Către,
Comisia de evaluare a dosarelor pentru acordarea gradației de merit

CERERE

Subsemnatul Levente Tamas, conferențiar în cadrul Departamentului de Automatică al Facultății de Automatică și Calculatoare, va rog să-mi aprobați cererea de înscriere la concursul pentru acordarea gradației de merit.

Anexez prezenței cereri următoarele:
1. CV
2. Raportul de autoevaluare asupra activității desfășurate în ultimii 3 ani
(întocmit pe baza criteriilor - Anexa 1);
3. Aprecierea sintetică asupra activității desfășurate în ultimii 3 ani (Anexa 2).
4. Documente care să justifice punctajul menționat în Raportul de autoevaluare.

Data
12.10.2021

Semnătura
Conf. dr. ing. Levente Tamas

Technical University of Cluj-Napoca
Memorandumului 12,Cluj-Napoca,
400114 RO
+40-726-280667
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Levente.Tamas@aut.utcluj.ro
rocon.utcluj.ro/levente

Levente TAMÁS

Research interests

My research interests are related to the robotics domain including map registration, localization, tracking, object detection and industrial applications.

Education

2006–2009 **PhD**, *Technical University of Cluj-Napoca*.
supervisor Prof. dr. ing. Gheorghe LAZEA
description Sensor Fusion Based Mobile Robot Position Estimation

2000–2006 **BSc&MSc**, *Technical University of Cluj-Napoca, final thesis at Ghent University*.
honor Best academic results scholarship

Work experience

2008–present **Lecturer/Assoc. Prof.**, *Technical University of Cluj-Napoca*.
Giving robot control and pneumatic equipments courses for Control Engineering graduates

2013–2014 **Postdoctoral Fellow**, *BFH*, Bern.
3D Semantic Reconaissance

2010–2013 **Postdoctoral Fellow**, *Technical University of Cluj-Napoca*.
ArhiFax – Creating 3D maps in urban environments

2006–2007 **Software Engineer**, *Evoline (Siemens partner)*, Cluj-Napoca.
Software design and development for Siemens TS department; SHTP team member

2005 **R&D Assistant**, *Solutia NV Europe*, Ghent.
Design and development of a new measurement system for thickness measurement

Invited talks&Project PI

2020 *3D perception AI services*: Industrial project with Analog Devices, 350KEUR
2018 *ROS2AR*: industrial project with NGI within ROSIN, 60KEUR
2017 *3D perception made easy*: Wokshop on 3D Image Processing, Veszprem, Hungary

2016 *Active 3D perception*: industrial project with Accentrure company, 100 KEUR

2015 *3D pointcloud processing*: COSCH Training School, Szeged, Hungary

2015 *Relative pose estimation and fusion of 2D spectral and 3D lidar images*: Computational Color Imaging Workshop, Saint Etienne, France

2014 *Are we there yet? Towards autonomous driving challenges*: International Summer Course on Multivariable Control: Automotive applications, Ghent, Belgium

2013 *3D Reconaissance*:SCIEX project, Bern, Switzerland, 100KEUR

Academic activities and services

2020 Habilitation thesis defense

2018 HAS Bolyai scholarship award

2017 KEPAF Conference main organizer

2010-2020 IEEE AQTR Conference organizer/reviewer.

2012 ROS fall school on cognitive systems, Munchen, participant.

2011 Patenting OSIM patent no. A10006/16.02.2011

2010 3^{rd} Intel ISIF student advisor award, 2010, USA.

2009 Filtering and Data Analyses Summer School, Milan, participant.

2008 SLAM Summer School, Sydney, participant.

2007 National PhD research project director.

2006 IEEE AQTR Conference organizer team member.

2005 Erasmus exchange student at Ghent University, Belgium.

Skills

Languages Fluent spoken/written English, Hungarian and Romanian; fair German.

Programming C, C++, Matlab, Linux shell scripting, LaTeX 2_ε, Java, DeltaV.

Interests

Traveling, dancing, swimming.

References

Available upon request

Levente Tamás

Anexa 1

Raport de autoevaluare asupra activității desfășurate în ultimii 3 ani

SECTIUNEA 1 Realizari raportate in Sistemul Integrat de Evaluare a Activitatilor Didactice, Cercetare si Management (SIMAC)	Punctaj declarat	Punctaj acordat
a) Punctajul total realizat în anul 2020 de raportare in SIMAC: total echivalent A (1A = 10)	**116.14**	
b) Punctajul total realizat în anul 2019 de raportare in SIMAC: total echivalent A (1A = 10)	**105.77**	
c) Punctajul total realizat în anul 2018 de raportare in SIMAC: total echivalent A (1A = 10)	**109.48**	
TOTAL SECŢIUNEA 1	**331.39**	
La aceasta sectiune este obligatoriu un minim cumulat pe cei 3 ani de puncte dupa cum urmeaza: profesor: 36 puncte; conferentiar: 21 puncte; sef lucrari: 15 puncte; asistent: 4,5 puncte.		
SECTIUNEA 2 **Alte realizari in planul activitatii didactice (care nu sunt incluse in sistemul integrat de evaluare SIMAC)**	Punctaj declarat	Punctaj acordat
a) Discipline noi asimilate, corelate cu standardele naţionale introduse în planul de învăţământ.	0.00	
Profesor invitat la: 1. Universitatea Komarno din Slovacia in 2018 2. Universitatea PPKE din Ungaria in 2020.	15.00	
c) Organizarea unor activităţi cu studenţii (practică în ţară/ străinătate, cursuri de vară, etc.). 1. Participarea cu stundeti la concursuri/manifestari stiintifice (un student cu premiul 1 pe nivel national) 2. Implicarea studentilor in activitati de R&D din proiecte de cercetare inclusiv obtinere de burse pentru ei 3. Organizarea cercurilor studentesti in regim practica de vara (2015-2020) inclusiv la firme	15.00	
d) Dezvoltarea bazei materiale la nivel departamental în concordanţă cu standardele specifice. Dotarea laboratorului C24 de R&D cu echipamente specifice de cercetare (ochelari AR, GPU pentru DL, placi de dezvoltare embedded Nvidia Jetson Nano/AGX, Movidius, etc) din proiecte nationale BG39 si PTE27 conduse de candidat Pe langa acesta am castigat o finantare de la Nvidia un server echivalent DGX in valoare de 180000EUR pentru UTCN dintr-un proiect depus in 2020.	20.00	
e) Dezvoltarea de noi laboratoare. Conceperea si dezvoltare lucrare de laborator folosind donatie de la Festo pentru stundetii de anul 3 la laboratoare in regim hibrid (in perioada de pandemie/primavara 2021). Dotarea laboratorului de EAHP cu echipamente de la firma Baumann Automation (ca si donatie) pentru lucrari de laborator specifice in valoare totala de peste 10000 EUR Dezvoltarea laboratorului de cercetare din C24 pentru activitati de la programul de master cu AGV, UAV, AR	10.00	
f) Recunoasteri ale performantelor didactice educationale. Stabilit pe baza evaluarii cadrului didactic. 90% feedback pozitiv, inclusiv din formulare anonimizate cerute de la studenti	20.00	
g) Activităţi de manageriat în procesul de învăţământ (decan de an, tutoriere ECTS,etc.). Responsabil Erasmus pentru 2 universitati din strainatate	10.00	
h) Alte activităţi educaţionale semnificative diferite de cele de la punctele (a – g). Organizarea vizitelor la firmele Bosch (Jucu) pentru studentii din anul 3, respectiv Accenture R&D si Braintronix (masteranzi) in anii 2018-2019. Organizarea cursurilor in regim de profesori invitati din strainatate la master (2018-2020) Organizarea cursurilor de robotica in regim voluntariat in perioada 2018-2019 in licee pentru atragerea studentilor UTCN Intocmire regulamentului pentru spin-off-uri din cadrul UTCN	10.00	
TOTAL SECŢIUNEA 2	**100.00**	**0.00**
Obligatoriu minim 40 de puncte cumulat pentru toti cei 3 ani de raportare		
SECTIUNEA 3 **Activităţi manageriale şi administrative în sprijinul procesului didactic, de cercetare-dezvoltare, etc.**	Punctaj declarat	Punctaj acordat
a) Funcţii executive de conducere (punctajul se acorda pentru ultimii 3 ani):		
1) Rector	0.00	
2) Prorector	0.00	
3) Decan	0.00	
4) Prodecan	0.00	
5) Director de departament	0.00	
b) Functii deliberative de conducere:		
1) Presedinte al senatului	0.00	

