



V okviru predsedovanja Slovenije Evropskemu Svetu se v Digitalnem razstavišču v BTC centru od 27. novembra do 22. decembra 2021 odvijajo dogodki pod skupnim imenom "**Digitalno razstavišče – Tehnologija za ljudi**". Vabimo vas, da si rezervirate čas in se udeležite dogodkov "**Industrija 4.0 in Robotika**".

## Plan dogodkov

<b>Sobota</b>	<b>27.11.</b>	<b>09:00</b>	<b>Delavnica za otroke</b>
Ponedeljek	29.11.	09:00	Industrija 4.0 in Robotika - "Pitch" predstavitve podjetij
		12:00	Finančni mehanizmi za hitrejše uvajanje Industrije 4.0
Torek	30.11.	09:00	Sodelujoča robotika
Sreda	01.12.	09:00	Industrija 4.0 in Robotika v Sloveniji
Četrtek	02.12.	09:00	Človeški viri in robotika - roboti so namenjeni ljudem
		14:00	Kreativna robotika in robotika v umetnosti
Petek	03.12.	09:00	Tehnologije vodenja – tehnologije, ki omogočajo stvarjem, da delujejo
<b>Sobota</b>	<b>04.12.</b>	<b>09:00</b>	<b>Delavnica za otroke</b>
Ponedeljek	06.12.	09:00	Delavnica: Pravice inteligentnih ljudi in organizacij
		13:00	Yaskawa - predstavitev tovarne robotov
Torek	07.12.	10:00	Dvostranski sestanki na daljavo Robotika in Industrija 4.0
Sreda	08.12.	09:00	Kongres: Vloga materialov pri prehodu v zeleno, brezogljeno družbo
		14:00	Kongres: Krožno gospodarstvo in industrija 4.0: zmagovalna kombinacija za ogljično nevtralnost do 2050?
Četrtek	09.12.	09:00	Kongres: Kako lahko Industrija 4.0 podpre razvoj pametnih mest
		14:00	Kongres: Izboljšave v medicini s pomočjo robotike
Petek	10.12.	09:00	Delavnica: Proces prenosa tehnologij in kaj pomeni JWP
		13:00	Yaskawa - predstavitev tovarne robotov
<b>Sobota</b>	<b>11.12.</b>	<b>09:00</b>	<b>Delavnica za otroke</b>
Torek	14.12.	09:00	Robotika na Institutu "Jožef Stefan"
		13:00	Strojni vid v Industriji 4.0
Četrtek	16.12.	09:00	EIT Manufacturing - Naj se inovacije zgodijo v Sloveniji
Petek	17.12.	09:00	Pametna tovarna v praksi
<b>Sobota</b>	<b>18.12.</b>	<b>09:00</b>	<b>Mladi in robotika - Revijalno robotsko tekmovanje RoboCupJunior (RCJ)</b>
<b>Ponedeljek</b>	<b>20.12.</b>	<b>09:00</b>	<b>Učenci slovenskih šol spoznavajo tehnične poklice</b>
		10:00	Dvostranski sestanki na daljavo Robotika in Industrija 4.0
Torek	21.12.	09:00	Zaključna konferenca: Predstavitve brošure
		10:00	<b>Okrogla miza:</b> Robotika in industrija 4.0 v prehodu v zelene tehnologije in digitalno preobrazbo
		12:00	<b>Okrogla miza:</b> Potrebe industrije in kako jo lahko odločevalci podpirajo?
Sreda	22.12.	13:00	Yaskawa - predstavitev tovarne robotov

Od 29. novembra do 18. decembra: prijave za dvostranske sestanke Industrija 4.0 in Robotika, ki bodo 7. in 20. decembra 2021 na daljavo.

Za vsako osebno prisotnost je obvezno upoštevanje veljavnih vladnih odlokov (PCT).

**Opomba:** prijava je za vsak dogodek posebej kot osebna prisotnost ali kot virtualna udeležba. Prijava je obvezna.



As part of the Slovenian Presidency of the European Council, events under the common name "**Digital Exhibition - Technology for the People**" will be held at the Slovenian Digital Center in the BTC City from 27. Nov. to 22. Dec. 2021. We invite you to reserve time and visit the events "**Industry 4.0 and Robotics**".

