Doctor Honoris Causa

PROFESSOR

Dr. GANG KOU

Executive Dean of School of Business Administration,
Southwestern University of Finance and Economics (SWUFE)

ORADEA
11 - MAY - 2016
AGORA UNIVERSITY OF ORADEA, ROMANIA

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DOCTOR HONORIS CAUSA
OF AGORA UNIVERSITY

PROFESSOR
Dr. GANG KOU

ORADEA, MAY 11, 2016
RECTOR’S PROPOSAL

In 2012, Prof. Gang Kou, Executive Dean of School of Business Administration, Southwestern University of Finance and Economics (SWUFE) of Chengdu, China, was an invited speaker at International Conference on Computers, Communications and Control (ICCCC), organized by Agora University, contributing to the prestige of the meeting ICCCC2012.

He has received, within this occasion, the title of Honorary Member of Agora University Senate and joined as a member of Editorial board of our ISI Thomson and Scopus quoted journal (the best in Romania and in top 100 in the World in the field of Computer Science), International Journal of Computers, Communications & Control (IJCCC).
In 2013, acad. F.G. Filip – Doctor Honoris Causa of Agora University since 2012 and, prof. Ioan Dzitac - rector of Agora University since 2012, were invited by prof. Gang Kou to visit SWUFE campus in Chengdu, China, and to contribute each with an invited lecture.

Within this occasion was signed the following agreement of cooperation.
AGREEMENT OF CO-OPERATION
BETWEEN
SCHOOL OF BUSINESS ADMINISTRATION IN SOUTHWESTERN
UNIVERSITY OF FINANCE AND ECONOMICS, CHINA
http://www.swufc.edu.cn
AND
THE AGORA UNIVERSITY OF ORADEA, ROMANIA
http://univagora.ro/en/

As a gesture of goodwill and for the purpose of establishing ties between their
two institutions, the undersigned hereby affirm their intent to promote such academic
collaboration and exchanges, as will be of mutual benefit to their respective institutions.
The Agreement covers, but is not limited to:

Article 1 – Object and scope of co-operation

The purpose of this Agreement is to define the main fields of the co-operation
and the procedure for its implementation.
Specific agreements will be drawn up within the Agreement of co-operation and
they will contain precise technical and economic terms for activities agreed upon by
both parties.
Particular attention shall be given to the following items:
1.1. Participation in research programs.
1.2. Participation in specific training courses.
1.3. Development of special programs for the students and academic staff.
1.4. Other subjects of mutual interest, as will be agreed upon.

Article 2 – Forms of co-operation

The co-operation between parties will be carried out according to one or more of
the following forms:
2.1. Exchange of verbal or written information and documentation.
2.2. Visits and training periods for the students and academic personnel.
2.3. Exchange of journal, books and reviews.

Article 3 – Terms of co-operation

3.1. Information and/or documentation, as per item 2.1., shall be dispatched
upon request of either party at no cost if the information is already available or can be
easily obtained. If the documentation itself or its preparation, translation or dispatch
requires considerable expenses, the party requesting it shall be informed of the relevant
price and the dispatch of this documentation shall be subject to that party's agreement to
reimburse the expenses.
3.2. Travel and lodging expenses related to the study trips and/or training
periods, as per item 2.2., shall be established on a reciprocity principle and a specific
agreement shall set forth the economic terms for overhead expenses and for the
assistance to be rendered by one party to another. Possible requests for study trips
and/or training periods should be sent at least six months in advance.
3.3. The performance of services and the participation in research programs and specific training courses shall be covered by *ad hoc* supplementary agreements.

**Article 4 – Duration**

This Agreement shall be valid for five years and shall be automatically extended every five years, unless termination is requested by one of the parties at least six months before the expire date.

**Article 5 – Taxes**

All taxes related to this Agreement shall be paid directly by the Agora University of Oradea in Romania and by the School of Business Administration in Southwestern University of Finance and Economics due in China.

**Article 6 – Amendments**

Any amendments to this Agreement shall be subject to the approval of both parties and given in writing in a new agreement.

**Article 7 – Language**

All correspondence related to this Agreement shall be in English.

**Article 8 – Entry into force**

This Agreement, drawn up in two original in English, both valid, shall take effect as of the date of signing by the contracting parties.

For School of Business Administration in Southwestern University of Finance and Economics

Gang Kou, Ph.D. Professor
Dean
Signed at **SWUFE** on this 19 day of **May** 2013.

Date: 19-05-2013

For Agora University of Oradea

Ioan Dzitac, Ph.D. Professor
Rector
Signed at **Cheia** on this 19 day of **May** 2013.