2) Vicepreşedinte al senatului	0.00	
3) Cancelar al senatului	0.00	
4) Alte functii de conducere asociate activitatilor desfasurate in interiorul institutiei. Conducerea unui grup de 6 persoane (in medie 3 permanenti si 3 MSc/PhD) in ultimii 3 ani, cu peste 0.75M$ finantare atrasi (H2020, BG, PTE, Nvidia grant, contracte ADI etc), si primul spinf-off de succes in domeniul Robotics&AI din cadrul departamentului (www.robotics-ai.org)	1.00	
TOTAL SECŢIUNEA 3	**1.00**	**0.00**
SECTIUNEA 4 **Activităţi la nivel de departament / facultate care nu sunt incluse in sectiunile anterioare**	Punctaj declarat	Punctaj acordat
a) Activitatea de intocmire a documentatiei de acreditare - Responsabil secţiune pentru dosarul de evaluare a scoalii doctorale grupul prof. Lazea + sectiunea lista de lucrari/deplasari pentru dept. de Automatica	15.00	
b) Activitatea de intocmire a statelor de functii si a orarului	0.00	
c) Activitatea de promovare, pregatirea, desfasurarea admiterii la licenta, masterat Promovarea UTCN in licee cu predare in limba maghiara (Apaczai, JZSUK, Bathory) inclusiv in regim online	20.00	
d) Activitatea in cadrul cercurilor stiintifice studentesti altele decat cele definite la S3-h – Organizarea si sprijinirea activitatilor de R&D pentru stundenti in programe de internhship la mediul economic (atasat Accenture research program certificate) Organizarea cercurilor de robotica pentru studenti	15.00	
e) Organizarea zilei absolventilor, ziua portilor deschise a facultatii. Participare la ziua portilor deschise, gazda la diferite vizite pe Dorobantilor. Reprezenant UTCN la IDENTICOM 2019 si RVP2 din 2020.	15.00	
f) Organizarea concursurilor studentesti locale, nationale si internationale Organizarea concursului ClujUAV in 2019 si conducerea echipei de studenti la ClujUAV respectiv BFMC	12.00	
g) Tinuta morala si comportarea academica	20.00	
h) Alte activitati semnificative la nivel de departament/facultate diferite de cele de la punctele: Membru in comitete conferinte internationale (AQTR, KEPAF, IVAPP, etc) Guest Editor revista Sensors Conducere doctorat international (Univ. Szeged)	20.00	
TOTAL SECŢIUNEA 4	**117.00**	**0.00**

OBSERVATII:

a) Punctajul de la sectiunea 2 este confirmat de catre directorul de departament. Se accentueaza ca punctajul acordat trebuie sa fie intre 0 si punctajul maxim, nuantat in strict acord cu performantele realizate in cei 3 ani de raportare.

b) Punctajul de la sectiunea 3 este acordat de catre directorul de departament din care provine candidatul , calculat pe durata ultimilor 3 ani pentru toate functiile detinute.

c) Punctajul de la secțiunea 4 este atribuit integral de către directorul de departament, cu acordul consiliului de departament.

Punctajul acordat trebuie sa fie intre 0 si punctajul maxim, nuantat in strict acord cu performantele realizate in cei 3 ani de raportare.

DECAN DIRECTOR DEPARTAMENT

RESEARCH PROGRAM CERTIFICATE

NEW IS DESTINED TO EVOLVE, TO INVENT, TO CHANGE.

This certificate is presented to

TAMÁS LEVENTE

For his active role in Accenture Research program which helps the enthusiast students to accumulate real working experience. Your work brings real value to our company.

Thank you for your involvement.

accenture | 2020

Centralizator punctaje SIMAC

2018-2019-2020

Nume: Tamas
Prenume: Levente
Grad didactic: Conferențiar
Facultate: Automatică și Calculatoare
Departament: Automatică

An	Activitate didactica [A]	Activitate de cercetare [A]	TOTAL [A]
2018	0.10890	11.50512	11.61402
2019	0.10000	10.47700	10.57700
2020	0.01650	10.93200	10.94850
Media			**11.04651**

Cluj-Napoca, 11/10/2021

ROMÂNIA

OFICIUL DE STAT PENTRU INVENȚII ȘI MĂRCI

BREVET DE INVENȚIE

Nr. 133736

Acordat în temeiul Legii nr.64/1991 privind brevetele de invenţie, republicată în Monitorul Oficial al României, Partea I, nr.613, din 19 august 2014.

Titular: ACCENTURE GLOBAL SOLUTIONS LIMITED, DUBLIN 4, IE; UNIVERSITATEA TEHNICĂ DIN CLUJ-NAPOCA, CLUJ-NAPOCA, CJ, RO

Titlul invenţiei: METODĂ DE VIZUALIZARE A TRASEULUI UNUI VEHICUL AUTONOM FOLOSIND REALITATE AUGMENTATĂ

Inventatori: MILITARU CRISTIAN, CLUJ-NAPOCA, CJ, RO; TAMAS LEVENTE, CLUJ-NAPOCA, RO, RO; TOFALVI LASZLO, CLUJ-NAPOCA, CJ, RO

Descrierea invenţiei, revendicările şi desenele la care se face referinţă în acestea, fac parte integrantă din prezentul brevet de invenţie.
Durata brevetului de invenţie este de 20 ani, cu începere de la data de 24/05/2018, cu condiţia plăţii taxelor anuale de menţinere în vigoare a brevetului.

Confirm cele de mai sus prin semnarea şi aplicarea sigiliului
Director General

OFICIUL DE STAT PENTRU INVENȚII ȘI MĂRCI · ROMÂNIA ·

părit la C.N. „Imprime[illegible]ţională" S.A.

COMMITTEES

Jury members

- Liviu Miclea (http://www.utcluj.ro) (TUCN)
- Lucian Busonius (http://busoniu.net/) (TUCN)
- Levente Tamas (http://rocon.utcluj.ro/levente) (TUCN)
- Andras Babos (https://aeromodelism.ro) (ARA)
- Paula Raica (https://utcluj.ro) (TUCN)
- To be extended

Organizers

- Levente Tamas (http://rrg.utcluj.ro/~levente/) (TUCN)
- Lucian Busoniu (http://busoniu.net) (TUCN)
- Paula Raica (https://utcluj.ro) (TUCN)

Cluj UAV contest first edition

2019.10.19 Cluj-Napoca, Romania

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CERTIFICATE OF SERVICE

AS

Guest Editor of Special Issue

"Novel Sensors and Algorithms for Outdoor Mobile Robot"

Dr. Levente Tamás

Automation Department, Technical University of Cluj-Napoca, Cluj-Napoca 400114, Romania

MDPI Academic Open Access Publishing since 1996

Basel, March 2021

Dr. Shu-Kun Lin

Publisher & President

Region-Based Pose and Homography Estimation for Central Cameras

Ph.D. Thesis

by

Robert Frohlich

Supervisor:
Prof. Zoltan Kato

External Consultant:
Dr. Levente Tamas

Doctoral School of Computer Science
Institute of Informatics
University of Szeged
Szeged
2019

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Applied Research Accelerator Program Application

Program Name
Applied Research Accelerator Program

Application Status
Approved

How did you hear about the Program?

How did you hear about this program?

