



Press review

@COSTprogramme #COSTactions Media enquiries: karima.bensalah@cost.eu

December 2020 Highlights

Looking after plants without pesticides

Taking a positive perspective on BIRTH

The greatest scientist women are featured in a new 2021 wall calendar and 2021 Calendar of Women who made Nuclear Astrophysics

Video on the social support of the elderly during the COVID-19 pandemic

Estonian-led international network publishes first study of growing influence of social media

Identifying and fighting gender-based violence against women in times of pandemic

***Beating Cancer by 2030: Mission Impossible?* COST Connect highlighted in the RIO Journal**




COST Actions in the News

[Looking after plants without pesticides.](#)

Platinum | 1/12/2020

An innovative project applies the molecular technique of RNA interference to plants. The 'iPlanta' project of the Horizon 2020 COST programme, coordinated by Prof Bruno Mezzetti... The primary objective the iPlanta COST Action network is to reduce the use of pesticides...




[Taking a positive perspective on BIRTH](#)

Alpha Galileo | 7/12/2020   

Birth is a life-changing experience but contemporary medical approaches have too often focused on what could go wrong, resulting in an ...

works, for whom, in what circumstances". Ongoing story The ***COST Action*** was launched in 2014 and eventually brought together over 120




2021 Calendar of Women who made Nuclear Astrophysics

Alpha Galileo | 7/12/2020   

News article from COST Action ChETEC Where do the chemical elements from carbon and oxygen, to iron and lead that make up our world and ...

News article from ***COST Action*** ChETEC Where do the chemical elements from carbon and oxygen, to iron and lead that make up our world and




Connecting for smarter cities and a climate-neutral future

Alpha Galileo | 7/12/2020   

Reaching climate neutrality has been identified as key to mitigate the potentially cataclysmic effects of climate change on the planet and ...

COST Connect are a series of thematic workshops organised by the ***COST Association***, which provide an open space for researchers, policy




European Council recognises COST as a significant R&I instrument

Alpha Galileo | 7/12/2020   

The European Council called on the European Commission and Member States to reinforce COST's role as a leading networking instrument in the ...

schools and short-term mobility missions.' Director of the ***COST Association***, ***Ronald de Bruin*** said of the news "COST is a vital instrument

Estonian-led international network publishes first study of growing influence of social media

EurekAlert! | 23/12/2020   

The key conclusion of the study was not a surprise to the scientists involved: the importance of social media as a primary communication ...

. The network was founded via the European Union ***COST*** programme (***European Cooperation in Science and Technology***) and connects more than 80

Estonian-led international network publishes first study of growing influence of social media

Scienmag Science Magazine | 23/12/2020   

The key conclusion of the study was not a surprise to the scientists involved: the importance of social media as a primary communication ...

. The network was founded via the European Union **COST** programme (*European Cooperation in Science and Technology*) and connects more than 80




A legnagyobb tudós nőket mutatja be egy új 2021-es falinaptár

Magyar Nemzet | 26/12/2020   

A nukleáris asztrofizika meghatározó nőalakjait mutatja be az a 24 nyelvre lefordított 2021-es falinaptár, amelynek magyar nyelvű kiadványa ...

az is kiderül, hogy a projekt fő támogatói a **COST** (*European Cooperation in Science and Technology*), a ChETEC Action (Chemical Elements as

Női tudósokat felvonultató falinaptár készült - 24 nyelven

Infostart.hu | 27/12/2020   

A nukleáris asztrofizika meghatározó nőalakjait mutatja be.

hazai középiskolába juttatták el. A projekt fő támogatói a **COST** (*European Cooperation in Science and Technology*), a ChETEC Action (Chemical

Identifying and fighting gender-based violence against women in times of pandemic

HOLR Magazine | 30/12/2020   

against women. She is MC Member (Italy) to Women on the Move **COST Action** CA19112. She is also a member of "Protagonism and consciousness of

COST Actions in Specialised Publications

Glide-Symmetric Holey Structures Applied to Waveguide Technology: Design Considerations

Multidisciplinary Digital Publishing Institute | 1/12/2020   

Recently, there has been an increased interest in exploring periodic structures with higher symmetry due to various possibilities of ...

