Prof. Alexandre Dolgui

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IMT Atlantique is in Top 10 of French « Grandes Ecoles » (a sort of Technological Universities), ranked 5th in France by « L'Usine Nouvelle », belons to IMT – National Institute of Science and Technology

IMT is composed of:

12 schools of engineering (Techn. Univ.)

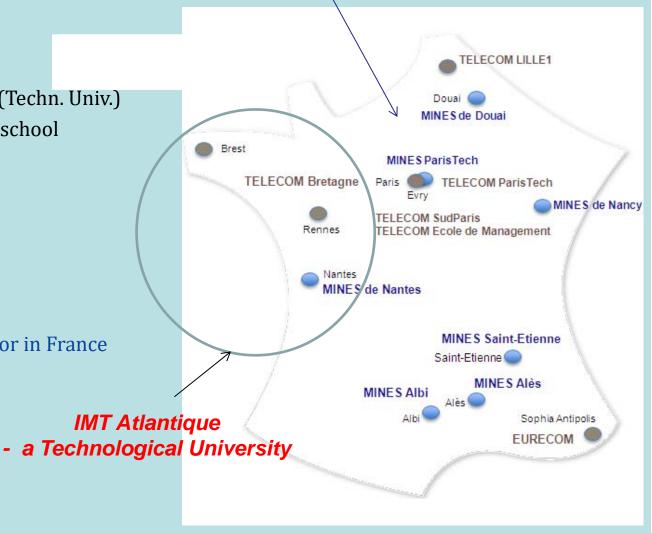
1 business and economics school

■ **1,450** faculty members

■ **13,000** students

4,300 graduates per year

- **60,000** alumni
- 34% foreign students
- 60 nationalities
- Largest enterprise incubator in France



Department DAPI of IMT Atlantique, campus in Nantes

Automation, Production and Computer Sciences (110 persons including 44 Faculty Members):

- Robotics and automatic control
- Logistics and production systems
- Constraint programming and decision making
- Object oriented systems, language and aspects

Annual amount of industrial contracts: 2 M Euros

My personal research topics

- Combinatorial Design of Production and Assembly Lines

Machining lines design and reconfiguration

Assembly line balancing and sequencing

Buffer allocation in production lines

- Scheduling and Discrete Optimization
Flow-shop scheduling
Joint lot-sizing and scheduling
Scheduling and lot-sizing under uncertainties

- Global Supply Chain Optimization under Uncertainties

Sales forecasting, inventory control and pricing

Replenishments, production planning and lot sizing

MRP parameterization for assembly systems

Adaptive supply chain planning and scheduling

Disruptions management in supply chains

Book in French

A. Dolgui, J.M. Proth

Les systèmes de production

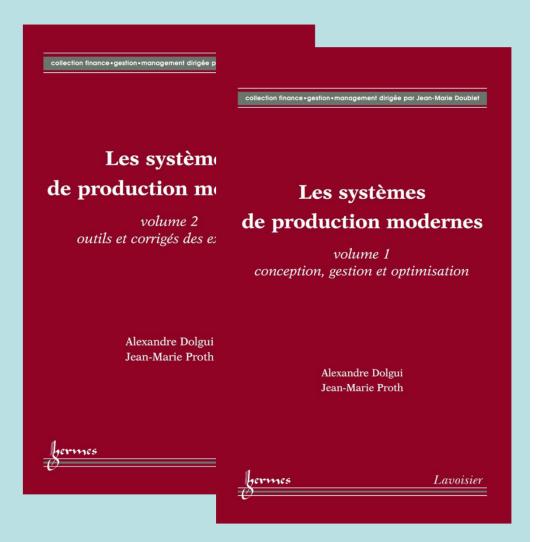
modernes (Modern

Production Systems)

Hermès Science/Lavoisier,

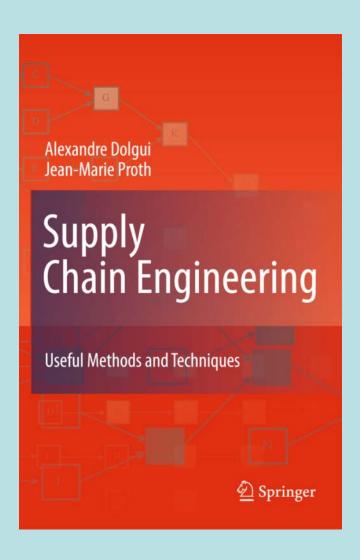
London, 2006 (In French)