## Events plan

Saturday	27.11.	09:00	Workshop for children
Monday	29.11.	09:00 12:00	Industry 4.0 and Robotics - Pitch presentations of Slovenian companies Financial mechanisms for faster introduction of Industry 4.0
Tuesday	30.11.	09:00	Collaborative robotics
Wednesday	01.12.	09:00	Industry 4.0 and Robotics in Slovenia
Thursday	02.12.	09:00 14:00	Human potentials in robotics – robots are all about people Creative robotics and robotics in art
Friday	03.12.	09:00	Control Technologies – technologies that make things work
Saturday	04.12.	09:00	Workshop for children
Monday	06.12.	09:00 13:00	Workshop: The rights of intelligent people and organizations Yaskawa - robot factory presentation
Tuesday	07.12.	10:00	On-line bilateral meetings Robotics and Industry 4.0
Wednesday	08.12.	09:00 14:00	Congress: The role of materials for green carbon-free society Congress: Circular economy and Industry 4.0: winning combination for carbon neutrality until 2050?
Thursday	09.12.	09:00 14:00	Congress: How can Industry 4.0 support development of Smart Cities Congress: Transforming Medicine with Robotics
Friday	10.12.	09:00 13:00	Workshop: Technology Transfer pipeline and what does JWP stand for? Yaskawa - robot factory presentation
Saturday	11.12.	09:00	Workshop for children
Tuesday	14.12.	09:00 13:00	Robotics at Jožef Stefan Institute Machine vision in Industry 4.0
Thursday	16.12.	09:00	EIT Manufacturing - Making Innovation Happen in Slovenia
Friday	17.12.	09:00	Smart Factory in practice
Saturday	18.12.	09:00	Youth and Robotics - Review Robot Competition RoboCupJunior (RCJ)
Monday	20.12.	09:00 10:00	Pupils from Slovenian schools get to know technical professions On-line bilateral meetings Robotics and Industry 4.0
Tuesday	21.12.	09:00 10:00 12:00	Closing Conference: Brochure presentation <b>Round Table:</b> Robotics and Industry 4.0 in the transition to a green deal and digital transformation <b>Round Table:</b> Needs of the industry and how can the decisionmakers support it?
Wednesday	22.12.	13:00	Yaskawa - robot factory presentation

From 29. November to 18. December registrations for brokerage event Industry 4.0 and Robotics will be on line on 7. and 20. December 2021

Compliance with applicable government regulations (PCT) is mandatory for any personal attendance.

**Note:** Registration for each event is separate as **on-site attendance** or **online attendance**. Registration is required.



## Industrija 4.0 in Robotika

Organizacijo priprave izvajata pod okriljem SRIP ToP programski vodji Simona Knežević Vernon - TECOS in doc. dr. Igor Kovač - Institut "Jožef Stefan". Dogodek pripravljamo v sodelovanju z MGRT, SPIRIT, DIH Slovenija ter BTC. Dvostranske sestanke v obdobju od 29. novembra do 20. decembra bo organiziral Center za prenos tehnologij in inovacij na Institutu "Jožef Stefan". Večina predavanj in delavnic razen dogodkov za otroke bo v angleškem jeziku.

Ciljna publika so srednješolci, študenti, mladi raziskovalci z ene strani, kot raziskovalne organizacije mladi podjetniki, podjetja ter ostala industrija z druge strani tako iz Slovenije kot iz Evrope. Dogodek bo hibriden. Fizično bo potekal v dvorani v BTC v Ljubljani, hkrati pa bo vse snemano in prenašano po spletu.

Na koncu bomo izdelali in izdali broščuro v angleškem jeziku.

## Opisi posameznih dogodkov

### Delavnica za otroke (27.11.2021)

Dogodek je namenjen otrokom in staršem, da z igro spoznajo robotiko in posredno tudi industrijo. V komunikativni igri pod vodstvom strokovnjakov bodo otroci dobili vpogled v tehniko s ciljem spodbujati tehnične poklice že v otroških letih. Organizator dogodka je *Razvojni center Novo mesto - Marko Rudolf*.



