Title of paper for IPIC 2021 Conference

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*Here are some rules and guidelines for submitting your paper for the IPIC 2019 conference. This document could be used as an application of those rules. The paper needs to include the conference topics. The maximum length of the paper is 10 pages.*

Abstract: *The paper should include an abstract with 100 – 200 words italicized in font size 12pt.*

***Conference Topic(s):*** *Select the conference topic(s) addressed by your paper. Conference topic are found in the call for contributions document. Please include the topic(s) that are mainly addressed by the article.*

Keywords: *The paper should also include 3 to 10 keywords, size 12, in italic. You may select those more representatives in the Annex*

# Introduction

Papers must be written in English and should be limited to 10 pages long (single column). In order to achieve rapid conference proceedings publication, the texts will be registered directly from authors’ version. The authors are therefore fully responsible for the quality of their article, including illustrations. Authors are strongly advised to have their final draft read by at least two other persons (fluent in English) before sending the submitted final version.

The final version of the paper should be submitted via EasyChair conference website: <https://easychair.org/conferences/?conf=ipic2021>**.** Please see <https://www.pi.events/IPIC2021/call-for-contributions> for abstract and submissions deadlines.

# Printing format

Papers must be typed with single spacing on A4 paper. Use of the "Times New Roman" typeface, size 12, is required. Do not indent when starting a new paragraph. Leave 6 point spacing before paragraphs, 12 points before the keywords and also main sections, and 18 points before the abstract and the first introductory section. Margins must be mirrored, along the inside 3 cm, outside, top and bottom 2 cm.

# Paper layout

## Beginning of the paper

The following items should appear at the beginning of the paper:

* Title of the paper: size 16, bold face, centered;
* Names of authors: size 12, centered;
* Addresses of authors, followed by the corresponding author’s email address: size 12;
* Abstract of 100 to 200 words (size 12, italic) preceded by "Abstract:" (size 12, bold);
* Three to ten keywords (size 12, italic) preceded by "Keywords:" (size 12, bold).

# Structure of the paper

Authors are requested to restrict the use of headings to three levels where possible. The headings should be presented as given below and as shown on this document. Main headings should be typed using size 14 and bold; left justified; with 12-point space above and none below. They should be numbered using Arabic numerals.

## Subheadings

Second level headings should be typed using size 12 and bold; left justified; with a 12-point space above and none below. They should be numbered using Arabic numerals where the first digit corresponds to the first heading’s number followed by a period and the number of the second level heading. For example, subheadings of heading ‘’1.’’ would be 1.1, 1.2, etc.

### Sub-sub-headings

Sub-sub-headings, third level, should be typed using size 12, bold and italics; left justified; with a 6-point space above and none below; with no numerals, as shown in this text.

# Footnotes

Footnotes should be avoided as much as possible. Necessary footnotes should be denoted in the text by consecutive numbers. The footnotes should be typed single spaced, and in size 8, at the foot of the page on which they are mentioned, and separated from the main text by a line extending halfway across the page. Leave a two-line space above the footnote line.

# Objects

Here are some guidelines on the formatting of objects such as equations, Figures and Tables.

### **Equations**

Simple expressions should be left in the text. Larger equations should appear apart from the text, with the corresponding reference number right aligned, as in equation (1).

(1)

In the case of a mathematical model, the layout should be unified, such as in the next example (equations (2) – (3)):

(2)

(3)

A 12-point spacing should be added before and after sets of equations.

### Figures

Illustrations should be as close as possible to their first reference. Care should be taken to ensure that they are still of an adequate size to be readable after reduction to the final page size. References to figures should appear in the text using the full word figure and no abbreviation is allowed. Figure 1 sourced from Montreuil (2013) gives an example of how to introduce a figure in the paper. Figure caption should be below the figure, in italics, size 11.

Please check if the illustrations you will use have a resolution of 300 dpi.



Figure 1: Illustrating Interconnected Transportation of a Multi-Destination Shipment

### Tables

Tables should be centered and should be referenced using the full word table, as illustrated in Table 1, sourced from Sarraj et al. (2013). Table caption should be above the table, in size 11, italicized.

Table 1: This is an example of a table

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario Family | ScenarioId. | ContainerSet | Route Criterion | Mean Weight Loading | MeanHubs/Route | Mean Lead Time (h) | CO2 (t) | Logistics cost (k€) |
| 0 | NA | NA | NA | 59% | 0 | 5.86 | 52 742 | 81 976 |
| 1 | 1.3.C | 3 | Cost | 76% | 2.25 | 8.89 | 45 599 | 68 429 |
| 1 | 1.3.T | 3 | Time | 75% | 1.93 | 8.69 | 46 682 | 68 861 |
| 2 | 2.3.C | 3 | Cost | 72% | 2.28 | 8.73 | 29 878 | 62 275 |
| 2 | 2.3.T | 3 | Time | 70% | 1.66 | 8.45 | 33 035 | 64 591 |
| 2 | 2.3.E | 3 | CO2 | 72% | 2.94 | 9.88 | 23 600 | 65 720 |
| 3 | 3.3.E | 3 | CO2 | 67% | 2.95 | 11.84 | 22 120 | 57 724 |
| 3 | 3.3.C | 3 | Cost | 65% | 2.30 | 10.69 | 27 584 | 56 057 |

# References

In the text, the surname of the author and the year of publication of the reference are given. Two or more references by the same authors published in the same year are differentiated by letters a, b, c etc. For references with more than two authors, text citations should be shortened to the first author’s name followed by ‘et al.’. In textual citations, only the year of publication appears in parenthesis while in parenthetical citations both the author’s name and the year of publication are between brackets.