Other - Please Specify

NVIDIA Employee

Event Attended

Researcher's Profile

Institution
Technical Univeristy of Cluj Napoca

Localized / Alternate Institution Name
Computer Science and Automation Department

Lab
Robotics and Nonlinear Control (http://rocon.utcluj.ro)

Primary Address Line 1
Memorandumului 28

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Primary City
Cluj-Napoca

Primary State
Cluj

Primary Postal Code
400114

Primary Location
Romania

Principal Investigator(PI) / Researcher

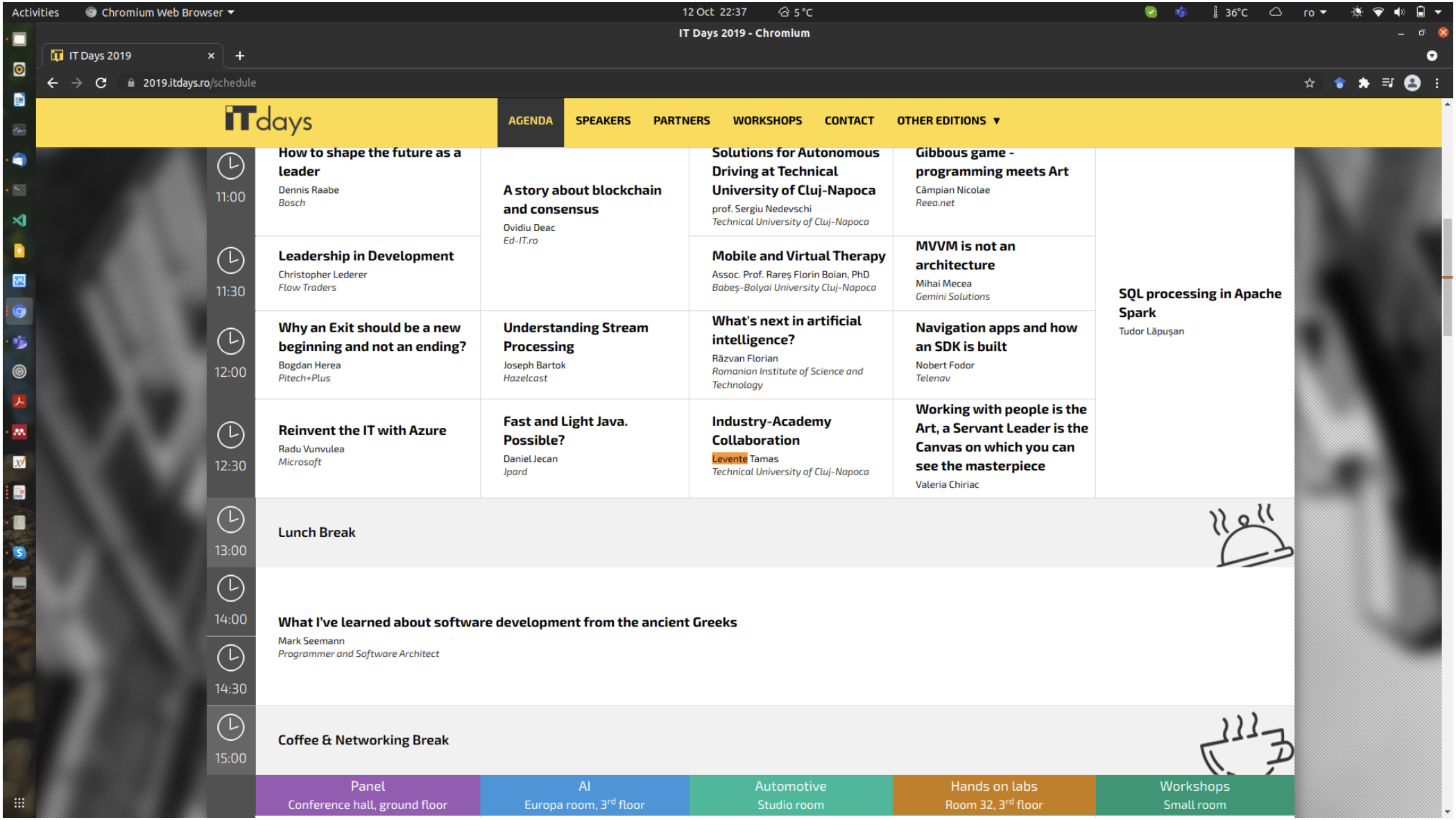
Requester First Name
Levente

Requester Last Name
Tamas

Requester's Email
levente.tamas@aut.utcluj.ro (mailto:levente.tamas@aut.utcluj.ro)

Phone
0040726280667

Research Team Offline


Activities
Chromium Web Browser
12 Oct 22:37
5 °C
36°C
ro
IT Days 2019 - Chromium
IT Days 2019
2019.itdays.ro/schedule
IT days
AGENDA
SPEAKERS
PARTNERS
WORKSHOPS
CONTACT
OTHER EDITIONS
11:00
How to shape the future as a leader
Dennis Raabe
Bosch
A story about blockchain and consensus
Ovidiu Deac
Ed-IT.ro
Solutions for Autonomous Driving at Technical University of Cluj-Napoca
prof. Sergiu Nedevschi
Technical University of Cluj-Napoca
Gibbous game - programming meets Art
Câmpian Nicolae
Reea.net
11:30
Leadership in Development
Christopher Lederer
Flow Traders
Mobile and Virtual Therapy
Assoc. Prof. Rareș Florin Boian, PhD
Babeș-Bolyai University Cluj-Napoca
MVVM is not an architecture
Mihai Mecea
Gemini Solutions
12:00
Why an Exit should be a new beginning and not an ending?
Bogdan Herea
Pitech+Plus
Understanding Stream Processing
Joseph Bartok
Hazelcast
What's next in artificial intelligence?
Răzvan Florian
Romanian Institute of Science and Technology
Navigation apps and how an SDK is built
Nobert Fodor
Telenav
SQL processing in Apache Spark
Tudor Lăpușan
12:30
Reinvent the IT with Azure
Radu Vunvulea
Microsoft
Fast and Light Java. Possible?
Daniel Jecan
Jpard
Industry-Academy Collaboration
Levente Tamas
Technical University of Cluj-Napoca
Working with people is the Art, a Servant Leader is the Canvas on which you can see the masterpiece
Valeria Chiriac
13:00
Lunch Break
14:00
What I've learned about software development from the ancient Greeks
Mark Seemann
Programmer and Software Architect
14:30
15:00
Coffee & Networking Break
Panel
Conference hall, ground floor
AI
Europa room, 3rd floor
Automotive
Studio room
Hands on labs
Room 32, 3rd floor
Workshops
Small room


InFocus
Collaboration That Works

Invited course (Meeting) | Microsoft Teams

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4

Pinhole camera image

- ✓straight line
- ×size
- ×parallelism/angle
- shape
- shape of planes
- depth

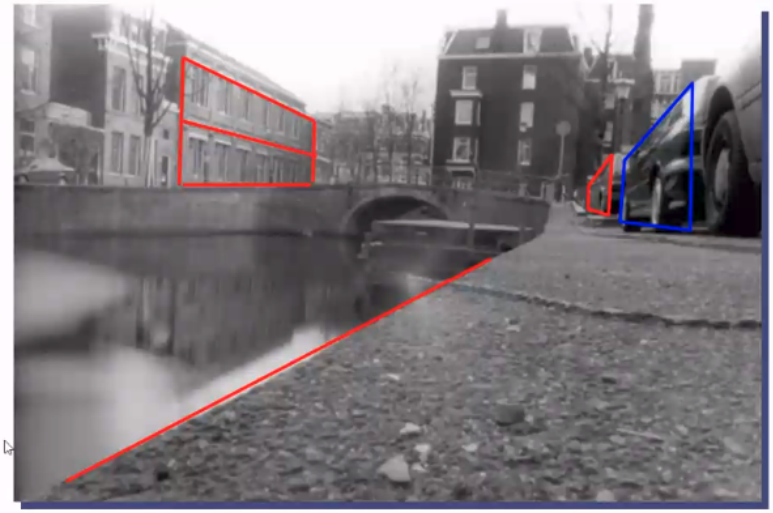

Photo by Robert Kosara, robert@kosara.net
http://www.kosara.net/gallery/pinholeamsterdam/pic01.html

Zoltan Kato: 3D-2D Visual Data Analysis

Zoltan Kato (Guest)

Slide adopted from Zhigang Zhu Computer Vision - CSC I6716

20:13

+24 AM M

Zoltan Kato (Guest) ...

Bianca Claudia Chior...