### Industrija 4.0 in Robotika - "Pitch" predstavitev podjetij

Dogodek Industrija 4.0 in Robotika - "pitch" predstavitev podjetij je namenjen kratkim predstavitvam podjetij (do 4 min) na področju Industrije 4.0 in Robotike v Sloveniji, ki se predstavljajo strokovni in širši skupnosti. Dogodek bo organiziral in povezoval *Institut "Jožef Stefan", Center za prenos tehnologij in inovacij - dr. Špela Stres*.



### Finančni mehanizmi za hitrejše uvajanje Industrije 4.0

Dogodek bo dal celovito predstavitev trenutnih in prihodnjih rzišpisov s strani države. Organizator dogodka je *Gospodarska Zbornica Slovenije - Andreja Hlišč*.



### Kreativna robotika in robotika v umetnosti

Dogodek bo obravnaval kreativno robotiko in robotiko v umetnosti. Organizator dogodka je *DDT Lab - dr. Maša Jazbec*.





## Sodelujoča robotika

Dogodek Collaborative robotics/Sodelujoča robotika bo nazorno z eksperimenti na samih robotih prikazal to novo družino robotov z njihovimi lastnostmi. V ta namen bodo izvedena predavanja in eksperimenti, ki bodo ponazorili sposobnosti sodelovanja s človekom in ostalimi napravami. Organizator dogodka je *Univerza v Ljubljani, Fakulteta za elektrotehniko - prof. dr. Marko Munih*.



## Industrija 4.0 in Robotika v Sloveniji

Dogodek bo povzel stanje Industrije 4.0 in robotike v Sloveniji. Organiziran bo v sodelovanju slovenskih in avstrijskih ustanov na tem področju z dodatkom B2B dogodka med slovenskimi in avstrijskimi podjetji. Dogodek organizira *Gospodarska Zbornica Slovenije - Andreja Hlišč*.



## Človeški viri in robotika - roboti so namenjeni ljudem

Dogodek bo namenjen kadrovskim izzivom v Industriji 4.0 in robotiki. Predstavljeni bodo primeri dobrih praks, poslovni vidiki, usposabljanje. Na dogodku bo sodeloval tudi EIT Manufacturing. Zaključilo se bo z okroglo mizo predstavitve poklicev na tem področju. Dogodek organizira *Gospodarska Zbornica Slovenije - Andreja Hlišč*.



## Tehnologije vodenja – tehnologije, ki omogočajo stvarjem, da delujejo

Dogodek bo podal pregled stanja prioritarnih usmeritev tehnologij vodenja za tovarne prihodnosti v Sloveniji. Poudarek bo na uporabi umetne inteligence pri vodenju in optimizaciji, digitalnih dvojčkov v tehničnih procesih, energetiki in kompleksnih sistemih, prediktivnem vzdrževanju, industrijskem internetu stvari, integriranih sistemih MES ter nekaterih specifičnih aplikacijah vodenja. Za vsako od prioritarnih področij bo podan splošni pregled področja ter predstavitev zanimivih izvedenih aplikativnih rešitev. Dogodek organizira *Kompetenčni center za sodobne tehnologije vodenja - dr. Zoran Marinšek*.



## Delavnica za otroke (4.12.2021)

Dogodek je namenjen otrokom in staršem, da z igro spoznajo robotiko in posredno tudi industrijo. V komunikativni igri pod vodstvom strokovnjakov bodo otroci dobili vpogled v tehniko s ciljem spodbujati tehnične poklice že v otroških letih. Organizator dogodka je *Mladinski tehnološko-raziskovalni center 404 - Rok Capuder*.



## Predavanje / delavnica: Pravice inteligentnih ljudi in organizacij

Strokovnjak Centra za prenos tehnologij in inovacij z Instituta „Jožef Stefan“ Matej Mrak, bo predstavil širše področje intelektualne lastnine in prenosa tehnologij in pojasnil naslednje:





- Intelktualna ali industrijska lastnina – to je sedaj vprašanje?
- Avtorska pravica ima sorodnike.
- Kdaj uporabiti patent, model, znamko?
- Enterprise Europe Network oz. kako se mednarodno povezati?
- Institut »Jožef Stefan« - možna sodelovanja.

