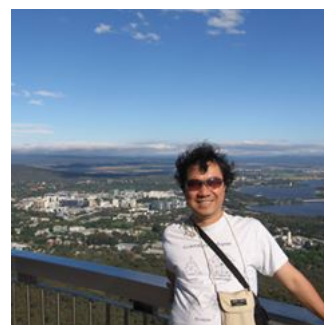


# CURRICULUM VITAE of Man V. M. NGUYEN



## Personal Details

Name	Man Van Minh Nguyen
Current position	Statistician and lecturer
Working address	Department of Mathematics, Faculty of Science (SCMU), Mahidol University, 272 Rama VI, Bangkok, Thailand
Telephone	+66 966 951 853
E-mail	man.ngu@mahidol.edu or man.ngu@mahidol.ac.th

## Appointments

**August 2017- present** Lecturer at Department of Mathematics, Mahidol University

**2006- 2017** Statistician and lecturer at Ho Chi Minh City University of Technology (H.U.T),  
Vietnam National University Ho Chi Minh (VNUHCM)

**2006-2014** staff of Faculty of Computer Science and Engineering, H.U.T

**January 2015- July 2017** staff of Faculty of Environment & Natural Resources, H.U.T

**2009-2011** World Bank grantee in the TRIG 2 project (Training and Research Innovation Grant),  
Vietnam Ministry of Education and Training, successfully built up a *Laboratory for Statistics and  
Computational Mathematics* of H.U.T. I was the Head of the Laboratory, hosted at H.U.T, designed  
for research and training in Statistics and Computational Mathematics in VNUHCM.

- Established few major research directions in *Statistical Science* at H.U.T
- Trained masters students in Statistics, particularly on how to apply mathematical methods  
and statistical thinking to real life

**2010- 2011** Research exchange scientist at the Faculty of Mathematical Sciences, Montana State  
University, Bozeman, Montana, USA, August 8– 31, 2011; and at Faculty of Information Science  
and Engineering, the University of Canberra, Australia (two visits in 2011)

**2007-2012** Visiting lecturer at University of Science and International University, both in VNU-  
HCM; and at University of Economics and Finance, HCM City

**2007** Consultant- Manager for Vietica Inc., a US based firm in Ho Chi Minh City, supervised the  
Vietica- HCM City branch, and set up a team of software engineers

**1998- 2000** Lecturer in Mathematics, Faculty of Computer Science and Engineering (CSE), H.U.T.

**1993- 1997** Teacher in Mathematics, Le Qui Don high school for talent gifted pupils, Sai Gon

**1991- 1992** IT officer, Department of Planing and Investment, Tien Giang province, Vietnam

## Research interests

- *Industrial Statistics and Experimental Designs*- mathematical constructions of factorial designs, their applications for experimental data analysis in industrial manufacturing, services, production management; in environment and natural resource management; kindly see more info at [www.academia.edu/3889002/Orthogonal-Arrays-Constructions-and-Application](http://www.academia.edu/3889002/Orthogonal-Arrays-Constructions-and-Application))
- *Statistical Inference, Modeling and Optimization*- with linear models, multivariate data analysis, sampling techniques, applied for reliability analysis & prediction (in environment, ecology);
- *Probabilistic Modeling and Operations Research (e.g. integer programming)*- methods and models applied in damage prognosis and risk analysis; in traffic science and logistics.

## Research Funding, Awards and Honors

**World Bank grantee (2009–2011)** in the TRIG 2 project, Vietnam Ministry of Education and Training, to set up the Laboratory for Statistics & Computational Mathematics at VNUHCM, Vietnam.

**STW Ph.D. grantee, Netherlands (2001–2005)**- Grant EWI. 5786, by the STW-Technology Foundation, for a Ph.D. scholarship researching *Mathematical Statistics and Applied Mathematics*, Eindhoven University of Technology, the Netherlands

**Vietnam national scholarship (granted in 1987)**- a national scholarship by the Ministry of Education and Training (to freshman) for studying a B.Sc in economics and political sciences in the (former) USSR, granted at University of Education, Ho-Chi-Minh City, Vietnam.

## Education

**Ph.D. in Mathematical Statistics** (minor in Applied Mathematics)

2001–2005, Eindhoven University of Technology (TUE), The Netherlands.

Thesis: *Computer-algebraic methods for the construction of Designs of Experiments*.

Advisors: Professor A.M. Cohen, Dr. Eric Schoen and Dr. Jan Dijkstra (late).