2 volumes, 806 pages



Book in English

A. Dolgui, J.M. Proth Supply chain engineering: useful methods and techniques Springer, 2010, 542 pages



The list of my publications can be found on Google Scholar



Alexandre Dolgui 🗸

✓ SUIVRE

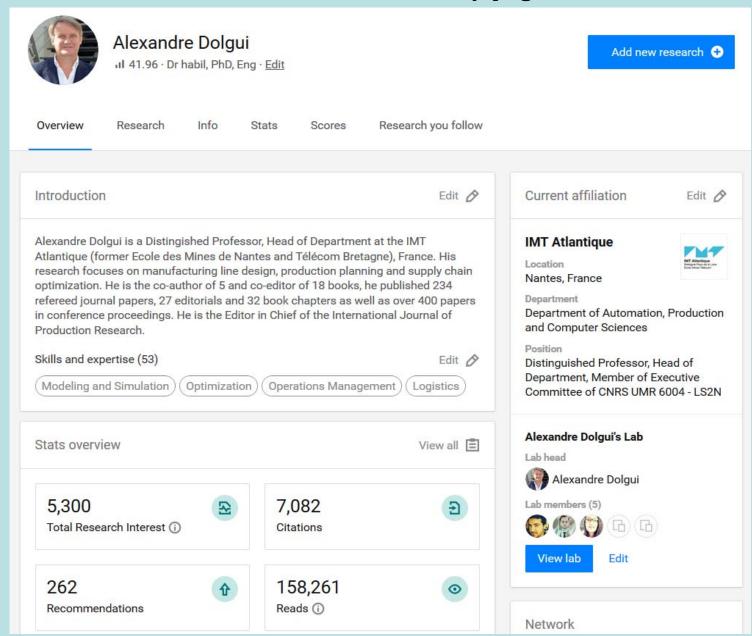
Professor of Industrial Engineering, IMT Atlantique, France Adresse e-mail validée de mines-nantes.fr - Page d'accueil

Manufacturing systems Assembly line balancing Scheduling Operations management Supply chain

TITRE		*	CITÉE PAR	ANNÉE	
O Battaïa,	A Dolgui	ne balancing problems and their solutionapproaches I of Production Economics 142 (2), 259-277	443	2013	
surgery M Lamiri, 2	X Xie, A [del for operating room planning with elective and emergency demand for olgui, F Grimaud f Operational Research 185 (3), 1026-1037	366	2008	
B Rekiek,	A Dolgui,	otimization methods for assembly line design A Delchambre, A Bratcu control 26 (2), 163-174	360 *	2002	
A Dolgui, J	JM Proth	gineering: useful methods and techniques Business Media	251	2010	
factory in	ndustry A Dolgui,	el and an algorithm for short-term supply chain scheduling in the smart 4.0 B Sokolov, F Werner, M Ivanova I of Production Research 54 (2), 386-402	207	2016	
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Most of them are available on my page in Research Gate



www.linkedin.com/in/alexandredolgui

www.researchgate.net/profile/Alexandre Dolgui

Editor-in-Chief

International Journal of Production Research (IJPR)





In 2019, IJPR publishes its **57**th **Volume**

(Volume 1 was published in 1961)

Flagship of our profession since 1961

First article in the first issue of the first volume of IJPR

ESTIMATION OF SERVICE REQUIREMENTS FOR PRODUCTION PURPOSES

by C. Kendrick*

(Received by Int. Jnl. Prod. Res., July 20, 1961)

SUMMARY

Work is discussed in which the service returns of automobile components, together with life mileage information are used to formulate relationships for forecasting future service requirements. Previous production levels of the components concerned are used, and regression analysis is applied to take into account the fact that any given manufacturer has only a proportion of the spares market. Comparisons with other forecasting techniques are given.

It is not unusual to consider that sufficient allowance can be made for spares in a manufacturing programme by adding a small percentage to the current programme.