Dogodek bo organiziral in povezoval *Institut "Jožef Stefan", Center za prenos tehnologij in inovacij - dr. Špela Stres.*



## **Dvostranski on-line sestanki Robotika in Industrija 4.0 (07.12. in 20.12.2021)**

Podjetja, raziskovalci ter drugi strokovnjaki s področja bodo imeli na 20-minutnih 1:1 sestankih možnost vnaprej izbranim sogovornikom predstaviti svoje poslovne ali tehnološke ponudbe, ekspertize in potrebe. Potrebna je predhodna prijava. Dogodek bo organiziral in povezoval *Institut "Jožef Stefan", Center za prenos tehnologij in inovacij - dr. Špela Stres.*



## **Kongres:**

### **Vloga materialov pri prehodu v zeleno, brezogljično družbo**

Govorili bomo o vlogi kovinskih materialov, razvoju novih naprednih lahkih materialov, pomenu raziskav, reciklaže in trajnosti kot potencialnih priložnosti za rast in razvoj. Dogodek organizira *SRIP Matpro - Vesna Nahtigal.*



## **Krožno gospodarstvo in industrija 4.0: zmagovalna kombinacija za ogljično nevtralnost do 2050?**

Na dogodku bomo predstavili obstoječe rešitve, ki prepletajo načela krožnega gospodarstva in tehnologije industrije 4.0, s katerimi bi potencialno lahko dosegli ogljično nevtralnost do 2050. Svoje poglede bodo soočili predstavniki industrije, raziskav in razvoja ter nevladniki.

Dogodek organizira *Štajerska Gospodarska Zbornica, SRIP – Krožno gospodarstvo - Nina Meglič*



## **Kako lahko Industrija 4.0 podpre razvoj pametnih mest**

Dogodek bo povezal pametna mesta in skupnosti z industrijo 4.0 in robotiko. Osvetlil bo izzive na omenjenem področju s katerimi se srečujejo mesta pri vključevanju v razvoj pametnih mest. Dogodek organizira *SRIP PMiS - dr. Nevenka Cukjati in Matjaž Logar.*





## Izboljšave v medicini s pomočjo robotike

Dogodek bo prikazal možnosti vpeljave novih hibridnih modalnosti in priložnosti za ponudnike zdravstvene oskrbe in industrijo. Dogodek organizira SRIP Zdravje - Medicina - dr. Alenka Rožaj Brvar.



## Predavanje / delavnica: Proces prenosa tehnologij in kaj pomeni JWP?

Strokovnjak Centra za prenos tehnologij in inovacij z Instituta „Jožef Stefan“, dr. Marijan Leban bo predstavil postopek priprave, zaščite in trženja tehnologij in pojasnil naslednje:

- Patenti in druge oblike Industrijske Lastnine,
- Pravilniki in kaj vse je treba vedeti o prevzemu službenih izumov,
- Pisarne za prenos tehnologij: Kaj sploh delajo na javnih-raziskovalnih organizacijah?,
- Kaj je to komercializacija tehnologij?,
- Kako odcepiti podjetja?,
- Kdo ali kaj je »Jožef Stefan«? Kako sodelovati z Jožefom Stefanom?
- Kaj oziroma kdo je pravzaprav JWP?,
- Kako nam JWP pomaga pri poslih?

Dogodek bo organiziral in povezoval Institut "Jožef Stefan", Center za prenos tehnologij in inovacij - dr. Špela Stres.



## Delavnica za otroke (11.12.2021)

Dogodek je namenjen otrokom in staršem, da z igro spoznajo robotiko in posredno tudi industrijo. V komunikativni igri pod vodstvom strokovnjakov bodo otroci dobili vpogled v tehniko s ciljem spodbujati tehnične poklice že v otroških letih. Organizator dogodka je Podjetniški inkubator Kočevje - Marko Stjepić.