Thesis committee:

- Prof. A.M. Cohen, Prof. A. Brouwer and Assoc. Prof. A. Di Bucchianico (TUE)
- Prof. Henry Wynn (LSE, United Kingdom), Prof. Richard D. Gill (Leiden University),
- Prof. Peter Goos (Univ. of Antwerp, Belgium), Dr. Eric Schoen (Delft, Netherlands).

**M.Sc. in Pure Mathematics** (Computer Algebra, Lie Algebra)

1995–1997, University of Science (HCMUS), VNUHCM, Vietnam.

Thesis: *Jacques Dixmier and Nguyen Huu Anh Conjectures on Weil Algebras*.

Advisors: Professor Nguyễn Hữu Anh and Dr. Trần Ngọc Hội

Thesis committee:

- Dr. Đỗ Văn Nhơn, Dr. Hoàng Lê Minh, Dr. Trần Đức Huyền,
- Assoc. Professor My Vinh Quang, Assoc. Professor Bùi Xuân Hải,
- Prof. Trần Văn Hạo and Prof. Nguyễn Hữu Anh.

**B.Sc. in Mathematical Science (First class)**

1986–1990, University of Education, Ho-Chi-Minh City, Vietnam.

## Publications

1. Nguyen V. Minh Man.  
A Survey on Computational Algebraic Statistics and Its Applications  
*East-West Journal of Mathematics*, Vol. 19, No 2 (2017), pp. 1-44
2. Nguyen V. Minh Man.  
Permutation Groups and Integer Linear Algebra for Enumeration of Orthogonal Arrays,  
*East-West Journal of Mathematics*, Vol. 15, No 2 (2014)
3. Man Nguyen, Tran Vinh Tan and Phan Phuc Doan.  
Statistical Clustering and Time Series Analysis for Bridge Monitoring Data,  
Recent Progress in Data Engineering and Internet Technology,  
*Lecture Notes in Electrical Engineering* 156, (2013) pp. 61 - 72, Springer-Verlag
4. Nguyen Van Minh Man and Scott H. Murray.  
Algebraic Methods for Construction of Mixed Orthogonal Arrays,  
*Southeast Asian Journal of Sciences*, Vol 1, No. 2 (2012) pp. 155-168; ISSN 2286-7724,  
(at [science.utcc.ac.th/sajs/wp-content/uploads/2013/06/3-MinhMan.pdf](http://science.utcc.ac.th/sajs/wp-content/uploads/2013/06/3-MinhMan.pdf))
5. Hien Phan, Ben Soh and Man Nguyen.  
A Parallelism Extended Approach for the Enumeration of Orthogonal Arrays, ICA3PP 2011, Part I,  
*Lecture Notes in Computer Science* 7016, (2011) pp. 482- 494, Springer
6. Hien Phan, Ben Soh and Man Nguyen.  
A step-by-step extending parallelism approach for Enumeration of Combinatorial Objects, Part I,  
*Lecture Notes in Computer Science* 6081, (2010) pp. 463- 475, Springer
7. Eric D. Schoen, Pieter T. Eendebak and Nguyen, Man V. M.  
Complete Enumeration of Pure-Level & Mixed-Level Orthogonal Arrays,  
*Journal of Combinatorial Designs*, 18(2) (2010) pp. 123 - 140, Wiley.
8. Nguyen, Man V. M.  
Some New Constructions of strength 3 Orthogonal Arrays,  
the Memphis 2005 Design Conference Special Issue of the  
*Journal of Statistical Planning and Inference*, Vol 138, Issue 1 (Jan 2008) pp. 220-233.
9. Brouwer, Andries E., Cohen, Arjeh M. and Nguyen, Man V. M.  
Orthogonal arrays of strength 3 and small run sizes,  
*Journal of Statistical Planning and Inference*, Vol 136, Issue 9, (2006) pp. 3268-3280.

## Proceeding Publications

1. Man Nguyen and Le Ba Trong Khang.  
Maximum Likelihood Estimation For Some Stock Pricing Models,  
*Vietnam Journal of Science and Technology*, Vol. 51, no. 4B, (2013)  
pp. 70- 81, ISSN 0866 708X, Special Issue on International Conference on Advanced Computing  
and Applications (ACOMP 2013), H.U.T, **Vietnam**

2. Man Nguyen and Tran Vinh Tan.  
Selecting Meaningful Predictor Variables: A Case Study with Bridge Monitoring Data,  
*Proceeding of the First Regional Conference on Applied and Engineering Mathematics (RCAEM I)*  
(2010), University of Perlis, **Malaysia**.
3. Man Nguyen and Phan Phuc Doan.  
A Combined Approach to Damage Identification for Bridge,  
*Proceeding of the 5th Asian Mathematical Conference*, pp 629- 636, (2009),  
Universiti Sains Malaysia in collaboration with UNESCO, **Malaysia**.