The percentage may be the result of an experienced guess at the probable future requirements and, where the replacement market is a small part of the manufacturer's total sales, this may be an adequate procedure. In many branches of industry, however, service requirements represent a large part of the total turnover. Where this is so, and company policy

Last page of the article

periods, and so be in a position to pre-plan production taking into account the requirements of the replacement market as well as the demand for original equipment. The accuracy of such forecasts compare well with forecasts made by other methods.

Les statistiques portant sur l'entretien des pièces d'une automobile avec renseignements sur le rapport entre la vie du véhicule et son kilométrage total sont employées pour prévoir les besoins futurs en pièces de rechange. Les niveaux de production précédents des pièces entrent dans ce calcul et on y applique l'analyse de regression pour tenir compte du fait qu'un fabricant donné ne détient qu'une proportion du marché des pièces dde rechange. On fournit également des comparaisons avec d'autres méthodes de prévision.

Berichte über Bedienung der Automobilkomponenten werden in Verbindung mit der zurückgelegten Meilenzahl und Komponentenhaltbarkeit dazu benutzt um Beziehungen zu formulieren welche eine Vorhersage über zukünftige Bedienungsbedürfnisse gestatten. Die früheren Produktionsniveaus der Komponenten werden zur Berechnung benutzt, und die Regressionsanalyse berücksichtigt die Tatsache dass einem Fabrikanten nur ein gewisser Teil des Ersatzteilmarkts zur Verfügung steht. Es werden Vergleiche mit anderen Vorhersagemethoden gezogen.

REFERENCES

BROWN, R. G. (1956) "Exponential Smoothing for Predicting Demand". Paper at 10th meeting of O.R.S.A., San Francisco, U.S.A.

KENDRICK, C. (1960) "Vehicle Component Replacement Policy". Unpublished Ph.D. Thesis. Department of Engineering Production, University of Birmingham.

MOORE, F. G. (1957) "Production Control". 2nd Ed. McGraw Hill.

Last page of the first issue

ABSTRACT

A STUDY OF THE VARIETY OF PAPER SIZES IN THE U.K.

by M. N. PHERWANI and S. EILON *

Case studies in the consumption of stationery paper revealed a wide variety of products and a pricing policy which does not penalise customers for ordering non-standard or odd sizes. Cost analysis by use of break-even charts is not applicable, owing to the difficulty of allocating fixed costs to the various products. The amount of scrap caused by cutting paper rolls to predetermined stationery sizes is suggested as an alternative criterion, and application of linear programming to scheduling of paper sizes is demonstrated. An overall saving to the industry of about 2% of produced material is estimated to be the result if scientific scheduling is adopted. Full data are appended.

Department of Mechanical Engineering, Imperial College of Science and Technology, London.

SEMINAR ON PRODUCTION CONTROL

A Seminar for those engaged on research into the psychological and organisational aspects of Production Control will be held at the University of Birmingham on January 4th and 5th, 1962.

Professor N. A. Dudley invites applications from those who would like to contribute a paper or a note to the Seminar, and also from those wishing to attend.

The purpose of the Seminar is to try to bring together in an informal group those engaged in this work from all parts of the world; to enable discussion of current work to be carried on freely and to encourage the interchange of ideas.

It will be held in the Institute for Engineering Production which is residential, accommodating 27 people, and an inclusive charge of £3 0s. 0d. will be asked to cover the Seminar and accommodation.

In your application, will you please mention the aspect of Production Control with which you are at present concerned, together with any publications concerning that work.

The Editor invites information regarding forthcoming conventions and courses dealing with production research.

