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Pořadové číslo: 1/11

ID publikace:	43868606
Stav:	Rozpracovaný
Literární forma:	OSTATNI
Rozšíření LiF:	OSTATNI
Titul (v originále):	Eigenspaces in max-t semirings - library of visualization programs
Rok publikace:	2013
Autor:	Richard Cimler (Prac.: 2900)
Autor:	Martin Gavalec (Prac.: 2410)
Autor:	Zuzana Němcová (Prac.: 2410, 2900)
Jazyk (originál):	angličtina (eng)
Titul česky:	
Titul anglicky:	Eigenspaces in max-t semirings - library of visualization programs
Datum vložení:	05.01.2014

Pořadové číslo: 2/11

ID publikace:	43868650
Stav:	Rozpracovaný
Literární forma:	J_ČLÁNEK V ODBORNÉM PERIODIKU
Rozšíření LiF:	J_Článek v odborném periodiku
Titul (v originále):	Tropical linear algebra with the Lukasiewicz T-norm
Rok publikace:	2014
Autor:	Martin Gavalec (Prac.: 2410)
Autor:	Zuzana Němcová (Prac.: 2410, 2900)
Autor:	Sergei Sergeev (Prac.:)
Název zdroje:	Fuzzy sets and systems
Místo publikace:	Amsterdam
ISSN:	0165-0114
Vydavatel:	North-Holland
Abstrakt orig.:	The max- Lukasiewicz semiring is defi ned as the unit interval [0; 1] equipped with the arithmetics "a+b" = max(a; b) and "ab" = max(0; a+b-1). Linear algebra over this semiring can be developed in the usual way. We describe a conversion of the problems of the max- Lukasiewicz linear algebra into the problems of tropical (max-plus) linear algebra. Based on this conversion, we develop a theory of the matrix powers and the eigenproblem over the max- Lukasiewicz semiring.
Abstrakt čes.:	T-norma max-Lukasievicz je definována jako jednotkový interval s aritmetikou "a+b"=max(a,b) a "ab"=max(0,a+b-1). Lineární algebra nad tímto polookruhem může být rozvíjena. V článku je popsána konverze problémů max-Lukasievicz lineární algebry do problémů tropické (max-plus) algebry. Na

	základě této konverze byla rozvinuta teorie mocnin matic a eigenproblému.
Abstrakt angl.:	The max- Lukasiewicz semiring is defi ned as the unit interval [0; 1] equipped with the arithmetics "a+b" = max(a; b) and "ab" = max(0; a+b-1). Linear algebra over this semiring can be developed in the usual way. We describe a conversion of the problems of the max- Lukasiewicz linear algebra into the problems of tropical (max-plus) linear algebra. Based on this conversion, we develop a theory of the matrix powers and the eigenproblem over the max- Lukasiewicz semiring.
Rozsah:	26
Typ dokumentu:	BA
Poznámka:	Článek byl poslán do časopisu, čeká na revizi
Hlavní klíč:	tropical; max-plus; Lukasiewicz; eigenvector; matrix power
Vedlejší klíč:	tropický; max-plus; Lukasiewicz; eigenvector; mocniny matice
Jazyk (originál):	angličtina (eng)
Titul česky:	Tropická lineární algebra T-normou max-Lukasiewicz
Titul anglicky:	Tropical linear algebra with the Lukasiewicz T-norm
Datum vložení:	09.01.2014
Financování:	S -
Financování:	P - GA402/09/0405

Pořadové číslo: 3/11

ID publikace:	43868585
Stav:	Uložený
Literární forma:	D_ČLÁNEK VE SBORNÍKU
Rozšíření LiF:	D_Článek ve sborníku
Titul (v originále):	Intelligent house - smart living and smart workplace in practical approach
Rok publikace:	2013
Autor:	Richard Cimler (Prac.: 2900)
Autor:	Karel Mls (Prac.: 2410)
Název zdroje:	Workshop proceedings of the 9th international conference on intelligent environments
Místo publikace:	Amsterdam
ISBN:	978-1-61499-286-8
Vydavatel:	IOS press
Strany:	338 - 346
Abstrakt orig.:	People are currently spending more and more time in their homes, where they also accomplish a wide range of activities, including professional work. The border between home-work and professional work is getting more traversal as greater number of activities is being supported by different kinds of Ambient Intelligence. Smart technology has changed the ways people work at home, with more virtual workspaces and the potential for constant wireless connection to one's work.