-C21 and TEC2016-79700-C2-R, and by the European **COST Action** CA18223-SYMAT. Acknowledgments The authors would like to thank Oscar Quevedo-

[A Parametric Study of Wind Pressure Distribution on Façades Using Computational Fluid Dynamics](#)

Multidisciplinary Digital Publishing Institute | 2/12/2020   

This paper uses Computational Fluid Dynamics (CFD) to determine wind pressures on façades for the purpose of efficient design of ...

the CFD Simulation of Flows in the Urban Environment: **COST Action** 732 Quality Assurance and Improvement of Microscale Meteorological Models;




[Multimodal Machine Learning Workflows for Prediction of Psychosis in Patients With Clinical High-Risk Syndromes and Recent-Onset Depression](#)

The JAMA Network | 2/12/2020   

Key Points Question Can a transition to psychosis be predicted in patients with clinical high-risk states or recent-onset depression ...

BMBF) within the e:Med programme (Dr Degenhardt), **COST Action** EnGagE CA17130 from the EU **COST Programme** (Dr Degenhardt), and the Else-Kröner




[Multi-tree cut-to-length harvesting of short-rotation poplar plantations](#)

Springer | 2/12/2020   

Abstract Small tree size represents the main challenge when designing a cost-effective harvesting system for European short-rotation ...

rates were estimated with the Harmonized European Costing Model developed within EU **COST Action** FP0902 (Ackermann et al. 2014). Costing




[GliMR: Cross-Border Collaborations to Promote Advanced MRI Biomarkers for Glioma](#)

Springer | 3/12/2020   

Abstract Purpose There is an annual incidence of 50,000 glioma cases in Europe. The optimal treatment strategy is highly personalised, ...

INTER-**COST** of the Ministry of Education, Youth and Sports CR, Grant No. LTC20027. Funding This publication is part of the **COST Action**


[An ionizable supramolecular dendrimer nanosystem for effective siRNA delivery with a favorable safety profile](#)

Springer | 3/12/2020   

Abstract Gene therapy using small interfering RNA (siRNA) is emerging as a novel therapeutic approach to treat various diseases. However, ...

COST Action CA 17140 “Cancer Nanomedicine from the Bench to the Bedside” supported by ***COST (European Cooperation in Science and Technology)***.

Open questions in functional molecular topology

Nature | 4/12/2020   

Molecular knots are evolving from academic curiosities to a practically useful class of mechanically interlocked molecules, capable of ...

Postdoctoral Fellowship, EC 746993) and networking contributions from the ***COST Action*** CA17139, EUTOPIA, are gratefully acknowledged. Author




Synthesis and use of an amphiphilic dendrimer for siRNA delivery into primary immune cells

Nature | 4/12/2020   

Delivery of siRNAs to immune cells is challenging because of these cells’ sensitivity to standard transfection reagents. This protocol ...

COST Action CA 17140 ‘Cancer Nanomedicine from the Bench to the Bedside’, supported by ***COST (European Cooperation in Science and Technology)***




The role of lignin in wood working processes using elevated temperatures: an abbreviated literature survey

Springer | 4/12/2020   

Abstract The lignin, cellulose and hemicelluloses in wood are polymers that behave similarly to the artificial polymers and are bonded ...

in wood machining—basics and applications in industrial processes. A review ***COST Action*** E35 2004–2008: Wood machining—micromechanics and

The generally covariant meaning of space distances

Springer | 5/12/2020   

Abstract We propose a covariant and geometric framework to introduce space distances as they are used by astronomers. In particular, we ...

is based upon work from ***COST Action*** (CA15117 CANTATA), supported by ***COST (European Cooperation in Science and Technology)***. We acknowledge

Robust quantum point contact operation of narrow graphene constrictions patterned by AFM cleavage lithography

Nature | 7/12/2020   

Abstract Detecting conductance quantization in graphene nanostructures turned out more challenging than expected. The observation of well- ...