## Robotika na Institutu "Jožef Stefan"



Dogodek bo povzel aktualne teme na področju robotike, ki se odvijajo v sklopu evropskih in domačih projektov na Institutu Jožef Stefan. Dogodek organizira Institut "Jožef Stefan", Odsek za Avtomatiko, biokibernetiko in robotiko - prof. dr. Aleš Ude.

Agenda:

- 09:00 **Otvoritev** - Doc. Dr. Igor Kovač/Simona Knežević Vernon
- 09:05 **Institut "Jožef Stefan" se predstavi** - Prof. Dr. Boštjan Zalar, Direktor
- 09:25 **Robotika na Institutu "Jožef Stefan"** - Prof. Dr. Aleš Ude, Vodja odseka
- 09:45 **Sodelujoča robotika v montažnih procesih** - Prof. Dr. Bojan Nemeč, Raziskovalni svetnik
- 10:05 **Humanoidna robotika** - Prof. Dr. Aleš Ude, Vodja odseka
- 10:25 *Premor.*
- 10:35 **Robotsko učenje** - Prof. Dr. Andrej Gams, Starejši raziskovalec
- 10:55 **Robotika v domačem okolju** - Doc. Dr. Tadej Petrič, Starejši raziskovalec
- 11:15 **Projekt ROBKNCEL: Končna kontrola v proizvodnji** - Ass. Prof. Dr. Leon Žlajpah, Raziskovalni svetnik
- 11:35 **Program GOSTOP** - Doc. Dr. Igor Kovač, Strokovno-raziskovalni svetnik
- 11:55 *Zaključek*





## Strojni vid v Industriji 4.0

Dogodek bo namenjen osvetlitvi praks in izzivov na področju strojnega vida v okviru tovarnih prihodnosti in širše. Na predavanjih in v diskusijah, ki jim bodo sledile, bodo strokovnjaki s tega področja predstavili najnovejše trende v raziskavah in razvoju ter praktične primere in dobre prakse iz industrije. Dogodek organizirajo *Univerza v Ljubljani, Fakulteta za računalništvo in informatiko - izr. prof. dr. Danijel Skočaj, Fakulteta za elektrotehniko - doc. dr. Janez Perš ter Kolektor Digital - dr. Jure Skvarč.*



## EIT Manufacturing - Naj se inovacije zgodijo v Sloveniji

Dogodek je namenjen predstavitvi EIT Manufacturing v celotnem trikotniku znanja: raziskave, izobraževanje in podjetništvo. Predstavljena bo tudi vloga Slovenije v tej elitni evropski družbi na področju proizvodnje. Dogodek organizira *EIT Manufacturing - Monika Primožič.*



## Pametna tovarna v praksi

Dogodek je namenjen uvodni kratki predstavitvi Razvojnega centra Novo mesto. V nadaljevanju bodo prikazane kompetence in izkušnje RC NM, pridobljene s postavitvijo novo odprtega Laboratorija za tovarne prihodnosti (LABTOP) ter s sodelovanjem z industrijo na področju robotike in pametne specializacije. Zadnji del dogodka bo namenjen predstavitvam dobrih praks postavljanja (segmentov) pametnih tovarn v industriji JV Slovenije. Dogodek organizira *Razvojni center Novo mesto – dr. Janez Povh.*



## Mladi in robotika - Revijalno robotsko tekmovanje RoboCupJunior (RCJ)

RoboCupJunior (RCJ) je robotsko tekmovanje, organizirano na osnovi mednarodno veljavnih pravil z namenom promocije in popularizacije robotike, inovatorstva in znanosti med mladimi na temeljih projektno zasnovanega izobraževanja. RCJ ponuja več tekmovalnih disciplin oz. izzivov, pri čemer je pri vseh osnovni poudarek na sodelovanju, reševanju problemov in doseganju zastavljenih ciljev. Organizator dogodka je *Univerza v Mariboru, Fakulteta za elektrotehniko, računalništvo in robotiko (UM FER) – izr. prof. dr. Aleš Hace.*



## Učenci slovenskih šol spoznavajo tehnične poklice

Dogodek organizira DIH Slovenija.