	While the conceptual description of the complexity of managing both work and home activities can be reached relatively fast, any successful model of work-home integration needs research on the spatial aspects of workspaces in the Smart Homes – physical environments, design and effective use of physical components such as sensors, controllers, and smart devices is vital. In practical part of the paper, hardware and software design and implementation of the system with basic functions for intelligent house management is described. The system enables the future extensions of its functionality in accordance with possible user requirements.
Abstrakt čes.:	Domov začíná být více a více i místem, kde se soustředí různé moderní technologie, které usnadňují lidem jejich aktivity. Lidé doma mohou vykonávat i svojí práci, často stejně efektivně, jako by byli fyzicky přítomni v kanceláři, díky možnosti komunikace a připojení se na vzdálená místa. Chytré prostředí pak dbá i při práci na jejich komfort. V praktické části článku je popsán softwarový i hardwarový přístup k řešení inteligentního domu založený na volně dostupných komponentách.
Abstrakt angl.:	People are currently spending more and more time in their homes, where they also accomplish a wide range of activities, including professional work. The border between home-work and professional work is getting more traversal as greater number of activities is being supported by different kinds of Ambient Intelligence. Smart technology has changed the ways people work at home, with more virtual workspaces and the potential for constant wireless connection to one's work. While the conceptual description of the complexity of managing both work and home activities can be reached relatively fast, any successful model of work-home integration needs research on the spatial aspects of workspaces in the Smart Homes – physical environments, design and effective use of physical components such as sensors, controllers, and smart devices is vital. In practical part of the paper, hardware and software design and implementation of the system with basic functions for intelligent house management is described. The system enables the future extensions of its functionality in accordance with possible user requirements.
Rozsah:	9
Typ dokumentu:	IN
Hlavní klíč:	smart, workplace, inteligent buidling
Jazyk (originál):	angličtina (eng)
Titul česky:	Inteligentní dům - chytré bydlení a pracovní místo zároveň
Titul anglicky:	Intelligent house - smart living and smart workplace in practical approach
Datum konání:	16.07.2013
Datum vložení:	04.01.2014
Financování:	S -

Financování:	O -

Pořadové číslo: 4/11

ID publikace:	43868586
Stav:	Rozpracovaný
Literární forma:	D_ČLÁNEK VE SBORNÍKU
Rozšíření LiF:	D_Článek ve sborníku
Titul (v originále):	Analytic hierarchy process and agent-based simulation for traffic modeling
Rok publikace:	2013
Autor:	Richard Cimler (Prac.: 2900)
Název zdroje:	Proceedings of the 12th International Symposium on the Analytic Hierarchy
Místo publikace:	Kuala Lumpur
ISSN:	1556-830X
Strany:	1-8
Abstrakt orig.:	We present an agent-based model of traffic at the roundabout. The model was implemented in agent based programming language NetLogo. Agents in the model correspond to cars. Each car has got its parameters and behavior. The behavior is expressed using multi-criteria decision making schema and analytic hierarchy process. Application of analytical hierarchy process in multi agent system is described. Driver's decision depends on his own character attributes as well as on driver's current situation. It is possible to experiment with different traffic situations and to observe the impact of each setting on the fluency of the traffic.
Abstrakt čes.:	V článku je představeno využití metody AHP v agentové simulaci kruhového objezdu. Simulace byla vytvořena v programu NetLogo. Řidiči se v simulaci rozhodují na základě multikriteriálního rozhodování a AHP. Rozhodnutí řidiče závisí na jeho povaze a konkrétní situaci, ve které se nachází. Je možné nastavit různé rozhodovací parametry a vlastnosti řidičů a následně pozorovat vliv těchto změn na plynulost dopravy.
Abstrakt angl.:	We present an agent-based model of traffic at the roundabout. The model was implemented in agent based programming language NetLogo. Agents in the model correspond to cars. Each car has got its parameters and behavior. The behavior is expressed using multi-criteria decision making schema and analytic hierarchy process. Application of analytical hierarchy process in multi agent system is described. Driver's decision depends on his own character attributes as well as on driver's current situation. It is possible to experiment with different traffic situations and to observe the impact of each setting on the fluency of the traffic.
Rozsah:	8
Typ dokumentu:	IN