Here is an example of textual citations: Meller et al. (2012) discovered that ..., and Montreuil (2011) introduced ...

Here is an example of parenthetical citations: Recent results (Ballot and Fontane, 2008; Meller et al., 2012; Sarraj et al., 2011) provide evidence that...

References should be listed in alphabetical order at the end of the paper as shown in the example at the end of this document. References of the same author(s) should appear in chronological order.

# Conclusion

Full responsibility for the paper rests with the authors. They must have taken the necessary steps to obtain permission for using any material that might be protected by copyright. The Conference Organization shall not undertake corrections to the paper and has the right to omit your paper from the Proceedings if it does not conform to the instructions.

Overall, the authors are invited to provide the best quality paper possible, contributing to Physical Internet research, innovation and deployment.

**References**

* Ballot E., F. Fontane (2008): *Rendement et efficience du transport: un nouvel indicateur de performance*. Revue Française de Gestion Industrielle, v27, no2, 41-55.
* Kurose J., K. Ross, A. Wesley (2009): Computer Networking: A Top Down Approach Featuring the Internet, 5th edition, Addison-Wesley, U.S.A., March 2009.
* Meller R.D., K.P. Ellis, B. Loftis (2012): From Horizontal Collaboration to the Physical Internet: Quantifying the Effects on Sustainability and Profits When Shifting to Interconnected Logistics Systems, Final Research Report of the CELDi Physical Internet Project, Phase I, <http://faculty.ineg.uark.edu/rmeller/web/CELDi-PI/Final%20Report%20for%20Phase%20I.pdf>, 2014/02/20.
* Montreuil B. (2011): Towards a Physical Internet: Meeting the Global Logistics Sustainability Grand Challenge, Logistics Research, v3, no2-3, 71-87.
* Montreuil B. (2013): Physical Internet Manifesto, v1.10, (Original v1.0, 2009), [www.physicalinternetinitiative.org](http://www.physicalinternetinitiative.org), 2014/02/20.