Odette Kelenyi

BK Kelenyi, Benjamin

People

Invite someone

Currently in this meeting (32) Mute all

- Levente Tamas, Organizer
- Alexandru Pop
- Alin - Paul Voicu
- Ana - Cristina Valcelean
- Andrea - Mariana Bud
- Andreea Bodea
- Andreea Roxana Maier
- Andrei Bacs
- Arthur - William Iakkel
- Attila Vass
- Bianca Claudia Chiorean
- Bogdan Paul Vlad
- Calin Pop

Suggestions (2)

A KÉPAF 2019 Konferencia Hivatalos honlapja ITT (http://kepaf.njszt.hu/kepaf2019/) elérhető. http://kepaf.njszt.hu/kepaf2019 (http://kepaf.njszt.hu/kepaf2019)

(http://kepaf.njszt.hu/kepaf2019)

KONFERENCIA

(http://kepaf.njszt.hu/kepaf2019)

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(http://kepaf.njszt.hu/kepaf2019)

(http://kepaf.njszt.hu/kepaf2019)A konferenciáról, általános információk (konferenciarol.html)

(http://kepaf.njszt.hu)

- ~~**Csoportos BUD-TGM repülőjáratra jelentkezés (utazas.html) 2016.10.15.-ig.**~~
- Cikk-beküldési határidő: **2016.10.23.** Figyelem: a Kuba A. dijra (kuba.html) ill. PhD dijra (phd.html) pályázókra más határidők vonatkoznak.
- Technikai bemutatók beküldési határidő: **2016.10.23.**
- Értesítés az elfogadásról: 2016.12.01
- Válasz a bírálatokra: 2016.12.12
- Camera ready határidő: 2017.01.08
- Regisztráció és fizetés: 2017.01.08
- Konferencia: 2017.01.24 - 2017.01.27

Felhívás

magyar (kepaf17_HU_callforentries.pdf), angol (kepaf17_EN_callforentries.pdf)

Történet

A KÉPAF konferenciák korábbi helyszínei (helyszinek.html)

Technikai bemutatók

A szakterület ipari fejlesztéseiben tevékenykedő cégek és intézmények részére (bővebben) (technikai.html)

Információk előadóknak

(bővebben) (eloadoknak.html)

Kuba Attila Díj

Fiatal kutatónak (bővebben) (kuba.html)

PhD Díj

Posztdoktori kutatóknak (bővebben) (phd.html)

A konferencia programja

- Programterv (KEPAF2017Program.pdf) - beosztás, órarend
- Részletes programfüzet (KEPAF2017Programfuzet.pdf)
- Elfogadott cikkek listája (cikklista.html)

Hírek

Elérhető a konferencia programja (KEPAF2017Program.pdf) és a részletes programfüzet (KEPAF2017Programfuzet.pdf).

2017.01.20.

‹‹ ››

Támogatóink:

Neumann János Számítógép-tudományi Társaság

(http://njszt.hu/)

Sapientia Erdélyi Magyar Tudományegyetem

SAPIENTIA ERDÉLYI MAGYAR TUDOMÁNYEGYETEM (http://www.sapientia.ro/hu)

Kolozsvári Akadémiai Bizottság

KOLOZSVÁRI AKADÉMIAI BIZOTTSÁG (http://www.kab.ro)

Szponzori információk (szponzorinfok.html)

BIZOTTSÁGOK

Programbizottság Elnökei

- Csurka Gabriella (http://www.xrce.xerox.com/About-XRCE/People/Gabriela-Csurka) (XRCE)
- Szirányi Tamás (http://www.sztaki.hu/~sziranyi/) (SZTAKI)

Programbizottság Tagjai

- Beleznai Csaba (http://www.ait.ac.at/profile/detail/Beleznai-Csaba/) (AIT)
- Benedek Csaba (http://web.eee.sztaki.hu/~bcsaba/) (SZTAKI)
- Berke József (http://www.gdf.hu/szervezet/intezetek/alap-es-muszaki-tudomanyi-intezet) (GDF)
- Csetverikov Dmitrij (https://www.sztaki.hu/munkatars/niifUniqueId%3D008000505,ou%3DPeople,o%3DSZTAKI,o%3DNIIF,c%3DHU/) (SZTAKI)
- Csébfalvi Balázs (http://sirkan.iit.bme.hu/~cseb/index.htm) (BME)
- Czúni László (http://virt.uni-pannon.hu/index.php/tanszek/oktatoi-oldalak/86-dr-czuni-laszlo) (PE)
- Vig Eleonóra (http://www.eleonoravig.com/) (DLR)
- Fazekas Attila (http://www.inf.unideb.hu/~fattila/) (DE)
- Hajder Levente (https://www.sztaki.hu/munkatars/niifUniqueId%3D008001119,ou%3DPeople,o%3DSZTAKI,o%3DNIIF,c%3DHU/) (SZTAKI)
- Hajdu András (http://www.inf.unideb.hu/~hajdua/) (DE)
- Horváth Péter (http://group.szbk.u-szeged.hu/sysbiol/horvath-peter-lab-member.html#peter-horvath) (SZBK)
- Kató Zoltán (http://www.inf.u-szeged.hu/~kato/) (SZTE)
- Nyúl László (https://www.inf.u-szeged.hu/~nyul/) (SZTE)
- Palágyi Kálmán (https://www.inf.u-szeged.hu/~palagyi/) (SZTE)
- Szirmay-Kalos László (http://www.fsz.bme.hu/~szirmay/szirmay.html) (BME)
- Szilágyi László (http://www.ms.sapientia.ro/hu/tanszekek/villamosmernoki-tanszek/dr-szilagyi-laszlo) (EMTE)
- Zarándy Ákos (https://www.sztaki.hu/munkatars/niifUniqueId%3D008003720,ou%3DPeople,o%3DSZTAKI,o%3DNIIF,c%3DHU/) (SZTAKI)

PhD Díjbizottság

Elnök: Szirmay-Kalos László (http://www.fsz.bme.hu/~szirmay/szirmay.html) (BME)

Tagok:

- Csetverikov Dmitrij (https://www.sztaki.hu/munkatars/niifUniqueId%3D008000505,ou%3DPeople,o%3DSZTAKI,o%3DNIIF,c%3DHU/) (SZTAKI)
- Csurka Gabriella (http://www.xrce.xerox.com/About-XRCE/People/Gabriela-Csurka) (XRCE)
- Hajdu András (http://www.inf.unideb.hu/~hajdua/) (DE)
- Kató Zoltán (http://www.inf.u-szeged.hu/~kato/) (SZTE)
- Szirányi Tamás (http://www.sztaki.hu/~sziranyi/) (SZTAKI)

Kuba Attila Díjbizottság

Elnök: Kató Zoltán (http://www.inf.u-szeged.hu/~kato/) (SZTE)

Tagok:

- Benedek Csaba (http://web.eee.sztaki.hu/~bcsaba/) (SZTAKI)
- Czúni László (http://virt.uni-pannon.hu/index.php/tanszek/oktatoi-oldalak/86-dr-czuni-laszlo) (PE)
- Hajdu András (http://www.inf.unideb.hu/~hajdua/) (DE)
- Horváth Péter (http://group.szbk.u-szeged.hu/sysbiol/horvath-peter-lab-member.html#peter-horvath) (SZBK)
- Szirányi Tamás (http://www.sztaki.hu/~sziranyi/) (SZTAKI)

Szervező Bizottság

- Kelemen András (http://www.ms.sapientia.ro/hu/tanszekek/villamosmernoki-tanszek/dr-kelemen-andras) (EMTE)
- Majdik András (https://www.sztaki.hu/munkatars/niifUniqueId%3D008010027,ou%3DPeople,o%3DSZTAKI,o%3DNIIF,c%3DHU/) (SZTAKI)
- Tamás Levente (http://rrg.utcluj.ro/~levente/) (KME)

THE STUDY OF THE DOUBLE ACTING CYLINDER WITH ELECTRIC VALVE CONTROL

Contents

1. Introduction

This laboratory focuses on the study of the double acting DSNU-20-30-PPS-A type cylinder produced by Festo. This double acting pneumatic actuator has dual connection ports for compressed air to be applied for advancing and retracting the piston rod in a linear motion. The self-adjusting speed limiters give a gentle and dynamic travel into the end position, even with changing loads and speeds. Equipped with a special extension to the main piston the design controls venting of the air cushion that has built up, as a result, no adjusting screw is necessary.