Hlavní klíč:	Agent-based, simulation, traffic simulation, roundabout, AHP
Jazyk (originál):	angličtina (eng)
Titul česky:	Využití AHP v agentové simulaci dopravy
Titul anglicky:	Analytic hierarchy process and agent-based simulation for traffic modeling
Datum konání:	23.06.2013
Datum vložení:	04.01.2014
Financování:	S -
Financování:	P - GA402/09/0405

Pořadové číslo: 5/11

ID publikace:	43868358
Stav:	Přijatý
Literární forma:	J_ČLÁNEK V ODBORNÉM PERIODIKU
Rozšíření LiF:	J_Článek v odborném periodiku
Titul (v originále):	Modified Fuzzy Relation and Its Applications
Rok publikace:	2013
Autor:	Rakesh Kumar Triapathi (Prac.:)
Autor:	Kumar Dookhitram (Prac.:)
Autor:	Vivek Raich (Prac.:)
Autor:	Hana Tomášková (Prac.: 2410)
Název zdroje:	International journal of fuzzy mathematics and systems
Místo publikace:	Delhi
Číslo:	2
ISSN:	2248-9940
Vydavatel:	Research India publications
Ročník:	3
Strany:	101-107
Abstrakt orig.:	In this paper we used difference operator to obtain diagnostic conclusion about Diabetes by giving membership grades to symptoms of a disease from 0 to 1 with the help of fuzzy relations which depend upon Ro (an occurrence relation obtained by a sufficient number of patients), Rc (a conformability relation confirmed by doctors) and Rs (a matrix which contains degree of symptoms seen by doctor or given by himself).
Abstrakt čes.:	V této studii jsme použili differenční operátor k získání diagnostického závěru o diabetu přiřazením membershoip stupňů k příznakům nemoci 0-1 s pomocí fuzzy relací, které závisí na Ro (výskyt vztah záleží na dostatečném počtu pacientů), RC (přizpůsobivost vztahů potvrzená lékaři) a R (matice, která obsahuje stupeň příznaků z pohledu lékařů nebo přiřazených individuálně).
Abstrakt angl.:	In this paper we used difference operator to obtain diagnostic conclusion about Diabetes by giving membership grades to symptoms of a disease from 0 to 1 with the help of fuzzy relations which depend upon Ro (an occurrence relation

	obtained by a sufficient number of patients), Rc (a conformability relation confirmed by doctors) and Rs (a matrix which contains degree of symptoms seen by doctor or given by himself).
Rozsah:	7
Typ dokumentu:	BA
Hlavní klíč:	Fuzzy sets; Fuzzy numbers; Diabetes; Difference operator
Vedlejší klíč:	Fuzzy množiny, fuzzy čísla, diabetes, Diferenční operátor
Jazyk (originál):	angličtina (eng)
Titul česky:	Modifikované fuzzy relace a jejich aplikace
Titul anglicky:	Modified Fuzzy Relation and Its Applications
Datum vložení:	05.11.2013
Financování:	S -
Financování:	P - GA402/09/0405

Pořadové číslo: 6/11

ID publikace:	43868627
Stav:	Přijatý
Literární forma:	D_ČLÁNEK VE SBORNÍKU
Rozšíření LiF:	D_Článek ve sborníku
Titul (v originále):	Decision making based on tropical algebra
Rok publikace:	2013
Autor:	Hana Tomášková (Prac.: 2410)
Autor:	Martin Gavalec (Prac.: 2410)
Název zdroje:	Mathematical methods in economics 2013 : proceedings of the 31st international conference
Místo publikace:	Jihlava
ISBN:	978-80-87035-76-4
Vydavatel:	Vysoká škola polytechnická
Strany:	950-955
Abstrakt orig.:	In AHP approach to multi-criteria decision problem, the relative importance of alternatives is computed from preference matrices, which come from experience and can possibly be inconsistent. Standardly, the preference vector is computed as the eigenvector of the preference matrix by methods of linear algebra. Alternative use of non-standard methods in tropical algebra is considered in this paper. The preference matrix will be processed by the methods used in max-prod algebra and other tropical algebras. Given preference matrix will be transformed by the tropical operations, until a steady state is reached. The eigenvector of the matrix then describes the steady state preferences and respects all preference relations contained in the original matrix. Efficient algorithms for computing eigenvectors in the tropical algebra are described. The method is illustrated by numerical examples and compared with the linear algebra approach. The consistent and inconsistent cases are