SuperTop project 127900, by AndQC FetOpen project, by NanocoHybri **COST Action** CA16218 and by TopoGraph Flag ERA project. Author information




Genotoxic Effects of Cylindrospermopsin, Microcystin-LR and Their Binary Mixture in Human Hepatocellular Carcinoma (HepG2) Cell Line

Multidisciplinary Digital Publishing Institute | 8/12/2020   

Simultaneous occurrence of cylindrospermopsin (CYN) and microcystin-LR (MCLR) has been reported in the aquatic environment and thus human ...

grant to Klara Hercog, PhD grant to Martina Stampar], **COST Action** ES1105 (Cyanobacterial blooms and toxins in water resources: Occurrence,

Top condensation model: a step towards the correct prediction of the Higgs mass

Springer | 8/12/2020   

Abstract A realization of the composite Higgs scenario in the context of the effective model with the $SU(2)_L \times U(1)_R$ symmetric four- ...

CNPq. We would like acknowledge networking support by the **COST Action** CA16201. Author information Affiliations Bogoliubov Laboratory of

Eregalerij 2020: deze studenten en medewerkers vielen in de prijzen

De Universiteit Leiden | 8/12/2020   

Veel studenten en de medewerkers van de Faculteit der Rechtsgeleerdheid wonnen het afgelopen kalenderjaar een prijs, werden genomineerd, ...

de Gold Medal in III 2020 Prize in International Insolvency Studies **COST Action** subsidie voor Bart Custers Tarlach McGonagle ontvangt

NURR1 Alterations in Perinatal Stress: A First Step towards Late-Onset Diseases? A Narrative Review

Multidisciplinary Digital Publishing Institute | 9/12/2020   

biomedicines Review NURR1 Alterations in Perinatal Stress: A First Step towards Late-Onset Diseases? A Narrative Review Laura Bordoni 1 , ...

. Funding: The publication of this manuscript was funded by **COST Action** CA18211:DEVotion:Perinatal Mental Health and Birth-Related Trauma:

A Pilot Study Combining Ultrafiltration with Ozonation for the Treatment of Secondary Urban Wastewater: Organic Micropollutants, Microbial Load and Biological Effects

Multidisciplinary Digital Publishing Institute | 9/12/2020   

Ozonation followed by ultrafiltration (O3 + UF) was employed at pilot scale for the treatment of secondary urban wastewater, envisaging its ...

Quality and Irrigation Management on Organic Greenhouse Horticulture; BioGreenhouse **COST Action** FA1105: Bleiswijk, Netherlands, 2020; ISBN

Looking Back at the Early Stages of Redox Biology

Multidisciplinary Digital Publishing Institute | 9/12/2020   

The beginnings of redox biology are recalled with special emphasis on formation, metabolism and function of reactive oxygen and nitrogen ...

to the study of ROS: A summary of the findings and prospects for the future from the **COST Action** BM1203 (EU-Ros). Redox Biol. 2017, 13, 94–

Beating Cancer by 2030: Mission Impossible?

Research Ideas and Outcomes (RIO) | 10/12/2020   

Cancer has been for many years the second leading cause of mortality right after cardiovascular diseases, representing 25% of all the deaths reported yearly and this tendency is expected to increase. The aim of this paper is to share the outcomes of the workshop organized by the COST (European Cooperation

Dynamics of Volatile Compounds in Triticale Bread with Sourdough: From Flour to Bread

Multidisciplinary Digital Publishing Institute | 10/12/2020   

Triticale has been suggested for human consumption due to its valuable nutritional composition. The aim of this study was to evaluate ...

received no external funding. Acknowledgments The authors are grateful to the **COST Action** Project SOURDOMICS, CA 1801 for the support in the

Selective hepatitis B and D virus entry inhibitors from the group of pentacyclic lupane-type betulin-derived triterpenoids

Scientific Reports | 10/12/2020   

Abstract Current treatment options against hepatitis B and D virus (HBV/HDV) infections have only limited curative effects. Identification ...

of Natural Resources in Finland, Marjatta ja Eino Kollin Säätiö, and the **COST Action** CM-0801 (New drugs for neglected diseases). Funding

Eduard Fosch-Villaronga becomes Assistant Professor at eLaw

Leiden University | 10/12/2020   

eLaw - Center for Law and Digital Technologies, has promoted Dr. Eduard Fosch-Villaronga to Assistant Professor to work on Law and ...