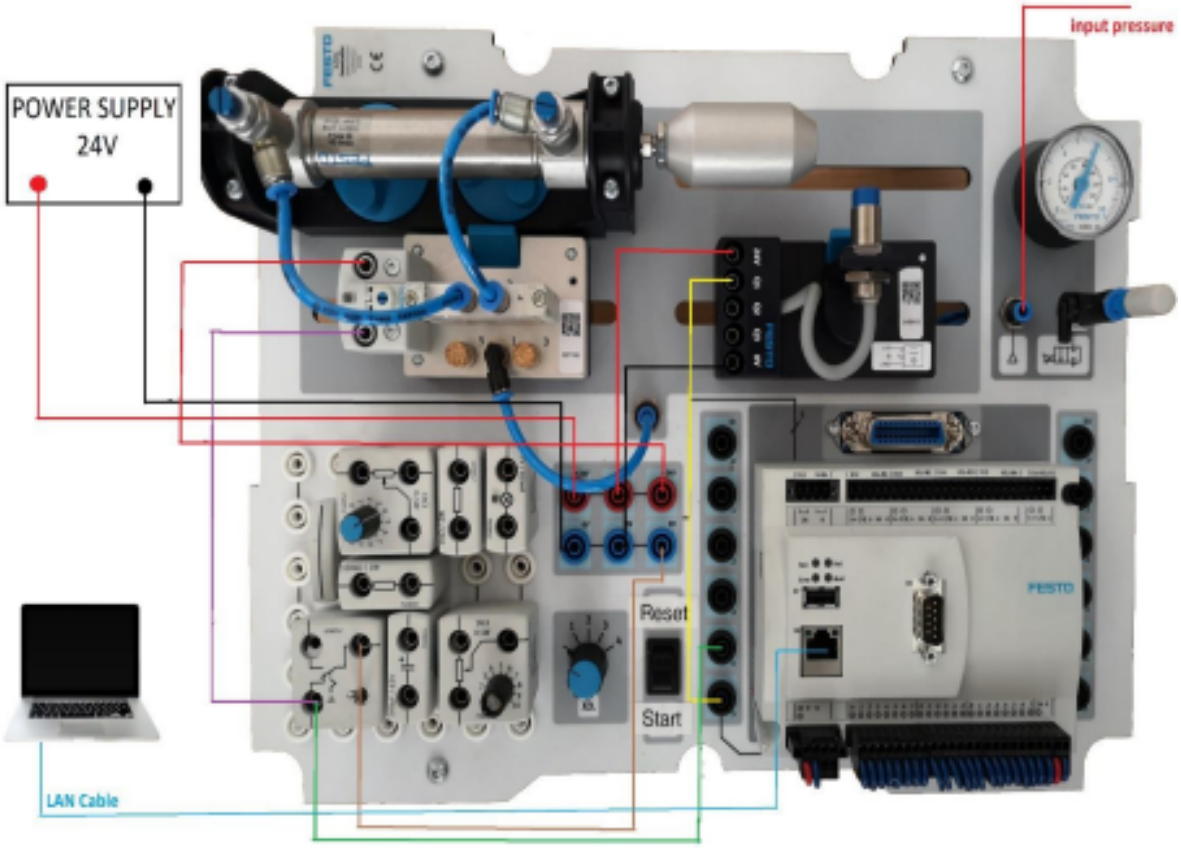
2. Software requirements

To be able to understand the functioning of this cylinder, respectively to solve the laboratory proposed exercises, the following applications or packages are needed:

1. CODESYS → https://www.codesys.com/download.html (V3.6 SP16 Patch 4 32 BIT)
2. FESTO FIELD DEVICE TOOL → https://www.festo.com
3. CECC PACKAGE FOR CODESYS → https://www.festo.com

3. Connection diagram

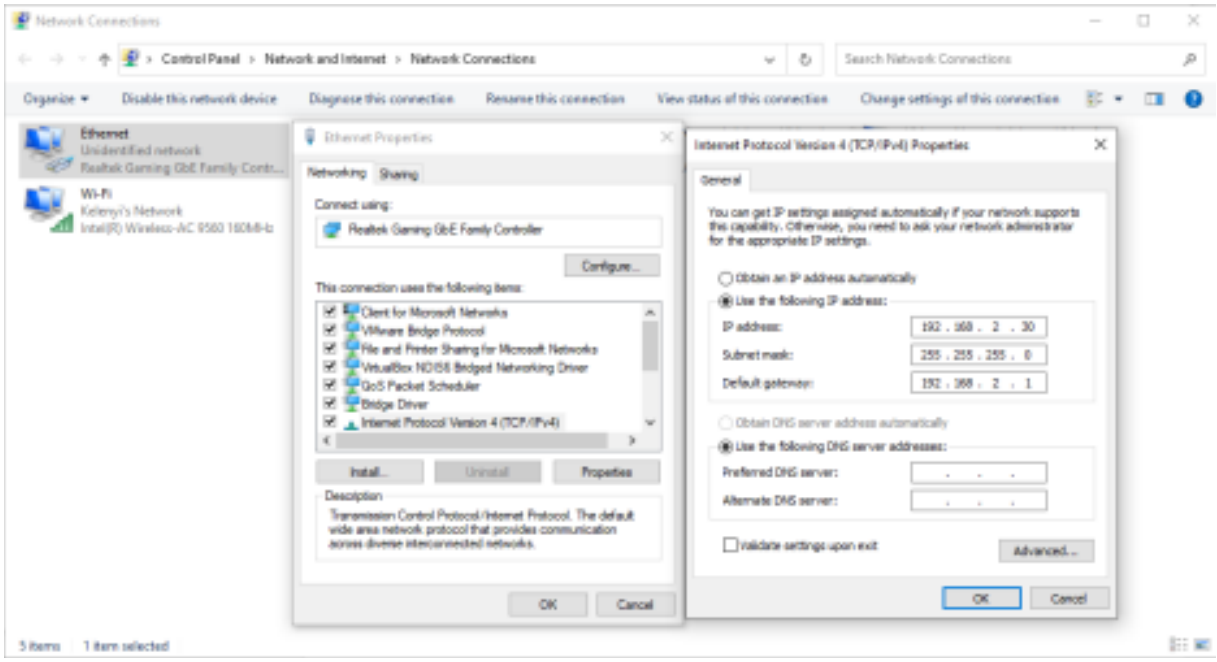
The connection diagram is shown in the figure below:



4. Network connection settings

In order to communicate with the CECC-LK microcontroller, the following settings are required on the Ethernet port:

ip address: 192.168.2.30
subnet mask: 255.255.255.0
default gateway: 192.168.2.1

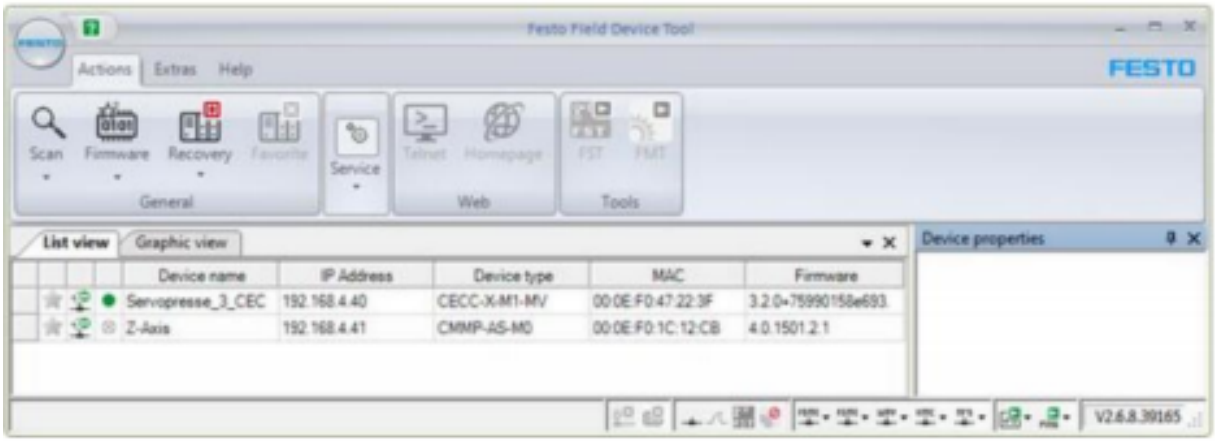


4.1 Check target communication

To verify that communication with the microcontroller CECC-LK is possible, the FFD (FESTO FIELD DEVICE) program must be used:

The Festo Device Tool (FFT) is available in the Support Portal ➔ www.festo.com/sp.

- Open the Festo Field Device Tool (FFT).



5. Commissioning

5.1 Preparations

Administrator rights are required to install the CODESYS V3 pbF programming software on your PC.