	considered.
Abstrakt čes.:	V AHP přístupu více-kriteriálního rozhodování jsou relativní důležitosti alternativ vypočítány z preferenční matice, která vychází z hodnot získaných na základě zkušeností a mohou tedy být inkonzistentní.Standardní metody lineární algebry jsou v tomto článku modifikovány pro využití metody tropické albegry.
Abstrakt angl.:	In AHP approach to multi-criteria decision problem, the relative importance of alternatives is computed from preference matrices, which come from experience and can possibly be inconsistent. Standardly, the preference vector is computed as the eigenvector of the preference matrix by methods of linear algebra. Alternative use of non-standard methods in tropical algebra is considered in this paper. The preference matrix will be processed by the methods used in max-prod algebra and other tropical algebras. Given preference matrix will be transformed by the tropical operations, until a steady state is reached. The eigenvector of the matrix then describes the steady state preferences and respects all preference relations contained in the original matrix. Efficient algorithms for computing eigenvectors in the tropical algebra are described. The method is illustrated by numerical examples and compared with the linear algebra approach. The consistent and inconsistent cases are considered.
Rozsah:	6
Typ dokumentu:	BB
Hlavní klíč:	preference matrix ; tropical algebra ; AHP decision making ; eigenvectors
Vedlejší klíč:	preferenční matice ; tropical algebra ; AHP rozhodování ; vlastní vektor
Jazyk (originál):	angličtina (eng)
Titul česky:	Rozhodování založené na tropické algebře
Titul anglicky:	Decision making based on tropical algebra
Datum konání:	11.09.2013
Datum vložení:	07.01.2014
Financování:	S -
Financování:	I -
Financování:	P - GA402/09/0405
Financování:	P - EE2.3.20.0001

Pořadové číslo: 7/11

ID publikace:	43868624
Stav:	Přijatý
Literární forma:	D_ČLÁNEK VE SBORNÍKU
Rozšíření LiF:	D_Článek ve sborníku
Titul (v originále):	Decision making in max-prod algebra
Rok publikace:	2013

Autor:	Hana Tomášková (Prac.: 2410)
Autor:	Martin Gavalec (Prac.: 2410)
Název zdroje:	Czech-Japan seminar on data analysis and decision making under uncertainty : proceedings
Místo publikace:	Jindřichův Hradec
ISBN:	978-80-245-1950-0
Vydavatel:	Vysoká škola ekonomická. Fakulta managementu
Strany:	91-97
Abstrakt orig.:	In AHP approach to multi-criteria decision problem, the relative importance of alternatives is computed from preference matrices, which come from experience and can possibly be inconsistent. Standardly, the prefference vector is computed as the eigenvector of the preference matrix by methods of linear algebra. Alternative use of non-standard methods in tropical algebra is considered in this paper. Two most frequently used tropical algebras are the max-plus and the max-prod algebra. The preference matrix will be processed by the methods used in max-prod algebra. By max-prod algebra we understand a linear structure on a linearly ordered set R of real numbers together with the binary operations \oplus= maximum and \otimes = product, similarly as the ordinary addition and multiplication operations are used in the classical linear algebra. The operations \oplus and \otimes are extended to matrices and vectors in a natural way. We should remark that the max-prod algebra is isomorphic to max-plus algebra, with the operations maximum and addition. The eigenvalue of a given max-plus or max-prod matrix and the eigenvectors can be eciently described by considering cycles in speci cally evaluated directed graphs. Given preference matrix will be transformed by the tropical operations, until a steady state is reached. The eigenvector of the matrix then describes the steady state references and respects all preference relations contained in the original matrix. Effcient algorithms for computing eigenvectors in the tropical algebra are described. The method is illustrated by numerical examples and compared with the linear algebra approach. The consistent and inconsistent cases are considered.
Abstrakt čes.:	článek se zaměřuje na využití nestandardních metod, jako je využití max-prod algbery, při vícekriteriálním rozhodování. Metoda AHP je modifikována tak, že danaá preferenční matice je transformována metodami max-prod algebry dokud není nalezen stabilní stav systému. Je představen algoritmus výpočtu a využití těchto postupů nestandardních matod.
Abstrakt angl.:	In AHP approach to multi-criteria decision problem, the relative importance of alternatives is computed from preference matrices, which come from experience and can possibly be inconsistent. Standardly, the prefference vector is computed as the eigenvector of the preference matrix by methods of linear algebra. Alternative use of non-standard