Content of the first issue

ESTIMATION OF SERVICE REQUIREMENTS FOR PRODUCTION PURPOSE C. KENDRICK

SELECTIVE ASSEMBLY — ITS ANALYSIS AND APPLICATIONS E.M. MANSOOR

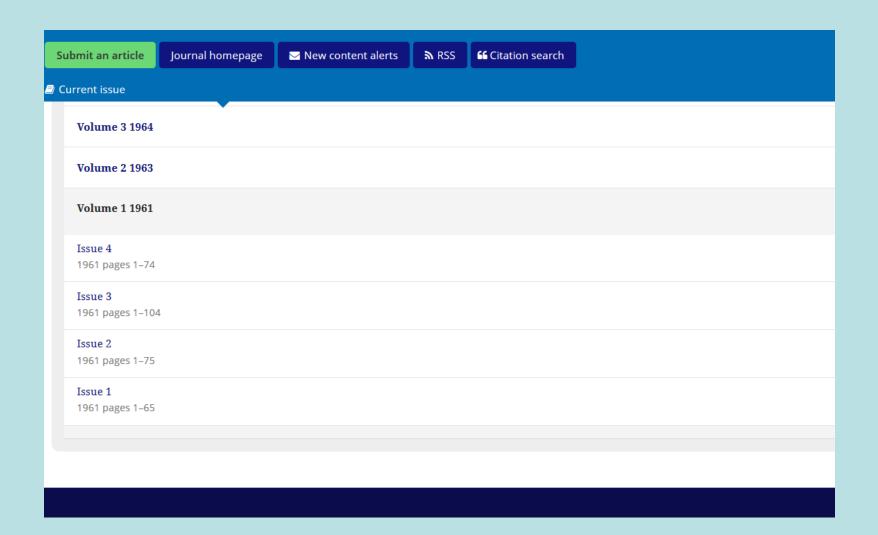
RESEARCH IN MACHINING HIGH STRENGTH MATERIALS AT ELEVATED TEMPERATURES W. PENTLAND , J. L. WENNBERG & C. L. MEHL

OPTIMAL REVISION PERIODS D. J. WHITE

TWO INVENTORY CONTROL MODELS S. EILON

AN ELECTRICAL ANALOGUE FOR SOLVING TRANSPORTATION PROBLEMS R. HILLS

A NOTE ON A METHOD OF ESTIMATING THE PRECISION OF TIME STUDY OBSERVATION
G. GREGORY



In 2021 and 2022, we will celebrate the 60th anniversary and 60th volume anniversary of IJPR, respectively

The past Editors-in-Chief of IJPR:

Norman Dudley, 1961 – 1981

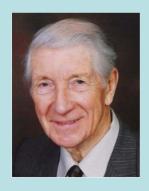
Roy Sury, 1982 – 1997

John E. Middle, 1998 – 2011

They have accomplished a great deal and established a wonderful reputation for the journal:

- Many cutting edge scientific results were published in IJPR and rest in the annals of scientific research
 - Significant advances published in IJPR were transferred from academia to industry and then to the rest of society

In the first editorial, IJPR's founding Editor-in-Chief Norman Dudley wrote:



1916-2006

"Production is a meeting place of many disciplines, for the planning, organizing and control of manufacturing industry necessitate an understanding of the nature and interaction of the technical, human and economic forces which are the agents of production. If this understanding can be advanced by bringing together papers which would otherwise have been scattered throughout the literature of the several contributing sciences, the initiative of The *Institution of Production Engineers* in launching this International Research Journal will have been well justified."

Contributing sciences

Mechanical engineering Manufacturing engineering Industrial engineering **Operations Research** Automation and IT technologies Computer science Management science **Economics** etc.

IJPR is a well established and respected journal in our domain

Indexed in ISI Science Citation Index® (as well as in British Library Inside; Cabell's Management Directory; Cambridge Scientific Abstracts; EBSCO Databases; Electronic Collections Online; Engineering Information Inc; INSEAD; INSPEC®; International Abstracts in Operations Research; ISI CompuMath Citation Index®; ISI Current Contents®: Engineering, Computing and Technology; New Jour; OCLC ArticleFirst; Recent Advances in Manufacturing Database (RAM); Scopus; Zentralblatt MATH/Mathematics Abstracts and Zetoc).

One of the **oldest journals** in this field

It was a pioneer and still is in manufacturing technologies, industrial engineering, product/process design and production management

The journal is a giant in our field. In the mind of many of our colleagues it is the reference for all of us

To summarize, IJPR has been the flagship of our profession for more than half a century

Operation Research 1952 (9 years before IJPR)
Management Sciences 1954 (7 years before IJPR)
Naval Research Logistics 1954 (7 years before IJPR)