1. Install the CODESYS V3 pbF programming software on the PC used to commission, configure and program the CECC.
2. Install required packages (CECC) if necessary. To do this, open the Package Manager in Codesys using the [Package Manager] command in the [Tools] menu.
3. After the last package is installed, restart Codesys to be able to use the modified plug-ins.
4. Connect the PC to the CECC directly via the Ethernet interface or indirectly via a switch/hub.

5.2 Getting started

- Launch CODESYS V3 pbF. You will find the program on your Windows PC in the Start menu directory [Programs] [Festo Software] [CODESYS V3].

5.2.1 Creating a project

- Create a new project ([File] [New Project...]), enter a name and the storage location and confirm your entries by clicking "OK".

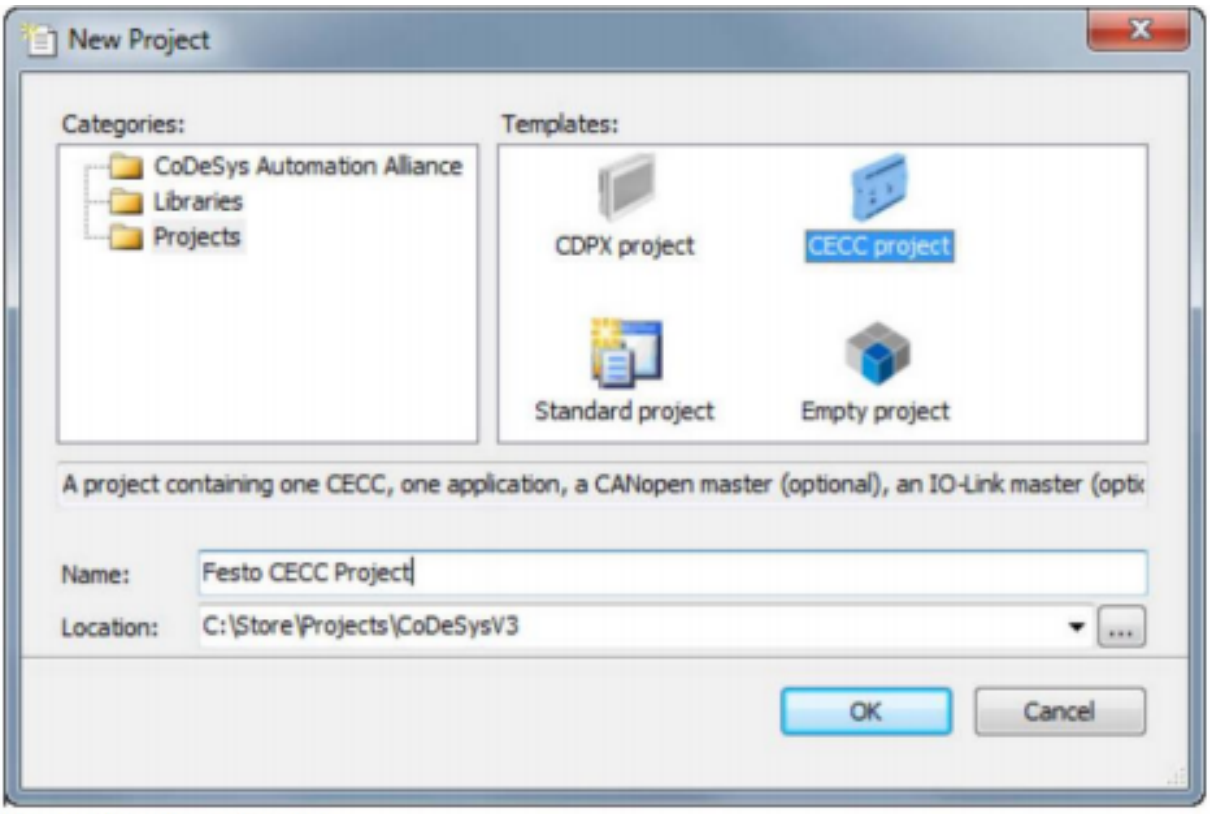


Figure: "New Project" dialog

5.2.2 Selecting a device

1. Select the relevant device in the "CECC Project" dialog.
   - Check the "Show all device versions" box for an extended selection of older device variants. The respective version of the relevant device description file is appended to the name of the selected device.