	methods in tropical algebra is considered in this paper. Two most frequently used tropical algebras are the max-plus and the max-prod algebra. The preference matrix will be processed by the methods used in max-prod algebra. By max-prod algebra we understand a linear structure on a linearly ordered set R of real numbers together with the binary operations \oplus= maximum and \otimes = product, similarly as the ordinary addition and multiplication operations are used in the classical linear algebra. The operations \oplus and \otimes are extended to matrices and vectors in a natural way. We should remark that the max-prod algebra is isomorphic to max-plus algebra, with the operations maximum and addition. The eigenvalue of a given max-plus or max-prod matrix and the eigenvectors can be eciently described by considering cycles in speci cally evaluated directed graphs. Given preference matrix will be transformed by the tropical operations, until a steady state is reached. The eigenvector of the matrix then describes the steady state references and respects all preference relations contained in the original matrix. Effcient algorithms for computing eigenvectors in the tropical algebra are described. The method is illustrated by numerical examples and compared with the linear algebra approach. The consistent and inconsistent cases are considered.
Rozsah:	7
Typ dokumentu:	IN
Hlavní klíč:	max-prod algebra; multi-criteria decision making;eigenproblem ; algorithm
Vedlejší klíč:	max-prod algebra; vícekriteriální rozhodování; vlastní problém; algoritmy
Jazyk (originál):	angličtina (eng)
Titul česky:	Podpora rozhodování v max-prod algebře
Titul anglicky:	Decision making in max-prod algebra
Datum konání:	19.09.2012
Datum vložení:	07.01.2014
Financování:	S -
Financování:	I -
Financování:	P - GA402/09/0405
Financování:	P - EE2.3.20.0001

Pořadové číslo: 8/11

ID publikace:	43868626
Stav:	Rozpracovaný
Literární forma:	D_ČLÁNEK VE SBORNÍKU
Rozšíření LiF:	D_Článek ve sborníku
Titul (v originále):	Preference matrices in tropical algebra
Rok publikace:	2013
Autor:	Hana Tomášková (Prac.: 2410)
Autor:	Martin Gavalec (Prac.: 2410)

Název zdroje:	The 12th International symposium on the Analytic Hierarchy Process
Místo publikace:	Kuala Lumpur
ISSN:	1556-830X
Strany:	1-7
Abstrakt orig.:	Relative importance of alternatives in AHP multi-criteria decision problem is standardly computed from the (possibly incosistent) preference matrix as the eigenvector of the preference matrix by methods of linear algebra. Alternative use of non-standard methods in other algebras, such as tropical or fuzzy algebra is considered in this paper. The preference matrix is investigated by the methods used in max-prod algebra. Given preference matrix is processed by max-prod operations, until a steady state is reached. The eigenvector of the matrix then describes the steady state preferences and respects all preference relations contained in the original matrix. Efficient algorithms for computing eigenvectors in the tropical algebra are described. The method is illustrated by numerical examples and compared with the linear algebra approach. The consistent and inconsistent cases are considered.
Abstrakt čes.:	Článek se věnuje aplikaci AHP rozhodovací metody s využitím přístupu tropical algebry. Algoritmus pro nalezení vlestních vektorů, potřebných pro rozhodování je v článku popsán. Využité metody jsou ilustrovány na příkladu a porovnávány s výsledky lineární algebry.
Abstrakt angl.:	Relative importance of alternatives in AHP multi-criteria decision problem is standardly computed from the (possibly incosistent) preference matrix as the eigenvector of the preference matrix by methods of linear algebra. Alternative use of non-standard methods in other algebras, such as tropical or fuzzy algebra is considered in this paper. The preference matrix is investigated by the methods used in max-prod algebra. Given preference matrix is processed by max-prod operations, until a steady state is reached. The eigenvector of the matrix then describes the steady state preferences and respects all preference relations contained in the original matrix. Efficient algorithms for computing eigenvectors in the tropical algebra are described. The method is illustrated by numerical examples and compared with the linear algebra approach. The consistent and inconsistent cases are considered.
Rozsah:	7
Typ dokumentu:	BB
Hlavní klíč:	preference matrix; tropical algebra ; AHP decision making ; eigenvectors.
Vedlejší klíč:	Preferenční matice; tropical algebra; AHP rozhodovací metoda
Jazyk (originál):	angličtina (eng)

