PID's, Logic diagrams, Location layout, wiring diagrams, Loop diagrams, Logic diagram and Instrument data sheets.
۹. Good knowledge on working with well-known brands such as: SIEMENS-OMRON-E+H-ABB-A+B-DANFOSS-ifm-FESTO-AUTONICS-VACON-LS.