ISI Science Citation Index®

IJPR 1961

ISI Science Citation Index Expanded®

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COR 1974 (13 years after IJPR)
CIE 1976 (15 years after IJPR)
EJOR 1977 (16 years after IJPR)
IJPE 1980 (19 years after IJPR)
JOM 1980 (19 years after IJPR)
JMS 1982 (21 years after IJPR)
JIM 1990 (29 years after IJPR)
PPC 1990 (29 years after IJPR)
POM 1992 (31 after IJPR)
MSOM 1999 (38 years after IJPR)
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Scope of IJPR

Fundamental mathematical techniques from computer, decision and management sciences which can be used in the design, measurement or operation of production and logistics systems

Models for analysis of manufacturing strategies and tools as well as the contribution of *new information technologies* to production management and logistics

24 issues, about 440 papers per year, acceptance rate 17%

New topics in the scope

Engineering and management of manufacturing systems are still crucial topics today and major concerns of the journal

Other issues with key implications for the world economy, like Global supply networks, Outsourcing, Pricing are now widely discussed

Transportation in relation with production, Warehousing, Mass customization, Reconfigurable manufacturing systems, Cloud manufacturing, Cognitive and collaborative technologies, Application of artificial intelligence, Blockchains, Big data, etc. are some other examples of topics which take more place in recent volumes

as well as new applications of Production Research in service systems (Health care engineering,...)

Journal Policy

International Journal of Production Research

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Scientific rigor & Practical relevance

The reputation of IJPR was based on a strong link with industrial applications

Convincing scientific results with clear real life applications are the principal criteria for the selection of our papers

Didactic articles, presenting *new and interesting production research problems or/and new applications*

are also welcome

Our journal will never refuse papers that promise a major advance in models and theory,

as long as their main concepts and usefulness for production systems and logistics are clearly explained, so that the production research community as a whole can understand them

A special place is reserved for surveys and discussion papers as well as invited articles presented by leading specialists in our domain

Establishing a permanent search for new topics and promising directions in production research has a high priority with us

Timothy Fry, Joan Donohue et al., University of South Carolina, USA

have analyzed 15 journal ranking studies previously published in literature that concerned 147 best journals, then a DEA model was proposed.

(see Outlets for Operations Management Research: A DEA Assessment of Journal Quality and Rankings, *International Journal of Production Research*, 2013, vol. 51, n° 24)

This exciting *American view* gives « Ranking of 32 OM journals ...» and placed

IJPR* in **4th position (!)** after:

- Management Science- Journal of Operations Management- Operations Research

^{*} The first European based journal listed

The same authors in another paper established the list of *Top 50 Institutions* based on the origin of author's Ph.D. (statistics 1961 to 2010)

Top 10 are:

Timothy D. Fry, Joan M. Donohue, Brooke A. Saladin, Guangzhi Shang. The Origins of Research and Patterns of Authorship in the International Journal of Production Research, *International Journal of Production Research*, 2013, vol. 51, n° 24.

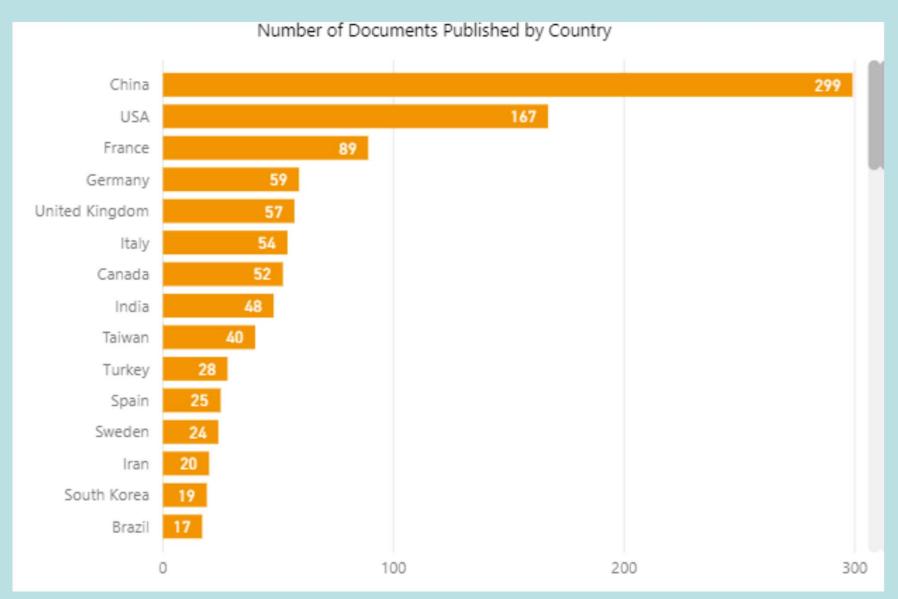
- 1. Purdue
- 2. Penn State
 - 3. Michigan
- 4. Virginia Tech
 - 5. Ga. Tech
- 6. Loughborough
 - 7. Wisconsin
 - 8. Texas A&M
 - 9. Arizona State
 - 10. Ohio State