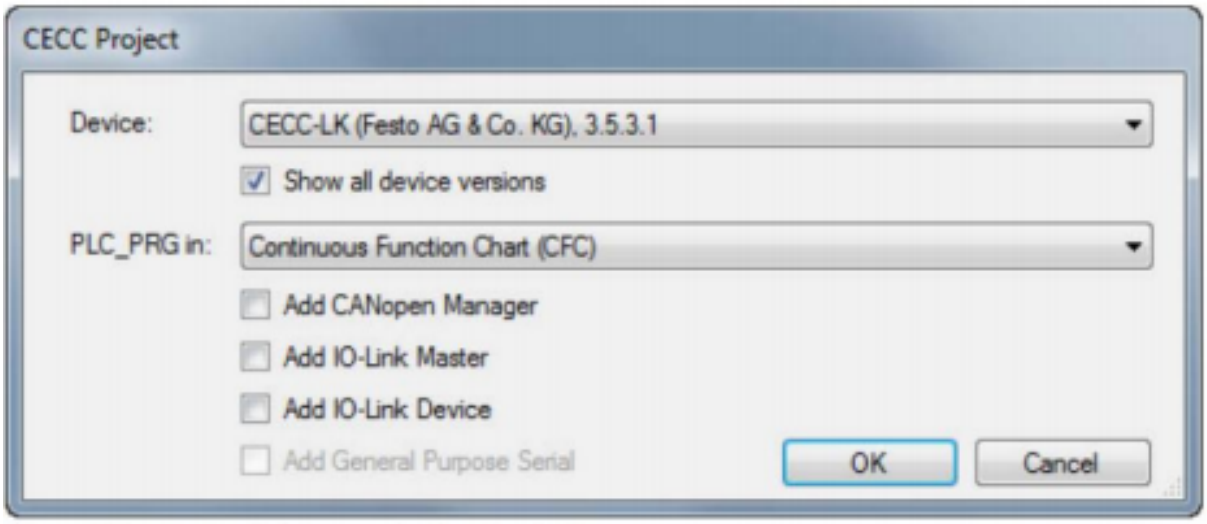


Figure: "New Project" dialog – selecting the device

2. Select a programming language, e.g. structured text (ST).
3. Select the relevant interfaces.

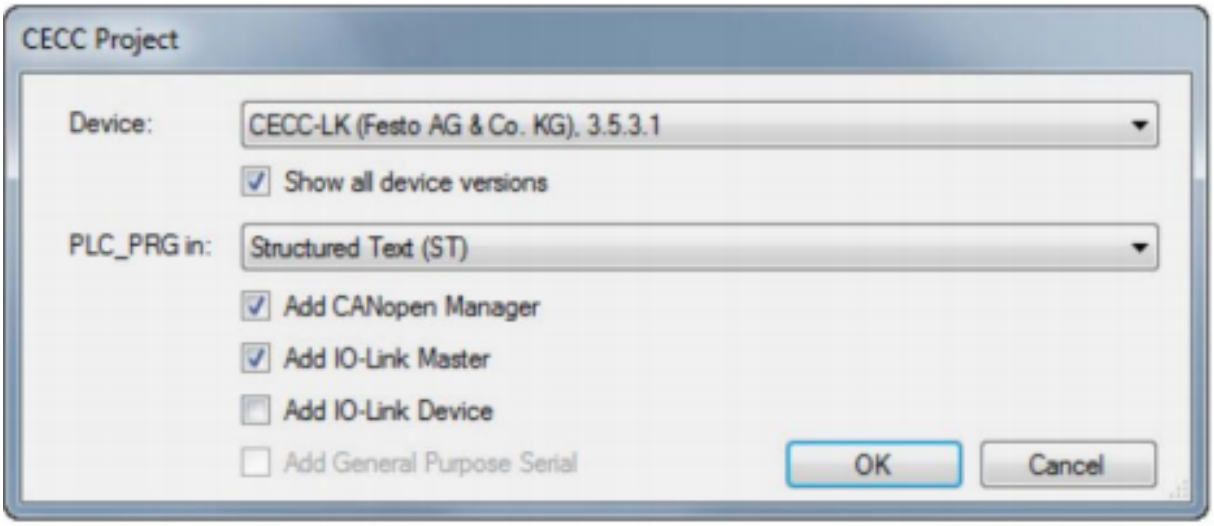
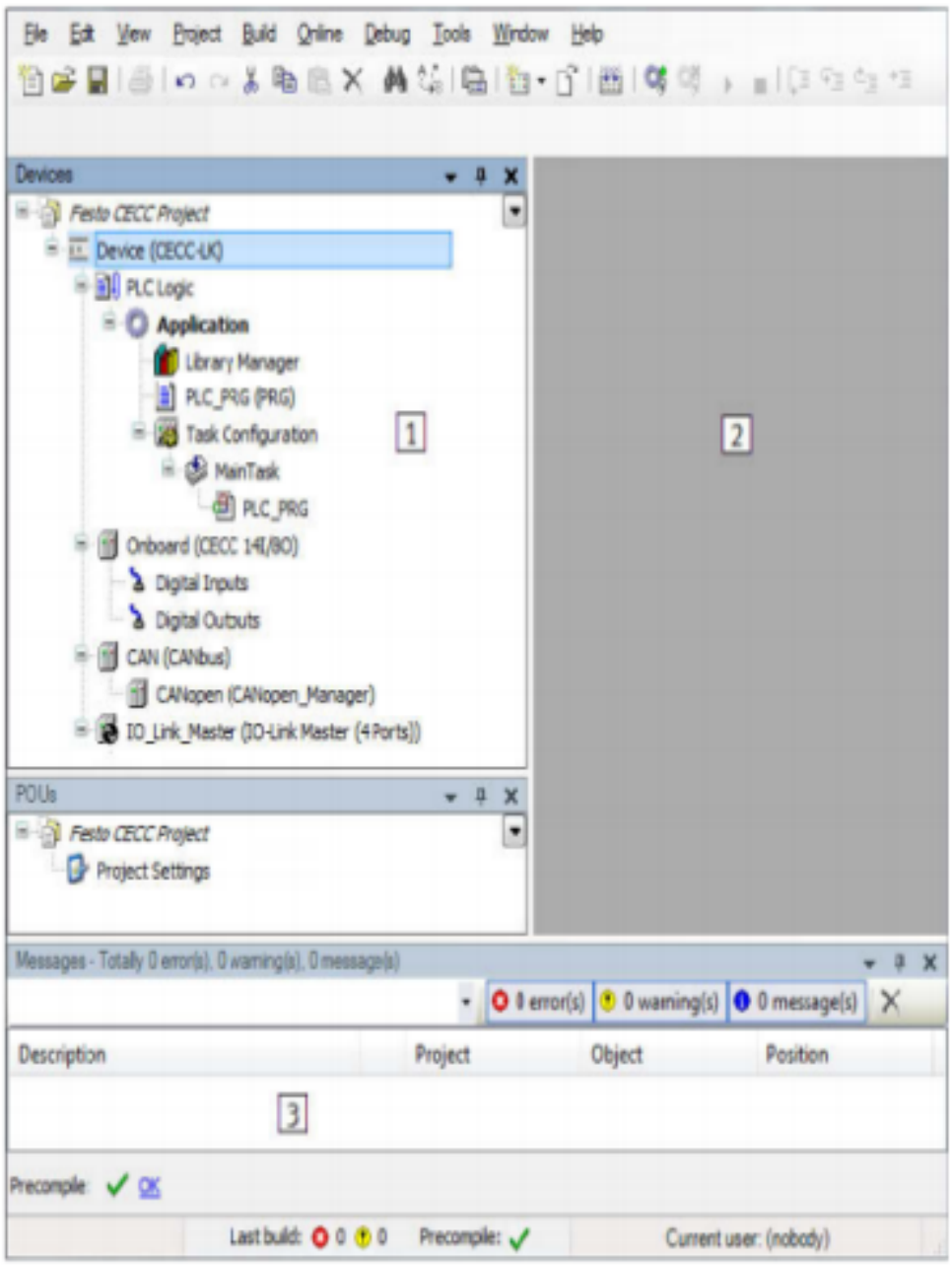


Figure: "New Project" dialog – selecting the interfaces

Options not supported by the respective device are inactive (shown in grey) and cannot be selected.

The CODESYS V3 pbF program window opens with the newly created project.



1 Device window with CECC, its interfaces and PLC logic

2 Editing window with tabs for the objects activated in the device window

3 Message window with information about the CECC as well as error messages and warnings

Figure: CODESYS V3 pbF program window with selected CECC

5.2.3 Adding a device

1. Double-click the device to be configured in the device window.
   The "Device" tab for making settings for the device opens in the editing window.

The following information and setting options can be found in the sub-tab for the device:

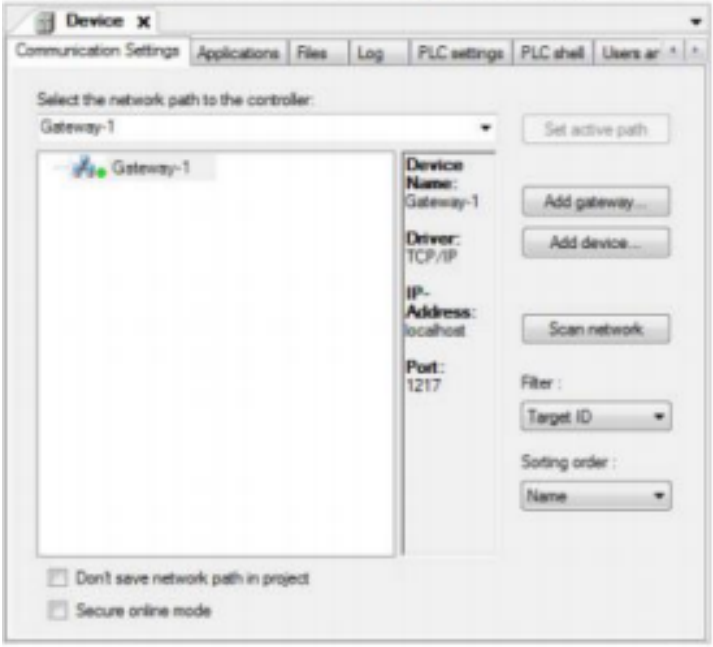


Figure: "Device" tab for CECC-...

2. Open the "Communication Settings" tab and highlight the local gateway (network path).
3. Click the "Scan network" button or double-click the highlighted gateway to add an updated list of devices to the local gateway.

- If necessary, set the filter to "Target ID". Only devices that match the CECC currently used in the project will then be displayed (➔ section "Selecting a device").
- If necessary, change the sorting sequence to alter how the devices are displayed in the updated list.
- Manually select a device if you know the name, node address or IP address of the CECC (➔ section "Manually adding a device").
- If necessary, change the network settings for the device (➔ section "Scan Festo Devices") and repeat step 3. Changing the settings adds the device to the local gateway.

The list only contains devices that match the following criteria:

– The subnet mask settings for the network connection and CECC are the same
– The IP address settings for the network connection and CECC match

If these criteria are **not** met, the device must be detected using the Festo scan program (➔ section "Scan Festo Devices"). The network settings for the device can be read out in the scan program and changed to suit your company network.

5.2.4 Setting the communication channel

You need a communication channel to exchange data with the connected CECC.

- Highlight the desired device and click the "Set active path" button or double-click the highlighted device.

The currently active path is shown in bold in the list and "(active)" is appended to the name.

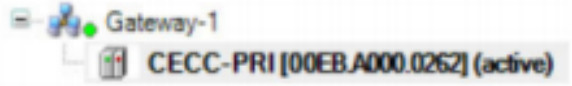


Figure: Activated device

5.2.5 Adding a CECC as a gateway

You can add a CECC as a gateway to extend the network. By doing so you extend the network by the subnet via which the CECC can be connected.