## Predstavitve brošure

Predstavljena bo brošura aktivnih udeležencev dogodka Industrija 4.0 in robotika. Brošuro bo predstavil *Institut "Jožef Stefan" - Jaka Jereb*.



## Okrogla miza: Robotika in industrija 4.0 v prehodu v zelene tehnologije in digitalno preobrazbo

*Okrogla miza* bo namenjena povzetku celotnega meseca, prav tako pa bo izpostavila trende na področju zelenih tehnologij in digitalne transformacije. Dogodek bo *moderiral N-ABLE - Pierre Padilla*.



## Okrogla miza: Potrebe industrije in kako jo lahko odločevalci podpirajo?

*Okrogla miza* bo namenjena izmenjavi pogledov s področja sodelovanja vseh deležnikov pri prehodu na zelene tehnologije, povečanju inovativnosti in produktivnosti, digitalni preobrazbi industrije s stališča političnih odločevalcev, izvajalcev in analitikov. Dogodek bo *moderiral N-ABLE - Pierre Padilla*.







## Industry 4.0 and Robotics

The organization of the preparation is under the auspices of SRIP FoF, program managers Simona Knežević Vernon - TECOS and Asst. Prof. Dr. Igor Kovač - Jožef Stefan Institute. We are preparing the event in cooperation with MGRT, SPIRIT, DIH Slovenia and BTC. The bilateral meetings in the period from 29 November to 18 December are organized by the Center for Technology Transfer and Innovation at the Jožef Stefan Institute. Most of the lectures and workshops, with the exception of the events for children, will be held in English.

The target audience will be high school students, undergraduate students, young researchers on one side, and research organizations, young entrepreneurs, companies and other industries from Slovenia and Europe on the other side. The event will be a hybrid. It will take place physically in the hall of BTC in Ljubljana, and at the same time everything will be recorded and broadcast online.

Finally, we will prepare and publish a brochure in English.

## Description of individual events

### **Workshop for children (27.11.2021)**

The event is aimed at children and parents to learn about robotics and indirectly the industry in a fun way. Through a communicative game led by experts, children will get an insight into technology with the aim of promoting technical careers from a young age. The organizer is *Development Centre Novo mesto - Marko Rudolf*.

### **Industry 4.0 and Robotics - Pitch presentations of Slovenian companies**

The event Industry 4.0 and Robotics - pitch presentations are intended for short presentations of companies (up to 4 minutes) in the field of Industry 4.0 and Robotics in Slovenia, presented to the professional community and a wider audience. The event is organized and coordinated by *Jožef Stefan Institute, Center for technology transfer and innovation - Dr. Špela Stres*.

### **Financial mechanisms for faster introduction of Industry 4.0**

The event provides a comprehensive presentation of current and future calls by the state. The organizer of the event is *Chamber of Commerce and Industry of Slovenia - Andreja Hlišč*.

### **Kreativ robotics and robotics in art**

The event will be oriented to creative robotics and robotics in art. The organizer is *DDT Lab - Dr. Maša Jazbec*.

### **Collaborative robotics**

The Collaborative Robotics event will demonstrate this new family of robots and their properties through experiments on the robots themselves. To this end, lectures and experiments will be conducted to illustrate the ability to collaborate with humans and other devices. The organizer of the event is *University of Ljubljana, Faculty of Electrical Engineering - Prof. Dr. Marko Munih*.

### **Industry 4.0 and Robotics in Slovenia**

The event will summarize the state of Industry 4.0 and robotics in Slovenia. It will be organized in cooperation with Slovenian and Austrian institutions in this field, complemented by a B2B event between Slovenian and Austrian companies. The event is organized by *Chamber of Commerce and Industry of Slovenia - Andreja Hlišč*.

### **Human potentials in robotics – robots are all about people**

The event will focus on HR challenges in Industry 4.0 and robotics. Examples of best practices, business aspects and training will be presented. EIT Manufacturing will also participate in the event. The event will end with a round table



presentation of careers in this field. The event is organized by *Chamber of Commerce and Industry of Slovenia - Andreja Hlišč*.