Date: 19-05-2013

According our agreement two students from Agora University can participate in annual Discover SWUFE Summer Camp for International students (Camp costs,
including course fees, accommodation, meals and local transportation etc., are fully covered by SWUFE for 2 student delegates).

Discover SWUFE International Summer Camp, 2014

Now, when Agora University, accredited by Law 59/2012, celebrates 11 years since the ICCCC and IJCCC were founded, it is a privilege for us, a great honor and a joy of the spirit to award the title and the diploma of Doctor Honoris Causa to Professor Gang Kou.

Rector,
Prof. Ioan DZITAC
LAUDATIO
addressed to Prof. GANG KOU, PhD,
when awarding the title of Doctor Honoris Causa
of the Agora University of Oradea

Prof. Dr. GANG KOU
(b. 1975, Chengdu, China)

Gang Kou, born in Jiangxi, China on December 12, 1975, is a Distinguished Professor of Chang Jiang Scholars Program and Executive Dean of School of Business Administration, Southwestern University of Finance and Economics. Dr. Kou's research interests include big data mining, risk analysis, emergency management and multiple criteria decision making.

He is the managing editor of International Journal of Information Technology & Decision Making (SCI, Impact factor 1.890) and editor-in-chief of Springer book series on Quantitative Management. He is also editor for the following journals: Decision Support Systems (SCI, Impact factor 2.036), Associate Editor, 2014-now; Technological and Economic Development of Economy(SSCI, Impact factor 2.818), Editorial board member, 2011-now; Studies in Informatics and Control(SCI, Impact factor 0.605), Editorial board member, 2011-now; International Journal of Computers, Communications & Control (SCI, Impact factor 0.694), Editorial board member,2013-now; Scientific World Journal(SCI, Impact factor 1.219), Editorial board member, 2012-now. Previously, he was a professor of School of Management and Economics, University of Electronic Science and Technology of China, and a research scientist in Thomson Co., R&D.

Dr. Kou has received many distinguished awards including the Distinguished Professor of Chang Jiang Scholars Program, 2014; ESI highly cited researcher, 2015; The National Science Fund for Excellent Young Scholars, 2013; The Youth Award of management in China, 2013. He has participated in various data mining projects, including data mining for software engineering, network intrusion detection, health insurance fraud detection, credit card portfolio analysis and China Score project etc.
He published more than 80 research papers in 35 different journals and numerous papers in international conferences ranging from decision analysis, risk evaluation, emergency management, models and algorithms of optimization and multiple criteria decision making etc. There are more than 1200 SCI/SSCI citations by others. 8 papers have been ranked as the top 1% highly cited papers by ESI (Essential Science Indicators) of ISI Web of Science from 2005-2015, in which one paper has been cited 137 times by others. He has thus been ranked as one of the ESI highly cited researchers. He published 2 books by Springer (in English). Among them, 1 book has been cited 23 times by others.

From 2003-2006, he started his PhD degree, majoring Information Technology, University of Nebraska at Omaha and developed theoretical concepts, algorithms and systems pertaining for Multi-Criteria Decision Making. He was also concerned with practical applications to real world data analysis problems in commercial and scientific datasets. His Research activity includes: Financial Fraud detection, Credit Card Risk Analysis, Health insurance fraud detection, Network Surveillance and Intrusion Detection System.

Since then, he focused on the interdisciplinary field between data mining and Multi-Criteria Decision Making, and has made great achievements in this field. Gang Kou's key theoretical contributions to the academic research can be summarized as follows:

First, he founded models and algorithms of multiple criteria optimization classification. Multi-class classification problems are harder to solve and less studied than binary classification problems. He presented a multi-criteria mathematical programming (MCMP) model for multi-class
classification by introducing the concept of e-support vector to facilitate computation of large-scale applications. This improves high classification accuracies and low false alarm rates for multi-class network intrusion classification. He also promoted a multiple criteria linear programming (MCLP) approach to data mining based on linear discriminant analysis. His findings suggest that the MCLP-data mining techniques have a great potential in discovering knowledge pattern from a large-scale real life database or data warehouse. To resolve the speed and scalability issues in data mining and knowledge discovery, he proposed a mathematical programming model (called Multicriteria Convex Quadric Programming (MCQP)). The proposed MCQP is highly efficient and scalable to massive problems because it only needs to solve linear equations to find the global optimal solution. He and his colleagues applied the proposed models and algorithms to various fields such as financial risk analysis, credit scoring, emergency management etc. He and his colleagues applied the proposed models to develop China Score, and made great contributions to the daily economic life of the people in China. The related works were published in several international journals, including Optimization methods and Software, Information Science, Decision Support Systems, in which one paper has been listed as the top 1% highly cited papers by ESI.