Ethical, Legal and Societal Aspects for Wearable Robots at the H2020 **COST Action** CA16116 and an MC Member of the H2020 Cost Action CA19121

Higgs–Chern–Simons Gravity Models in $d = 2n + 1$ Dimensions

Multidisciplinary Digital Publishing Institute | 12/12/2020   

We consider a family of new Higgs–Chern–Simons (HCS) gravity models in $2n+1$ dimensions ($n=1,2,3$). This provides a ...

. The authors would like to acknowledge networking support by the **COST Action** CA16104. Acknowledgments We are grateful to Ruben Manvelyan

Abrupt warming and salinification of intermediate waters interplays with decline of deep convection in the Northwestern Mediterranean Sea

Scientific Reports | 1/12/2020   

Abstract The Mediterranean Sea is a hotspot for climate change, and recent studies have reported its intense warming and salinification. In ...

Agreement No. 287600), FP7 JERICO (Grant Agreement No. 262584) and the **COST Action** ES0904 “EGO” (Everyone’s Gliding Observatories). L. H. is

Erratum: Aluwé, M. et al. Exploratory Survey on European Consumer and Stakeholder Attitudes towards Alternatives for Surgical Castration of Piglets. Animals 2020, 10, 1758

Multidisciplinary Digital Publishing Institute | 14/12/2020   

The authors wish to make the following corrections to this paper [...]

was funded by **COST Action** “Innovative approaches in pork production with entire males”-IPEMA (CA 15215), supported by **COST** (European




Are There Epigenetic Oxytocin-Mediated Effects on the Mother and Infant during Physiological Childbirth?

Multidisciplinary Digital Publishing Institute | 14/12/2020   

Introduction: Studies have shown that long-term positive behavioural and physiological changes are induced in connection with vaginal, ...

the manuscript. Funding The publication of this manuscript was funded by **COST Action** CA18211: DEVoTION: Perinatal Mental Health and Birth-




Layered Laminated Glass Elements with High Load-Bearing Capacities

Glass on Web | 14/12/2020   

Glass elements with static properties are not possible without laminated glass. The desire of designers and planners for greater ...

E.H.J.: Glass columns. In: Challenging Glass 4 & **COST Action** TU0905 Final Conference, Lausanne, London: Taylor & Francis Group, 2014. [2]

A molecular endless (74) knot

Nature | 14/12/2020   

A combination of metal- and anion-template synthesis directs the weaving of molecular weft and warp strands in the assembly of a 3×3 ...

synchrotron beam time on I19 (XR029); networking contributions from the **COST Action** CA17139, EUTOPIA and Alberto Valero for the video of the


A Prediction-Based Model for Consistent Adaptive Routing in Back-Bone Networks at Extreme Situations

Multidisciplinary Digital Publishing Institute | 15/12/2020   

To reduce congestion, numerous routing solutions have been proposed for backbone networks, but how to select paths that stay consistently ...

/1, and EP/P004024/1; by the **European Cooperation in Science and Technology (COST)** Action CA 15127: RECODIS—Resilient communication and

Západočeská univerzita má tři nové profesory

<https://zcu.cz/> | 17/12/2020   

prof. Ing. Milan Honner, Ph.D. Byl jmenován profesorem na návrh Vědecké rady Západočeské univerzity v Plzni (ZČU), a to pro obor Strojní ...

2014–2018 byl členem managementu a vedoucí výboru a pracovní skupiny **COST Action** MP1306 EUSpec a od roku 2015 je mimořádným členem Centra




Západočeská univerzita má tři nové profesory

Tachovský deník | 18/12/2020   

Milan Honner a Ján Minár z institutu Nové technologie-výzkumné centrum (NTC) a Martin Kopecký z Fakulty právnické Západočeské univerzity v ...