Titul česky:	Preferenční matice v tropical algebře
Titul anglicky:	Preference matrices in tropical algebra
Datum konání:	23.06.2013
Datum vložení:	07.01.2014
Financování:	S -
Financování:	I -
Financování:	P - GA402/09/0405

Pořadové číslo: 9/11

ID publikace:	43868625
Stav:	Přijatý
Literární forma:	J_ČLÁNEK V ODBORNÉM PERIODIKU
Rozšíření LiF:	J_Článek v odborném periodiku
Titul (v originále):	Modeling of user roles for mobile communication in fuzzy algebra
Rok publikace:	2013
Autor:	Monika Šimková (Prac.: 2900)
Autor:	Hana Tomášková (Prac.: 2410)
Název zdroje:	Global journal on technology
Místo publikace:	Istanbul
Číslo:	2013
ISSN:	2147-5369
Vydavatel:	Academic world education and research center
Ročník:	4
Strany:	1029-1034
Abstrakt orig.:	The current use of mobile devices allows almost everything that can be used to PC. The breakthrough came with the advent of smart phones. Modeling the role of communication is an important aspect of balanced communication. The problem that is solved here is similar to the problem of finding an optimal schedule or route. For these problems can propose a solution using the fuzzy algebra. In this paper, application of so-called eigenproblem in extremal algebras to specific models of system of user roles are studied. The eigenproblem is a task of finding such vectors, which are transformed to their multiple (or remain unchanged) by a given space transformation. The formal tools used in extremal algebras are similar as the matrix operations in linear algebra, only the standard operations+ and * are substituted by maximum and minimum, or by other binary operations.
Abstrakt čes.:	Článek se zaměřuje na možnost využití fuzzy algebry při modelování uživatelských rolí v mobilní komunikaci
Abstrakt angl.:	The current use of mobile devices allows almost everything that can be used to PC. The breakthrough came with the advent of smart phones. Modeling the role of communication is an important aspect of balanced communication. The problem that is solved here is similar to the problem of finding

	an optimal schedule or route. For these problems can propose a solution using the fuzzy algebra. In this paper, application of so-called eigenproblem in extremal algebras to specific models of system of user roles are studied. The eigenproblem is a task of finding such vectors, which are transformed to their multiple (or remain unchanged) by a given space transformation. The formal tools used in extremal algebras are similar as the matrix operations in linear algebra, only the standard operations+ and * are substituted by maximum and minimum, or by other binary operations.
Rozsah:	6
Typ dokumentu:	IN
Hlavní klíč:	user role; mobile communication; fuzzy algebra; modeling
Vedlejší klíč:	uživatelské role; mobilní komunikace; fuzzy algebra; modelování
Jazyk (originál):	angličtina (eng)
Titul česky:	Modelování uživatelských rolí pro mobilní komunikaci ve fuzzy algebře
Titul anglicky:	Modeling of user roles for mobile communication in fuzzy algebra
Datum vložení:	07.01.2014
Financování:	S -
Financování:	P - GA402/09/0405