Second, he proposed methodologies of selection and evaluation of data mining algorithm based on multiple criteria decision making (MCDM) methods. In the multiclass classification problem, the selection and evaluation of an effective algorithm is important yet difficult issue. Gang kou and his colleagues modeled the selection process of multiclass algorithms as a multiple criteria decision making (MCDM) problem and proposed a fusion approach to resolve conflicting rankings generated by different MCDM methods. Besides, the evaluation of clustering algorithms is also intrinsically difficult because of the lack of objective measures. He and his colleagues also modeled it as a MCDM problem, and presented an MCDM-based approach to rank a selection of popular clustering algorithms. The proposed algorithms were successfully applied to many practical fields such as software defect prediction, financial risk analysis and credit card fraud. His related works were published in several international journals, including the well-known Information Sciences and Decision Support Systems etc. Two of the related papers have been listed as the highly cited papers (Top 1%) by ESI of ISI Web of Science.

Third, he made a lot of achievements in the field of data analysis in the pair-wise comparison matrices (PCMs). As we all know that pair-wise comparison matrices (PCMs) have been widely used to assess the performance of qualitative or quantitative relationships between sets of decision elements in the multi-criteria decision making methods, especially the analytical hierarchy process (AHP) and analytical network process (ANP) methods. However, the PCMs often involve inconsistency, uncertainty and/or missing data due to unavailable or asymmetric information, prejudice, limited expertise and the complicated decision problems in nature etc, which could result in invalid even wrong decision making. He led a research group to investigate these issues, and proposed several models such as improved statistical model and induced bias matrix model, to identify the most inconsistent elements in the PCM. He also developed a Hadamard product induced bias matrix model to simultaneously cope with Cardinal and ordinal inconsistencies in the PCM, which only requires the use of the data in the original matrix to identify and adjust the inconsistent element(s) in a PCM. To derive the priority vector from an inconsistent pairwise comparison matrix, he developed algorithm for achieving a nearest consistent matrix, which is based on a logarithmic transformation of the pair-wise comparison matrix. Besides, he presented a cosine maximization method (CM) based on similarity measure to derive the priority vector. The proposed model could maximize the sum of the cosine of the angle between the priority vector and each column vector of a PCM and derive the reliable priority vector. The related works were published in several international journals, including the well-known European Journal of Operational Research, Applied Mathematical Modelling and Journal of the Operational Research Society etc. Two of the related papers have also been listed as the highly cited papers (Top 1%) by ESI of ISI Web of Science.

His related researches have quickly been accepted by international academic community and highly cited by international scholars, in which 8 papers are listed as the highly cited papers (Top
1%) by ESI, and he is listed as as ESI highly cited scientists. Due to his outstanding contributions in management science, he was awarded the Distinguished Professor of Chang Jiang Scholars Program in year 2014, won the National Science Fund for Excellent Young Scholars and the Youth Award of management in China in year 2013.

WORK EXPERIENCE

1. May 2013 – Present: Executive Dean, Professor, The School of Public Administration, Southwestern University of Finance and Economics.
2. March 2008–April 2013: Professor, School of Management and Economics, University of Electronic Science and Technology of China.

AWARDS AND HONORS

2. Sichuan Youth Science and Technology Award, 2013
3. Chinese Management Youth Award, 2013
4. First Prize of Natural Science by the Ministry of Education of China, 2012
5. Second Prize of Natural Science by the Ministry of Education of China, 2012
6. Second Prize of Sichuan Science and Technology Progress Award, 2010

PROFESSIONAL SERVICES

Managing Editor:


Associate Editor:

*Decision Support Systems (2014-now)*

Editorial board member:


Guest Editor:

1. *Information Sciences (2011)*
2. *Journal of Supercomputing (2011)*
4. *Journal of Multi Criteria Decision Analysis (2010)*
RECENT KEYNOTE/INVITED SPEECHES AT CONFERENCES

1. *Manifold Learning for Financial Data*, Workshop on Internet and Big Data Finance (WIBF), City University of Hong Kong, June 11-12, 2015


4. *IBMM: Data Processing Model for Reciprocal Pairwise Comparison Matrix*, the 2nd International Symposium on Dataology & Data Science, June 2011, Beijing, China

5. *Selecting Data Mining algorithms using Multiple Criteria Decision Making - Applications in Software Engineering and Incident Management*, the 3rd International Joint Conference on Computational Sciences and Optimization, CSO 2010, May 2010, Yellow Mountain, China


7. *Heterogeneous Information Integration and Mining – A Review and Case Study on Real-time Incident Management*, the 3rd International Conference on New Trends in Information and Service Science, NISS 2009, June 2009, Beijing, China


SELECTED WORKS (CO)AUTHORED BY GANG KOU


[38] Yi Peng, Yong Zhang, Gang Kou, and Yong Shi, A Multicriteria Decision Making Approach for Estimating the Number of Clusters in a Data Set, PLoS One, DOI: http://dx.doi.org/10.1371/journal.pone.0041713, 7(7): e41713 (SCI).