**Annex 1. List of recommended Keywords,** you may include yours if you do not find good ones in this list

|  |
| --- |
| 3D Printing |
| 5G |
| 5G networks |
| ad-hoc Collaborative Logistics |
| Agent-based modelling |
| Air cargo transport chain |
| Airport |
| Artificial Intelligence |
| Augmented Reality |
| Automated Negotiation |
| Automated transhipment |
| Automated Vessels |
| Automation |
| Autonomous Logistics Operations |
| Autonomous transport |
| Autonomous transport boxes |
| Backhauling |
| behavioural analysis |
| Big Data |
| Bill of Lading |
| Blockchain |
| boxes |
| BPaaS |
| bulky goods |
| Bundling |
| Business model |
| Capacity management |
| Cargo handling |
| Case study |
| CCAM-Connected, Cooperative and Autonomous Mobility |
| Centralization or Decentralization organization |
| Choreography |
| Circular Economy |
| C-ITS |
| City logistics |
| Climate Neutral and Smart Cities |
| Climate Resilient Networks |
| Cloud Computing |
| Cloud Logistics |
| Cognitive Logistics |
| Collaboration |
| Collaborative Platforms |
| Collective Intelligence |
| Co-loading |
| Coloured Petri nets |
| Commodities |
| Comodality |
| Consignment note |
| Consolidation |
| Consolidation centers |
| Container |
| Container Logistics |
| Container terminal management |
| Coordination |
| Corridors Hubs and Synchromodality |
| Couriers |
| COVID-19 |
| Cross Border |
| Cross-chain collaboration |
| Cross-Docking |
| Crowdshipping |
| Crowdsourcing |
| Customs |
| Customs Cross Border Interoperability |
| cyber security |
| Data |
| Data Analytics |
| Data Formats |
| Data Ownership |
| Data Sharing |
| Data Sovereignty |
| Decarbonization |
| Decision Support System |
| Decission Making |
| Delivery |
| Delivery networks |
| Delivery Robots |
| Dematerialization |
| Digital Business Platform |
| Digital Twins |
| Digitalization |
| Distributed ledger |
| Distribution Center Optimization |
| Distribution process |
| Digital Transport and Logistics Forum |
| Dynamic Appointment Scheduling |
| Dynamic pricing |
| e-cmr |
| e-Commerce |
| eCustoms |
| Emission calculation |
| Emission factors |
| Emissions reduction |
| Empty trips |
| End-to-End Optimization |
| Equipment |
| Estimated Time of Arrival |
| e-trucks |
| Farm to Fork |
| Feeder vessel |
| Finance |
| Finished vehicles logistics |
| Flexibility |
| FMCG |
| Freight Forwarder |
| Freight transportation planning |
| FTL – Full Truck Loads |
| Fuels |
| Gain sharing |
| Gamification |
| General Cargo |
| Geo-fence |
| GIS |
| Governance |
| GPS |
| Green Deal |
| Green House Gas emissions |
| GS1 standards |
| GSM |
| H2020 Projects |
| Handling |
| Handling systems |
| Home delivery |
| Horizontal Collaboration |
| Hyperconnected City Logistics |
| Hyperconnected Distribution |
| Hyperconnected Logistics |
| Hyperconnected Systems |
| Innovative web platforms |
| Intermodal |
| Intermodal and Synchromodal Transport |
| internalization |
| Internet of Things |
| ITS |
| Land use |
| Large-Scale Hub Location Problem |
| Last mile |
| LTL (Less tan Truck Load) |
| Load carriers |
| Load factor |
| Load optimization |
| Load Units |
| Location specification |
| Logistics |
| Logistics Clusters |
| Logistics Networks |
| Logistics Nodes |
| Logistics Space Time Network |
| LSPs – (Logistics Service Providers) |
| M2M |
| Marketplace |
| Matchmaking platform |
| Metadata |
| Microzone |
| Mixed-integer linear programming |
| Modular Production |
| Modular systems |
| Modular Units |
| Modularization |
| Montecarlo |
| Multi-agent simulation |
| Multimodal hubs |
| Multimodal network |
| Multimodality |
| Multi-objective optimisation |
| Multiple modes |
| Nearshoring |
| Network-Model |
| Omnichannel Supply Chains |
| On-demand |
| Ontology |
| Ontology alignment |
| Open Networks |
| Open-source |
| Open-source standards |
| Optimization |
| Optimization; Mixed Integer Programming |
| Packaging |
| Pallets |
| Parcel |
| Parcel Distribution |
| Parcel Lockers |
| Parking spaces |
| Partnership creation |
| Party Specification |
| Physical Internet |
| Physical location identification |
| PI Access and Adoption |
| PI business models |
| PI containers |
| PI Governance |
| Platform |
| Platooning |
| Pooling |
| Port |
| Port Management |
| Port of the future |
| ports |
| Practical experiments |
| Price of Anarchy |
| Privacy |
| Procurement |
| Product availability |
| Purchase Order |
| Railway |
| Real time |
| Real time data |
| Reduction of food waste |
| Resilience |
| Resources |
| Retail |
| RFID |
| Road Transport |
| Road transport market |
| Roadmap |
| Robotic cargo handling |
| Robotics |
| Robustness |
| Routing |
| RPA (Robotic Process Automation) |
| SC Finance |
| Security |
| Self-organizating Logistics (SOL) |
| Semantic technology |
| Service-Orientation |
| Shared logistics |
| Shared Vissibility |
| Shared Warehouses |
| Sharing assets |
| Sharing economy |
| Shipment specification |
| Shippers |
| Short Sea Shipping |
| Showcasing |
| Simulation |
| Situation awareness |
| Slot booking |
| Smart Containers |
| Smart Contracts |
| Smart Devices |
| Social capital |
| Social Internet of Things |
| Software Defined Networks |
| Sovereignity |
| Space Time Network |
| Space-time graphs |
| Standards |
| Stated preference |
| Stochastic transit times |
| Supply Chain |
| Supply Chain Management |
| Supply Chain Optimization |
| Supply Chain Visibility |
| Supply Network Coordination and Collaboration |
| Sustainability |
| Sustainable Logistics Supply Chains |
| Sustainable mobility |
| Sustainable Transport |
| Synchromodality |
| System of Logistics Networks |
| System Optimal Solution |
| Systems and Technologies for Interconnected Log. |
| Systems Integration |
| TEN-T Network |
| Terms-of-Use |
| Territory |
| Trace |
| Tracing vehicles |
| Track and Trace |
| Tracking |
| Tracking Documentation |
| Trade Identity |
| Transhipment |
| Transport chains |
| Transport System |
| Transportation Management |
| Transshipment |
| Truck Load Optimization |
| Truck platooning |
| Trucks |
| Trust |
| Trust between competitors |
| Trustees |
| Urban Logistics |
| Urban Mobility |
| User Equilibrium |
| Value chains |
| Value Networks |
| Variable reductions techniques |
| VGM verification |
| Virtual Reality |
| Virtualization |
| Visibility |
| Warehouse Optimization |
| Warehousing |
| White-label deliveries |
| Work Programme |
| Zero emissions |
| Zero Emissions Zones |