1. Click the "Add gateway..." button.
   The "Gateway" dialog opens.

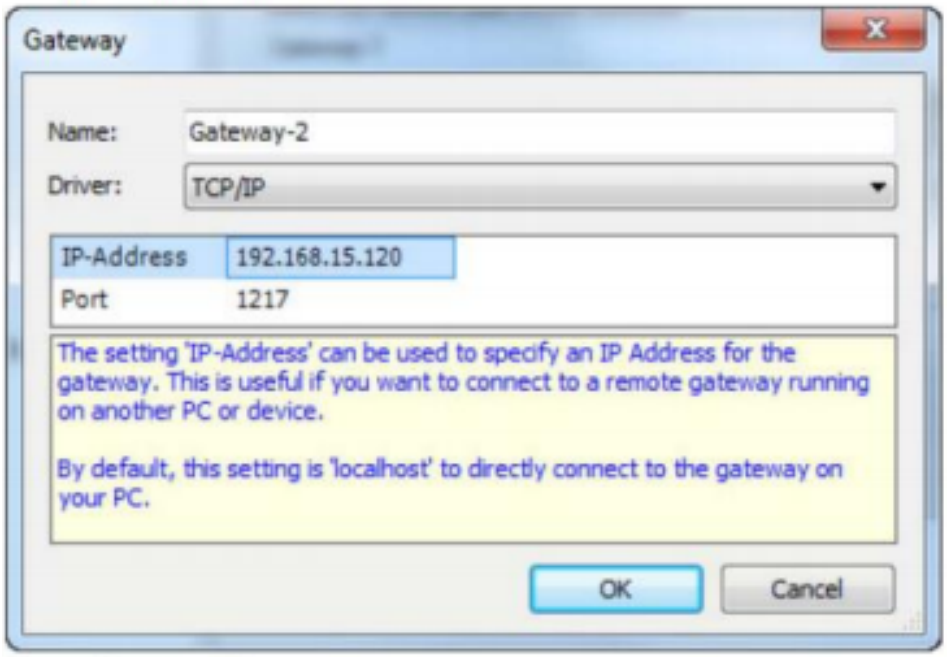


Figure: Gateway dialog

2. Enter a name for the new gateway in the input field.
3. Enter the known IP address for the relevant CECC.
4. Confirm your entries with "OK".
5. Repeat step 3 from the section "Adding a device" to add an updated list of devices to the CECC gateway (➔ section "Getting started").

If all the settings mentioned above have been done correctly, we now have the microcontroller connected to our computer and we are ready to program the microcontroller.

6. How to program de microcontroller

6.1 Online mode

Caution
Risk of injury due to uncontrolled movements of the connected actuators.

- Test projects and programs without active actuators initially.

A configured project including program (CECC application) is to be transferred to the CECC. Online mode must be activated for transfer, i.e. CODESYS V3 pbF must be "logged in" on the CECC.

6.2 Login

Use one of the following commands for login:

- Click the icon in the toolbar of the Codesys program window
- Menu command [Online] [Login]
- Shortcut ALT+F8

Once online mode is active, the connection to the CECC as well as the application are highlighted in green in the device window. The CECC is online, the application is not started (not running), the "Run" status LED lights up yellow.

Figure: Device window with CECC logged in

6.3 Monitoring the input/output ports

PÁZMÁNY PÉTER CATHOLIC UNIVERSITY

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Levente TAMÁS, PhD
Automation Department
Technical University of Cluj-Napoca
E-mail: Levente.Tamas@aut.utcluj.ro

Subject: Invitation

Dear Levente TAMÁS,

Hereby I kindly invite you to the Faculty of Information Technology and Bionics of Pázmány Péter Catholic University for the period of 21-22 December 2020 to hold a guest lecture (block course) for the 3rd EMJMD cohort of Image Processing and Computer Vision MSc students, under the title

3D Vision

The costs of your travel, accommodation, as well as your honorarium will be covered by the IPCV Consortium, upon successful application to the IPCV guest scholar program.

Budapest, 1 December 2020

Sincerely yours,

.....

Dr. KARACS Kristóf
Vice Dean for General and International Affairs
Head of the IPCV program at PPCU

News

MTDK 2021

Pictures taken at the event can be viewed **here** .

RESULTS

1st place and OTDK labeling - Purple Boga (RO BBTE), hydrothermal synthesis of CaTiO3 and optimization of its photocatalytic performance using statistical models

Leading teachers: Dr. Mircea-Vasile Cristea, Professor István Székely, Dr. Zsolt Pap

1st place and OTDK marking - Szilárd Molnár (RO KME), ToFNest: Efficient orthogonal calculation for depth images from time-of-flight type cameras

lead teacher: Dr. Tamás Levente, associate professor

II. placement and OTDK marking - Balazs Bustya, Attila Hammas (RO EMTE), Framework for neural network FPGA based implementation

lead teacher: Dr. Sándor Tihamér Brassai, associate professor

II. positioning and OTDK marking - Norbert Hodgyai (RO EMTE) , Comparison of load capacity of gear-modified and classically designed gears

lead teacher: Dr. Márton Máté, associate professor

III. placement and OTDK marking - Norbert Kertész (RO KME), Battery monitoring system interface development for sb-RIO 9636 system

lead professor : Dr. Lóránd Szabó, university professor

III. position - Zátyi Tibor-Botond (RO EMTE), Design and construction of inclined screw conveyor

lead teacher: Dr. Gergely Attila-Levente assistant professor

CALL

XXII. Transylvanian Technical Scientific Student Conference

6 to 8 May 2021 .

The Timişoara Hungarian Student Organization (TMD) and the Student Self-Government of the Faculty of Târgu Mureş (MSHÖK) of Sapientia EMTE announce the XXII. Transylvanian Technical Scientific Student Conference (MTDK 2021). The aim of the conference is to encourage student academic student activity and to provide a space for students to present their work. We are waiting for the application of those students who, in addition to continuing their studies, carry out scientific activities in the field of technology for the purpose of self-study, and include the results in a high-quality dissertation (in Hungarian or English). At the conference, the entries will be presented in Hungarian. The content and form requirements of the dissertations to be submitted are the same as the requirements of the technical section of the OTDK.

Attention! A XXII. A Hungarian participant from the Transylvanian Technical Scientific Student Conference cannot be delegated to the OTDK.

A XXII. Planned sections of the Transylvanian Technical Scientific Student Conference (MTDK 2021):

1. Automation and applied informatics
2. Electrical engineering
3. Mechanical engineering
4. Civil Engineer and Architect
5. Chemical engineering
6. Light industry engineering
7. Poster session (for high school and first year students)

Attention! Based on the topic of the received dissertations, the planned departments may be modified or new departments may be started.

Important dates:

- Pre-registration: ~~**March 28,**~~ **2021 April 10, 2021**
- Extract submission: **April 10, 2021**
- Application submission: **April 25, 2021**
- The date of the conference is **May 6-8, 2021 .**

The official Facebook page of MTDK:

The MTDK poster is available **here** .

We welcome all applicants and interested parties to the conference!

Organizing Committee of MTDK

LECTURES ON ROBOTICS AND IMAGE PROCESSING DURING TÉT WEEK

On Monday of Science and Technology Week (November 5), two faculty lectures were held:

Tamás Levente: Robotics 4.0 - opportunities and challenges

On November 5, 2018, Tamás Levente, PhD., An assistant professor at the Technical University of Cluj-Napoca, presented the latest trends and challenges in the field of robotics. The workplace then presented the results of some specific development projects: e.g. 1) autonomous tracking of the railway line with a drone, 2) classification by an industrial robot based on certain characteristics and transport of selected products by a robot to a given location by mapping landmarks and obstacles and planning the optimal route, 3) stopping a car on foot if pedestrian senses in front of you.

Tibor Lukity: Energy minimization methods in image processing

On November 5, 2018, Tibor Lukity, PhD., Associate professor at the University of Novi Sad, presented the energy minimization methods used in image processing. The attendees were then introduced to some of the results in the areas of image denoising, discrete tomography, and defuzzification.

View the embedded image gallery online at:
http://gik.ujs.sk/hu/tudomany-es-kutatas/tudomanyos-rendezvenyek/5897-eloadasok-a-robotika-es-kepfeldolgzas-teren-a-tet-heten.html#sigProId13f49d62f7

Centralizator punctaje SIMAC

2018-2019-2020

Nume: Tamas
Prenume: Levente
Grad didactic: Conferențiar
Facultate: Automatică și Calculatoare
Departament: Automatică

An	Activitate didactica [A]	Activitate de cercetare [A]	TOTAL [A]
2018	0.10890	11.50512	11.61402
2019	0.10000	10.47700	10.57700
2020	0.01650	10.93200	10.94850
Media			**11.04651**

Cluj-Napoca, 11/10/2021