

Blvd. Vasile Parvan, No.2, Room B326
Politehnica University from Timișoara,
The Faculty of Electronics,
Telecommunications and Informational
Technologies, In the attention of Lecturer,
Dr.Eng. Raul Ciprian IONEL

Support letter for the project proposal *Development of an autonomous Framework generating a Cobot integration into a smart manufacturing cell.*

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent, and affordable solutions for vehicles, machines, traffic and transportation.

The project thematic discussed with Mr. Raul Ciprian Ionel (as Project Leader) proposes a technology which will autonomously integrate a Cobot into a Smart Manufacturing Test Cell.

We consider this topic as innovative and relevant in relation to the industrial necessities in Romania. Furthermore, the proposal is feasible according to the international state of the art in the field of collaborative robots and manufacturing equipment integrations. We also confirm that the subject of Cobots interaction with acknowledged test methodologies and machines, represents an area of interest for our company.

Finally, we have the confidence that the implementation team coordinated by Mr. Raul Ciprian Ionel and composed of researchers from the most important technical universities in Romania, will successfully deliver significant and complete results.

Our reference
Dr. Christian Albrichsfeld

Your reference





FLEXTRONICS ROMÂNIA S.R.L.

Calea Torontalului DN 6, KM 5,7

*To the Politehnica University from Timișoara,
The Faculty of Electronics, Telecommunications and Informational Technologies,
In the attention of Lecturer, Dr.Eng. Raul Ciprian Ionel,*

Support letter for the project: "Development of an autonomous Framework generating a Cobot integration into a Smart Manufacturing Cell"

Flex Timișoara is a representative of an international company and a supplier for the most important auto vehicles producers in the world. Our company offers a complete range of services starting from project design and project engineering and ending with production and logistics. Having a high level of expertise in different industry sectors, Flex România supports the most important national and international brands. With an offer which begins from an idea and ends with a complex solution (Sketch-to-Scale™), we help our small and large customers in solving their challenges in an era of speed interconnection, efficiency and effectiveness throughout the entire product life cycle.

The project thematic proposed by Mr. Raul Ciprian Ionel, together with researchers from the most important technical universities in Romania, is of interest for our company. Integration of a Cobot into a Smart Manufacturing Test Cell which performs Boundary Scan testing, represents an application which is compliant with Industry 4.0 requirements. After the implementation, the proposed experimental system having a TRL 4 validation, will generate added value and will represent a modern technical approach, applicable to a wide range of industrial fields.

We support the project idea. We believe that the demonstration system is relevant in relation to the national and international industry state of the art and we are confident that the implementation team will successfully deliver the expected results.

Administrator

Cuciula Florin





In the attention of
Lecturer, Dr.Eng. Raul Ciprian IONEL,
Faculty of Electronics, Telecommunications and Informational Technologies,
University "Politehnica" Timișoara

Support letter for the project

**"Development of an autonomous Framework generating a Cobot
integration into a Smart Manufacturing Cell"**

To Whom It May Concern,

Elektrobit (EB) is an award-winning and visionary global supplier of embedded and connected software solutions and services for the automotive industry. A leader in automotive software with 30 years serving the industry, EB's software powers over 90 million vehicles and offers flexible, innovative solutions for connected car infrastructure, human machine interface (HMI) technologies, navigation, driver assistance, electronic control units (ECUs), and software engineering services. EB is a wholly owned subsidiary of Continental.

The project proposed by Dr. Eng. Raul Ciprian IONEL (& the research team members) is of interest for our company. The project will allow the development of modules for image processing and robot control, modules of interests also for the automotive industry looking to the actual trend regarding autonomous driving cars. More over the experimental and educational purpose will allow better prepared students for the digital economy.

One goal of the project is to develop software modules for communication and data exchange between robots which is also align with another trend in our automotive industry, connectivity between vehicles. The experience and the results in the area of collaborative robots can be used in Car-to-Car communication.

In conclusion, we support the project idea. We consider it as relevant in relation to the national and international industry state of the art and we are confident that the involved research team will finalize the implementation and present results which bring substantial added value to various industry areas of activity including software and automotive area.

Site Manager,
Dr. Eng. Virgil Ivășchescu

A handwritten signature in blue ink, appearing to read 'Virgil Ivășchescu', is written over the printed name.



To the Politehnica University from Timișoara,
The Faculty of Electronics, Telecommunications and Informational Technologies,
In the attention of Lecturer, Dr.Eng. Raul Ciprian IONEL,

Support letter for the project

"Development of an autonomous Framework generating a Cobot integration into a Smart Manufacturing Cell".

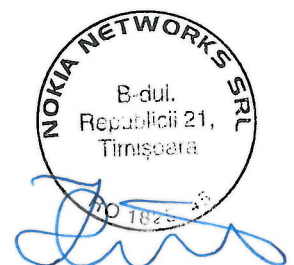
To whom it may concern,

Nokia is a worldwide leader and innovator in technologies which support our interconnected world. Powered by research results and developments ensured by the NOKIA Bell Labs, we collaborate with suppliers of telecommunication services, governments, large companies and consumers, offering a complete portfolio of products and services.

Mr. Raul Ciprian Ionel and a team of researchers from the most important technical universities in Romania, have presented a project which of interest for our company. Cobots integrations, via customized software platforms, with existing test and measurement technologies represent a key scientific direction. Their application is relevant in the context of Industry 4.0 requirements and could represent an example for producers of telecom dedicated printed circuit boards.

For these reasons, Nokia Network Romania supports the project idea. We believe that the finalized system will bring added value in relation to the national industry state of the art and we are confident it will represent a well-correlated educational example.

Florin Costin Ciocan
Ecosystem & Innovation
Nokia Networks Romania





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To the Politehnica University from Timișoara,

The Faculty of Electronics, Telecommunications and Informational Technologies,

In the attention of Lecturer, Dr.Eng. Raul Ciprian IONEL,

Support letter for the project

"Development of an autonomous Framework generating a Cobot integration into a Smart Manufacturing Cell".

To Whom It May Concern,

HELLA is an international company with over 100 years of tradition. We develop and produce technology for electronic products in the automotive and light/illumination sectors. We own one of the largest world-wide aftermarket organisations for auto parts and accessories. Having over 7000 employees in research and development, HELLA is one of the leading actors on the innovations market. HELLA is one of the most important 40 suppliers for the automotive sector and among the 100 largest German companies in the industry sector.

The project thematic proposes a technology which is of interest for our company. It is innovative and relevant with respect to the industrial context in Romania and in Europe. To autonomously integrate a Cobot into a Smart Manufacturing Test Cell represents a direction which is compliant with Industry 4.0 requirements and represents a novel development in this field.

Through this project, we are confident that the R&D team coordinated by Mr. Raul Ciprian Ionel, together with researchers from the most important technical universities in Romania, will generate added value by working on a modern technical approach, applicable to a wide range of industrial fields."

Best Regards,

Bogdan-Florin NUNA
Technical Center Director