Prof. Mişu-Jan Manolescu,  
President of Agora University
ANALYSIS COMMISSION FOR LAUDATIO*

on the occasion of awarding the title

Doctor Honoris Causa
To Professor Gang Kou

President:
Acad. Florin Gheorghe FILIP,
Romanian Academy, Romania.

Members:

1. Prof.Dr. Fuad ALESKEROV,
   National Research University, Higher School of Economics, Moscow, Russia.
2. Prof.Dr. Ioan DZITAC,
   Agora University of Oradea, Romania.
3. Prof.Dr. Enrique HERERRA-VIEDMA,
   University of Granada, Granada, Spain.
4. Prof.dr. Misu-Jan MANOLESCU,
   Agora University of Oradea, Romania.
5. Prof.Dr. Yong SHI,
   University of Nebraska at Omaha, USA.
6. Prof.Dr. Zenonas TURSKIS,
   Vilnius Gediminas Technical University, Lithuania.

*Note. The Commission has been nominated by Rector’s Decision No. 27/07.04.2016 based on approval of Agora University Senate.
RESPONSE TO THE LAUDATIO

The theorem and methodologies of the data analysis in the decision making,
Gang Kou, Southwestern University of Finance and Economics, Chengdu, China

Abstract. In the multi-criteria decision making, decision matrices are used extensively to gather the related decision information and/or quantify experts' judgments so as to compute the priority vectors of alternatives. Therefore, the theorem and methodologies of the data analysis in the decision matrices have been widely studied from different perspectives, and various approaches and models have been proposed over the past few decades. The pairwise comparison matrix, one of the most popular decision matrices in the decision making, usually involves the following issues in practice: uncertain or missing data estimation, cardinal/ordinal inconsistency identification, consistency index, priority derivation and sensitivity analysis due to unavailable or asymmetric information, prejudice, limited expertise and the complicated decision problems in nature etc, which could result in invalid even wrong decision making. In this study, some theorems and methodologies of the data analysis are proposed to tackle the above issues in the decision matrices.
Gaudeamus igitur,
Juvenes dum sumus;
Post icundum iuventutem,
Post molestam senectutem
Nos habebit humus.

Let us therefore rejoice,
While we are young;
After our youth,
After a troublesome old age
The ground will hold us.

Vita nostra brevis est,
Brevi finietur;
Venit mors velociter,
Rapit nos atrociter;
Nemini parcetur.

Our life is brief,
It will shortly end;
Death comes quickly,
Cruelly snatches us;
No-one is spared.

Ubi sint qui ante nos
In mundo fuere?
Vadite ad superos,
Transite in inferos
Hos si vis videre.

Where are those who before us
Existed in the world?
You may go up to the gods,
You may cross into the underworld
If you wish to see them.

Vivat academia,
Vivant professores,
Vivat membrum quodlibet,
Vivat membra quaelibet;
Semper sint in flore!

Long live the university,
Long live the teachers,
Long live each male student,
Long live each female student;
May they always flourish!

Vivat et republica
Et qui illam regit.
Vivat nostra civitas,
Maecenatum caritas
Quae nos hic protegit.

Long live the state
And those who rule it.
Long live our city,
And the charity of benefactors
Which protects us here.

Vivat omnes virgines,
Faciles, formosae!
Vivant et mulieres,
Tenerae, amabiles,
Bonae, laboriosae.

Long live all young women,
Easy and beautiful!
Long live wives as well,
Tender, loveable,
Honest, hardworking.

Pereat tristitia,
Pereant osores.
Pereat diabolus,
Quivis antiburschius
Atque irrisores!

Perish sadness,
Perish haters.
Perish the devil,
Whoever is against the student fraternity,
As well those who mock us!

Quis confluxus Hodie
Academicorum?
E longinquo convenerunt,
Protinusque successerunt
In commune forum.

Who has gathered now
Of the university?
They gather from long distances,
Immediately joining
Our common forum.
Vivat nostra societas,  Long live our fellowship,
Vivant studiosi!      Long live the studious!
Crescat una veritas,  May truth and honesty thrive,
Floreat fraternitas,  Flourish with our fraternity,
Patriae prosperitas.  And our homeland be prosperous.

Alma Mater floreat,  May our Alma Mater thrive,
Quae nos educavit;   That which educated us;
Caros et commilitones,  Dear ones and comrades,
Dissitas in regiones  Who we let scatter afar,
Sparsos, congregavit.  Let us assemble.