### **Control Technologies – technologies that make things work**

The event provides an overview of the key orientations of control technologies for the Factories of the Future in Slovenia. The emphasis will be on artificial intelligence for control and optimization, digital twins in technical processes, energetics in complex systems, predictive maintenance, industrial Internet of Things, integrated MES systems and some specific control applications. For each of the control technology priority areas, a general overview of the field will be highlighted and a presentation of interesting application solutions will be given. The event is organized by the *Competence Centre for Advanced Control Technologies - Dr. Zoran Marinšek*

### **Workshop for children (04.12.2021)**

The event is aimed at children and parents to learn about robotics and indirectly the industry in a fun way. Through a communicative game led by experts, children will get an insight into technology with the aim of promoting technical careers from a young age. The organizer of the event is *Mladinski tehnološko-raziskovalni center 404 - Rok Capuder*.

### **Lecture / workshop: The rights of intelligent people and organizations**

An Expert from the Center for Technology Transfer and Innovation from the Jožef Stefan Institute Matej Mrak will present different aspects of intellectual property and technology transfer and explain:

- Intellectual or industrial property - is that the question now?
- Copyright has relatives
- When to use patent, model, trademark?
- Enterprise Europe Network oz. How to connect internationally?
- Jožef Stefan Institute - possible collaborations.

The organiser of this event is *Jožef Stefan Institute, Center for Technology Transfer and Innovation - Dr. Špela Stres*.

### **Bilateral on-line meetings Robotics and Industry 4.0 (07.12. and 20.12.2021)**

Enterprises, researchers and other experts from the field will discuss their business or technological offers, expertise and needs at 1:1 20-minutes meetings. Registration required.

The organiser of this event is *Jožef Stefan Institute, Center for technology transfer and innovation - Dr. Špela Stres*.

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### **Congress:**

#### **The role of materials for green carbon-free society**

We will talk about the role of metals, the development of new advanced lightweight materials, the importance of research, recycling and sustainability as potential opportunities for future growth and development. The event is organised by *SRIP Matpro - Vesna Nahtigal*.

#### **Circular economy and Industry 4.0: winning combination for carbon neutrality by 2050**

The event will focus on the presentation of solutions, which combine circular economy principles with industry 4.0 technologies, and which can potentially enable carbon neutrality by 2050. Speakers come from industry, research sector and NGOs. The event is organized by *Chamber of Commerce and Industry of Štajerska, SRIP – Circular Economy - Nina Meglič*

#### **How can Industry 4.0 support development of Smart Cities**

The event will connect smart cities and communities with Industry 4.0 and robotics. It will highlight the challenges facing cities in developing smart cities. The event is organized by *SRIP PMIS - Dr. Nevenka Cukjati and Matjaž Logar*.

#### **Transforming Medicine with Robotics**

The event will highlight new hybrid engagement modalities and opportunities for healthcare providers and industry. The event is organized by *SRIP Health - Medicine - Dr. Alenka Rožaj Brvar*.



### **Lecture / workshop: Technology Transfer pipeline and what does JWP stand for?**

An Expert from the Center for Technology Transfer and Innovation from the Jožef Stefan Institute, dr. Marijan Leban, will present the procedures of IP preparation, protection and marketing and explain the following:

- Patents and other forms of Industrial Property,
- What you need to know about taking over business inventions,
- Technology Transfer Offices: What do they do in public research organizations?
- What is technology commercialization?
- How to Spin-off companies,
- Who or what is "Jožef Stefan"? How to work with Jožef Stefan?
- Who or what is actually JWP?
- How does JWP help us with business?