Pořadové číslo: 10/11

ID publikace:	43868628
Stav:	Přijatý
Literární forma:	D_ČLÁNEK VE SBORNÍKU
Rozšíření LiF:	D_Článek ve sborníku
Titul (v originále):	Inverse fuzzy eigenproblem in databases
Rok publikace:	2013
Autor:	Martin Bacovský (Prac.: 2900)
Autor:	Martin Gavalec (Prac.: 2410)
Autor:	Hana Tomášková (Prac.: 2410)
Název zdroje:	Mathematical methods in economics 2013 : proceedings of the 31st international conference
Místo publikace:	Jihlava
ISBN:	978-80-87035-76-4
Vydavatel:	Vysoká škola polytechnická
Strany:	13-18
Abstrakt orig.:	Fuzzy algebra is de ned as the real unit interval equipped by two binary operations: maximum and minimum, which are used analogously as addition and multiplication in the classical linear algebra. Fuzzy algebra is used in applications such as fuzzy control systems, or stability of discrete event systems. Eigenvectors of a fuzzy matrix correspond to steady states of a given discrete-events system. The inverse

	eigenproblem is motivated by the task of nding all possible systems possessing a given steady state. In the contribution, the inverse problem is studied as a system of fuzzy equations, possibly with upper end lower bounds. Application of the inverse approach to ecient search in databases is presented.
Abstrakt čes.:	Inverzní vlastní problém je motivován problémem nalezením všech možných nastavení systému pro dané stabilní stavy. V tomto článku je inverzní problém studován jako systém fuzzy rovnic omezených horní a dolní hranicí.
Abstrakt angl.:	Fuzzy algebra is de ned as the real unit interval equipped by two binary operations: maximum and minimum, which are used analogously as addition and multiplication in the classical linear algebra. Fuzzy algebra is used in applications such as fuzzy control systems, or stability of discrete event systems. Eigenvectors of a fuzzy matrix correspond to steady states of a given discrete-events system. The inverse eigenproblem is motivated by the task of nding all possible systems possessing a given steady state. In the contribution, the inverse problem is studied as a system of fuzzy equations, possibly with upper end lower bounds. Application of the inverse approach to ecient search in databases is presented.
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Hlavní klíč:	fuzzy algebra ; max-min algebra ; eigenproblem ; database search
Vedlejší klíč:	fuzzy algebra; max-min algebra ; vlastní problém; databázové vyhledávání
Jazyk (originál):	angličtina (eng)
Titul česky:	Inverzní fuzzy vlastní problém v doatabázích
Titul anglicky:	Inverse fuzzy eigenproblem in databases
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Abstrakt orig.:	Key factor success in logistics management is cost eff ectiveness. This article aims to describe and apply a method Economic order quantity (EOQ), which allows managers to make a number of important supply decisions. Managers can use EOQ to determine the quantity of items ordered and how often to order. When used to determine the size of the batch, then it is called a model of economic lot size. For the lot size problem we can consider various special cases, one of which is the case using Monge properties. It can be shown that for a given case are lot-size problems solvable in linear time.
Abstrakt čes.:	Klíčovým faktorem úspěchu v logistice je ekonomická efektivnost. Článek si klade za cíl popsat a aplikovat metodu Economic order quantity (EOQ), která umožňuje manažerům učinit řadu důležitých rozhodnutí ohledně dodávek zboží. Manažeři mohou využít EOQ k určení množství objednaného zboží a jeho frekvenci. Chceme-li určit velikost dávky, pak se model nazývá ekonomické lot size. Za problémy lot size můžeme považovat různé speciální případy, z nichž jeden je v případě použití Mongeovské matice. Může prokázat, že lot size problémy jsou řešitelné v lineárním čase.
Abstrakt angl.:	Key factor success in logistics management is cost eff ectiveness. This article aims to describe and apply a method Economic order quantity (EOQ), which allows managers to make a number of important supply decisions. Managers can use EOQ to determine the quantity of items ordered and how often to order. When used to determine the size of the batch, then it is called a model of economic lot size. For the lot size problem we can consider various special cases, one of which is the case using Monge properties. It can be shown that for a given case are lot-size problems solvable in linear time.
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Typ dokumentu:	AH
Odkazy:	http://link.springer.com/chapter/10.1007%2F978-3-319-01857-7_61
Hlavní klíč:	Lot-size problem, Economic Order Quantity, cost, optimalization, effectiveness, matrix, management
Vedlejší klíč:	Lot-size problémy, EOQ, náklady, optimalizace, efektivnost, matice, řízení
Jazyk (originál):	angličtina (eng)
Titul česky:	Tradiční modely zásob pro zvýšení konkurenceschopnosti
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