2014–2018 byl členem managementu a vedoucí výboru a pracovní skupiny **COST Action** MP1306 EUSpec a od roku 2015 je mimořádným členem Centra

Prospects for new physics from gauge left-right-colour-family grand unification hypothesis

Springer | 17/12/2020   

Abstract Given the tremendous phenomenological success of the Standard Model (SM) framework, it becomes increasingly important to ...

work of A.P.M. has been performed in the framework of **COST Action** CA16201 “Unraveling new physics at the LHC through the precision frontier”

Adiposity, metabolites, and colorectal cancer risk: Mendelian randomization study

BMC Medicine | 17/12/2020   

Abstract Background Higher adiposity increases the risk of colorectal cancer (CRC), but whether this relationship varies by anatomical sub- ...

de Catalunya), CERCA Programme (Generalitat de Catalunya), and **COST Action** BM1206 and CA17118. CIBERehd is funded by the Instituto de Salud

Air Pollution Prediction with Multi-Modal Data and Deep Neural Networks

Multidisciplinary Digital Publishing Institute | 18/12/2020   

Air pollution is becoming a rising and serious environmental problem, especially in urban areas affected by an increasing migration rate. ...

upon work from **COST Action** IC1303—AAPELE—Architectures, Algorithms and Protocols for Enhanced Living Environments and **COST Action** CA16226—

Value of information of combinations of proof loading and pore pressure monitoring for flood defences

Taylor & Francis Online | 18/12/2020   

Abstract Formulae display: Mathematical formulae have been encoded as MathML and are displayed in this HTML version using MathJax in order ...

structural health information for decision support: Guide for practising engineers. In **COST Action** TU1402. [Google Scholar] Eijgenraam, C. ,

Leaf proteome modulation and cytological features of seagrass *Cymodocea nodosa* in response to long-term high CO₂ exposure in volcanic vents

Scientific Reports | 18/12/2020   

Abstract Seagrass *Cymodocea nodosa* was sampled off the Vulcano island, in the vicinity of a submarine volcanic vent. Leaf samples were ...

data analysis, AP was supported by a STSM fellowship within the ESF **COST Action** “Seagrass Productivity: from genes to ecosystem management”,




Comparison of Pyrolysis Liquids from Continuous and Batch Biochar Production—Influence of Feedstock Evidenced by FTICR MS

Multidisciplinary Digital Publishing Institute | 22/12/2020   

Bio-oils from biomass pyrolysis can be a resource for upgrading to chemicals or fuels. Here, for the first time, we compare the composition ...

was funded by European **COST Action** 1306 “Lignoal”. Acknowledgments The authors would like to thank the European **COST Action** 1306 “Lignoal”

Water Vapor Retrievals from Near-infrared Channels of the Advanced Medium Resolution Spectral Imager Instrument onboard the Fengyun-3D Satellite

Springer | 22/12/2020   

Abstract Water vapor plays a key role in weather, climate and environmental research on local and global scales. Knowledge about ...

operational numerical weather prediction and climate applications. Final Report, **COST Action** 716 EUR 21639 edition, COST Office, Luxembourg.

IOCBIO Kinetics: An open-source software solution for analysis of data traces

PLOS Computational Biology | 22/12/2020   

Abstract Biological measurements frequently involve measuring parameters as a function of time, space, or frequency. Later, during the ...

the software were supported by **COST Action** 5203 (MitoEAGLE), supported by **COST (European Cooperation in Science and Technology)**, <https://www.>

Residual Effects Caused by a Past Mycovirus Infection in *Fusarium circinatum*

Multidisciplinary Digital Publishing Institute | 24/12/2020   

Mycoviruses are known to be difficult to cure in fungi but their spontaneous loss occurs commonly. The unexpected disappearance of ...

circinata in greenhouses and forests) supported by **COST (European Cooperation in Science and Technology)** and project AGL2015-69370-R funded




Estonian-led international network publishes first study of growing influence of social media

Health Medicine Network | 25/12/2020   

The key conclusion of the study was not a surprise to the scientists involved: the importance of social media as a primary communication ...