The organiser of this event is *Jožef Stefan Institute, Center for technology transfer and innovation - Dr. Špela Stres.*

### **Workshop for children (11.12.2021)**

The event is aimed at children and parents to learn about robotics and indirectly the industry in a fun way. Through a communicative game led by experts, children will get an insight into technology with the aim of promoting technical careers from a young age. The organizer of the event is *Kočevje Business Incubator - Marko Stijepič.*

### **Robotics at Jožef Stefan Institute**

The event will summarize current topics in the field of robotics taking place within European and national projects at the Jožef Stefan Institute. The event is organized by *Jožef Stefan Institute, Department of Automation, Biocybernetics and Robotics - Prof. Dr. Aleš Ude.*

### **Robotics at Jožef Stefan Institute - 14. December 2021**

- 09:00 **Opening** - Asst. Prof. Dr. Igor Kovač/Simona Knežević Vernon  
09:05 **Jožef Stefan Institute presentation** - Prof. Dr. Boštjan Zalar, Director  
09:25 **Robotics at the Jožef Stefan Institute** - Prof. Dr. Aleš Ude, Head of Department  
09:45 **Collaborative Robotics in Assembly Operations** - Prof. Dr. Bojan Nemeč, Research Councillor  
10:05 **Humanoid Robotics** - Prof. Dr. Aleš Ude, Head of Department  
10:25 *Coffee break.*  
10:35 **Robot Learning** - Prof. Dr. Andrej Gams, Senior Researcher  
10:55 **Robotics in Home Environment** - Asst. Prof. Dr. Tadej Petrič, Senior Resercher  
11:15 **Project ROBKONCEL: Final Inspection in Manufacturing** - Ass. Prof. Dr. Leon Žlajpah, Research Councillor  
11:35 **Program GOSTOP** - Asst. Prof. Dr. Igor Kovač, Professional Research Councillor  
11:55 *Closing*

### **Machine vision in Industry 4.0**

The event will highlight practices and challenges in the field of machine vision in the factories of the future and beyond. In the presentations and discussions that follow, experts in the field will share the latest trends in research and development, as well as practical examples and best practices from industry. The event organizer is *University of Ljubljana, Faculty of Computer and Information Science - Assoc. Prof. Dr. Danijel Skočaj and Faculty of Electrical Engineering - Asst. Prof. Dr. Janez Perš and Kolektor Digital - Dr. Jure Skvarč.*

### **EIT Manufacturing - Making Innovation Happen in Slovenia**

The event is dedicated to the presentation of EIT Manufacturing and its activities applied in the knowledge triangle: Innovation, Education and Business Creation. Slovenia's role in this elite European manufacturing community will also be presented. The event is organized by *EIT Manufacturing - Monika Primožič.*



### **Smart Factory in practice**

The event will offer an introductory short presentation of the Development Center Novo mesto (DCNM). This will be followed by a presentation of the skills and experience gained through the establishment of a new Laboratory for Factories of the Future (LABTOP). The innovative cooperation of DCNM with industry in the field of robotics and smart specialization will be presented. The last part of the event will be dedicated to the presentation of best practices in the establishment of (segments of) smart factories in the South-East Slovenia industry. The event is organized by *Development Centre Novo mesto – Dr. Janez Povh*.

### **Youth and Robotics - Review Robot Competition RoboCupJunior (RCJ)**

RoboCupJunior (RCJ) is a robotics competition based on international rules and organized with the aim of promoting and popularizing robotics, innovation, and science among young people through project-based education. RCJ offers several challenges, each emphasizing cooperative, problem-solving and task-achievement aspects. The organizer of the event is *University of Maribor, Faculty for Electrical Engineering and Computer Science, (UM FERl), – Assoc. Prof. Dr. Aleš Hace*

### **Pupils from Slovenian schools get to know technical professions**

The event is organised by *DIH Slovenia*.

### **Brochure presentation**

A brochure of the active participants in the event Industry 4.0 and Robotics will be presented. The brochure will be presented by *Jožef Stefan Institute - Jaka Jerab*.

### **Roundtable: Robotics and Industry 4.0 in the transition to a green deal and digital transformation**

The roundtable will summarize the entire month and highlight trends in green technologies and digital transformation. The event will be *moderated by N-ABLE - Pierre Padilla*.

### **Roundtable: Needs of the industry and how can the decisionmakers support it?**

The roundtable will focus on exchanging views on how to engage all stakeholders in the transition to green technologies, increase innovation and productivity, digital transformation of the industry from the perspective of policy makers, contractors and analysts. The event will be *moderated by N-ABLE - Pierre Padilla*.