As well as

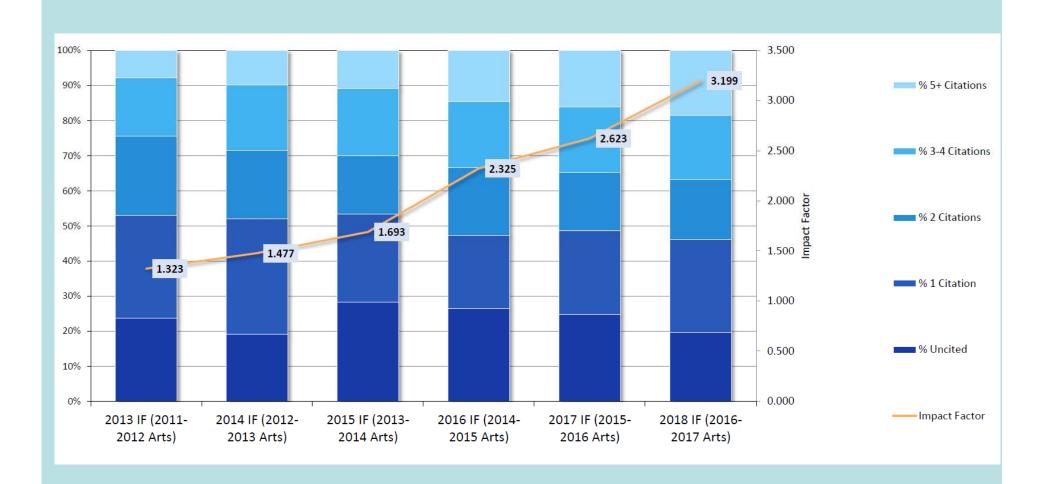
Top 10 Institutions based on *IJPR* authors' affiliations (1961 to 2010):

- 1. Purdue, 255 papers
- 2. Penn State, 246 papers
- 3. National University of Singapore, 201 papers
 - 4. Loughborough, 193 papers
- 5. Nanyang Technological University, 193 papers
 - **6. Hong Kong**, 131 papers
 - 7. Arizona State, 122 papers
 - 8. Shanghai Jiao Tong University, 122 papers
- Korea Advanced Institute of Science and Technology, 109 papers
 National Chiao Tung University, 105 papers

New statistics 2017 to 2019



Finally, even if the Impact Factor is less significant measure for the *leading scientific journals*, there has been a welcome and **ongoing improvement in IJPR IF 2016 = 3.19**



Some suggestions for your submissions to IJPR

Before a submission please to respond to this major question:

Why would you submit to IJPR?

Please see the scope and policy of journal and read papers published in IJPR, before a submission!

For IJPR papers, the following elements are mandatory:

- ✓ An exhaustive analysis of production research literature
- ✓ A novel decision aid model for design or management of production systems and logistics, the model should be explained for a wide audience in production research
 - ✓ Comparisons with the state of the art
 - ✓ Discussion on real life applications of the proposed approach in production systems and logistics
 - ✓ Managerial insights for decision makers in industry
 - ✓ Research perspectives

Some suggestions for your submissions to IJPR

Obviously this is **my first question** when I receive a paper:

Why the authors have submitted this paper to IJPR?

Understand, I need to find a response quickly (in the title, abstract, keywords, references, your letter,...) given the number of articles submitted daily!

Thank you for your consideration.

Please select carefully keywords from our list at IJPR

You should know that: Keywords are often used to search for referees!