. The network was founded via the European Union **COST** programme (**European Cooperation in Science and Technology**) and connects more than 80

Statistical methods and models based on quality of experience distributions

Springer | 26/12/2020   

Abstract Due to biased assumptions on the underlying ordinal rating scale in subjective Quality of Experience (QoE) studies, Mean Opinion ...

. European Network on Quality of Experience in Multimedia Systems and Services (**COST Action** IC 1003), Lausanne, Switzerland, Tech. Rep.,

Alcoholic and Non-Alcoholic Beer Modulate Plasma and Macrophage microRNAs Differently in a Pilot Intervention in Humans with Cardiovascular Risk

Multidisciplinary Digital Publishing Institute | 28/12/2020   

Beer is a popular beverage and some beneficial effects have been attributed to its moderate consumption. We carried out a pilot study to ...

of plant food bioactives and determinants involved” supported by **COST (European Cooperation in Science and Technology)**, <http://www.cost.eu/>.




Influence of Atomic Doping on Thermal Stability of Ferrite Nanoparticles—Structural and Magnetic Studies

Multidisciplinary Digital Publishing Institute | 29/12/2020   

In this paper, a series of experiments are reported where ferrite nanoparticles were synthesized with different substitution percentages (5 ...

article is based upon work from **COST Action** RADIOMAG (TD1402), supported by **COST (European Cooperation in Science and Technology)**. The SQUID

[The effect of tree age, daily sap volume and date of sap collection on the content of minerals and heavy metals in silver birch \(*Betula pendula* Roth\) tree sap](#)

Plos One | 29/12/2020   

Abstract The aim of this study was to determine the effect of the age of trees, daily sap volume as well as the term of tapping birch sap ...

Niskanen A. Forest sector entrepreneurship in Europe—summary of country studies of ***COST Action*** E30. Acta Silv Lign Hung. 2005;Special Ed:7—

[Investigation of Pre-Earthquake Ionospheric and Atmospheric Disturbances for Three Large Earthquakes in Mexico](#)

Multidisciplinary Digital Publishing Institute | 30/12/2020   

The purpose of the present study is to investigate simultaneously pre-earthquake ionospheric and atmospheric disturbances by the ...

/assimilation/. Acknowledgments This paper is based upon work from ***COST Action*** “Atmospheric Electricity Network: coupling with the Earth

[Effect of Panel Moisture Content on Internal Bond Strength and Thickness Swelling of Medium Density Fiberboard](#)

Multidisciplinary Digital Publishing Institute | 30/12/2020   

Wood-based products usually have serious limitations concerning contact with water, both because wood is a hygroscopic material and because ...

component on the bonding process and the properties of wood products. In ***COST Action*** E13-Wood Adhesion and Glued Products. State of the Art—

[Optimized Design of OTA-Based Gyrator Realizing Fractional-Order Inductance Simulator: A Comprehensive Analysis](#)




Multidisciplinary Digital Publishing Institute | 30/12/2020   

A detailed analysis of an operational transconductance amplifier based gyrator implementing a fractional-order inductance simulator is ...

is based upon work from ***COST Action*** CA15225, a network supported by ***COST (European Cooperation in Science and Technology)***. Conflicts of

COST Actions in the blogs

Call for Papers (Special Issue in Sustainability journal) based on the Abstracts of the Cancelled International Conference on Public Value

puvaca.eu | 1/12/2020   

Vademecum 10.4.8, the authors must be participants of the ***COST Action*** coming from at least three different countries (COST Full Members/COST

10th Anniversary Volume 11: Updates on the ClimEx Handbook

methodsblog.com | 17/12/2020   

change ecology using experimental and modeling approaches. At a ClimMani ***COST Action*** Network meeting in Copenhagen in 2015, the problems

Estonian-led international network publishes first study of growing influence of social media

www.vectorsjournal.org | 26/12/2020   

. The network was founded via the European Union ***COST*** programme (***European Cooperation in Science and Technology***) and connects more than 80

Impact story: Creating opportunities for inclusive game creation

coe-gamecult.org | 15/12/2020   

engaged in international collaboration through a European research network, ***COST Action*** INDCOR (Interactive Narrative Design for Complexity