Therefore, too general and not specific keywords may result in an inappropriate selection of referees

Take the time to write an appropriate abstract and please explain clearly in the abstract:

Scientific contribution and Practical relevance

of your paper

It is specially important to reach a larger readership

Thus, please explain in the Introduction and Conclusion

why your research is for a large production research audience

(not only for the specialists in your domain)

Before presenting a model, it is necessary to explain its idea and to define all notations and variables

Simplify a presentation of your models by *introducing step by step their elements*

If you can remove a formula or a text without loss of information, please do so

Idem for indexes of variables

Simpler is better!

A paper for IJPR ranges from

9000 (a regular paper) to 14000 (a state of the art article) words

with a maximum of 15 figures

Concise and clear papers are favored

Editorial team

Global Operations Strategy and New Product Development
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Pricing, Consumer Behavior and Supply Chain Modeling

<u>Dr Hubert Pun</u> - Western University, Canada

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Dr Desheng Dash Wu - RiskLab, University of Toronto, Canada

Forecasting and Inventory Management Zied Babai - Kedge Business School, France

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Information Systems and Knowledge Management

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Supply Chain Planning and Control

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Professor Frank Werner - University of Magdeburg, Germany

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Design of Manufacturing/Assembly Systems

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Cross-dock Scheduling, Bin Packing and Load Balancing

Dr Kangbok Lee - Pohang University of Science and Technology, Korea

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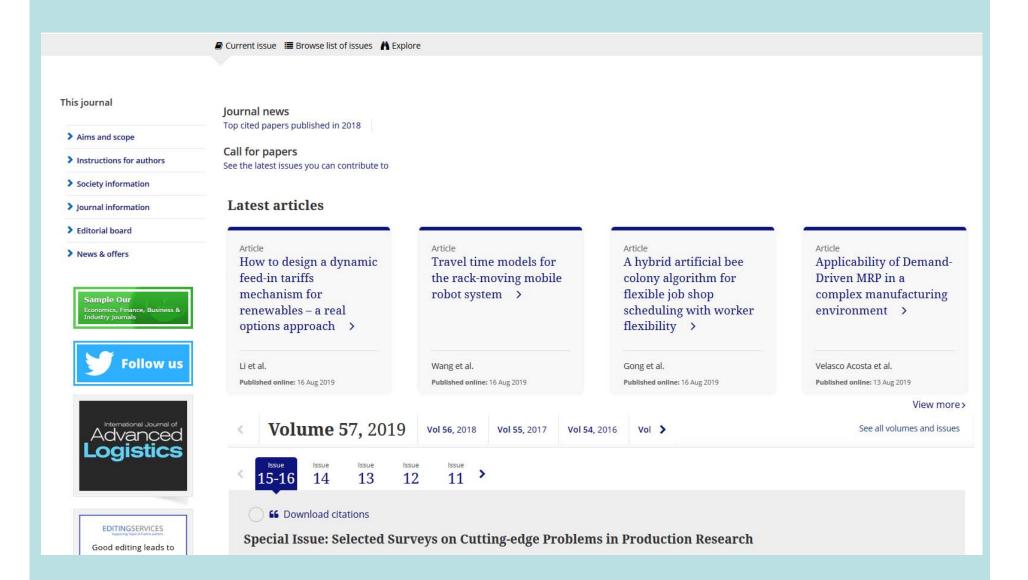
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Xun W. Xu - University of Auckland, New Zealand

Shanlin Yang - Hefei University of Technology, China

Recent announcements on the site web of IJPR



Conferences of IFAC/IFIP/IFORS associated with IJPR: APMS, MIM, IESM, etc.











To celebrate the **60th Anniversary of the International Journal of Production Research** in 2021, we invite you at



Advances in Production Management Systems (APMS'2021)

https://www.apms-conference.org/

6 to 9 September 2021, Nantes, France

https://en.wikipedia.org/wiki/Nantes





and 60th Volume Anniversary of the International Journal of **Production Research** in 2022, at



10th IFAC Conference on Manufacturing Modelling for Management and Control (MIM'2022)

22 to 24 June 2022, Nantes, France







✓ to celebrate with us

the 60th anniversary of IJPR at IFIP APMS 2021

the 60th volume anniversary of IJPR at IFAC MIM 2022

I also invite you to submit always your best scientific results to

International Journal of Production Research

https://mc.manuscriptcentral.com/tprs