## Preprints

- Man VM. Nguyen, Krittamed Lengrugsa and Arin Suttiwan, Vehicle Routing: From a Cost Analysis for Startups to Sustainable Urban Transportation Management
- Man VM. Nguyen and Nhut C. Nguyen,  
*Kriging Models for prediction of PM 10 in Air Pollution at HCMC*
- Man VM. Nguyen and Ngo Thanh Tu,  
*Genetic Algorithms for Computing Fractional Factorial Designs  $2^{k-p}$*

## Contributions to professional organizations and societies

1. [Reviewer](#) (ID 108526) for Mathematical Reviews, American Mathematical Society
2. [Scientific Program Committee](#)
  - Workshop on Science and Technology, 25th Anniversary of Hoa Sen Univ.,  
Co-chair of Statistics and Scientific Computing section, HCM City, December 3-4, 2016
  - National Conference on Probability and Statistics,  
Co-chair of Mathematical Statistics & Applications section, Danang City, May 23-25, 2015
3. [International Scientific Program Committee-Member](#)
  - International Conference on Mathematical Research, Education and Applications (ICMREA - UEL 2013), University of Economics and Law, VNUHCM, HCM City, **Vietnam**  
21 - 23 December 2013, presented a talk on *Permutation Groups for Mixed Orthogonal Arrays*
  - International Conference on Statistics and its Interactions with Other Disciplines (SIOD 2013), (<http://siod.tdt.edu.vn/index.php/siod/2013>), HCMC, **Vietnam**  
5 - 7 June 2013, invited talk on *Algebraic Constructions of Orthogonal Arrays*
4. [Organizing Chair of IEEE- RIVF2012](#), an IEEE-based International Conference on Computing and Communication Technologies, **Research, Innovation, and Vision for the Future**,  
HCM University of Technology, **Vietnam**, February 27– March 1, 2012
5. [Organizing Member](#), at Workshop on Experimental Designs and Information Science, Faculty of Information Sciences & Engineering, University of Canberra, **Australia**,  
October 7, 2011, invited talk on enumerating orthogonal arrays
6. [Scientific Committee Member](#), at International Conference on Theories and Applications of Computer Science (ICTACS' 2010), University of Science, VNUHCM, **Vietnam**

## 7. Contributor in scientific conferences

- at RCAEM 2010, the 1st Regional Confer. on Applied & Engineering Mathematics, Penang, **Malaysia**, 2-3 June 2010, presented a research on statistical dimension reduction
- at AMC 2009, Asian Mathematical Conference, Kuala Lumpur, **Malaysia**, 22-26 June 2009, talked on damage prognosis and structural health monitoring

## 8. International Scientific Committee Member & Invited Speaker at CAPS2008,

International Conference on Applied Probability & Statistics, Hanoi, **Vietnam**, December 2008, invited talk on *Introductory Algebraic Statistics*, (see info at <http://www.action-m.com/CAPS2008/>).

## Reviewer and referee for Journals, Conferences and Workshops

### 1. *Mathematical Reviews*, American Mathematical Society (AMS)

**Spring 2017:** MR3540555 -

paper *Computationally Efficient Algorithm for Gaussian Process Regression in Case of Structured Samples*, *Computational Mathematics and Mathematical Physics* (2016), Vol. 56, no. 4, 499513; authors M. Belyaev, E. Burnaev, and Y. Kapushev

**Spring 2016:** MR3415218 -

paper *Analysis of high-dimensional one group repeated measures designs*, *Statistics* 49 (2015), no. 6, 1243–1261. 62K15 (62F05 62H15);

authors Markus Pauly, David Ellenberger and Edgar Brunner

**Spring 2015:** paper *A Note on Bayesian prediction*, author Denis Bosq

### 2. *Journal of Combinatorial Designs*, Ref. No. JCD-13-1468, 2013

### 3. *Journal of Statistical Planning and Inference*, Ref. No. JSPI-D-10-00668, 2011

### 4. *Journal of Operations Research*, Ref. No. OPRE-2010-01-024, 11-Mar-2010

### 5. *Pakistan Journal of Statistics*, Ref. No. 100609 - July 2010

### 6. Referee and Co-organizer for CAPS2008 at Hanoi, Vietnam

## Coaching (from January 2006)

### Adviser to graduates in Statistics Science (from 2007)

1. M.Sc. project, *Kriging modelings for PM10 air pollution data analysis* [done in 2017]
2. M.Eng. project, *Mathematical Methods for container allocating at Vietnam sea ports* [2014]
3. M.Eng. project, *Genetic Algorithms for Constructing Fractional Factorial Designs* [2011]
4. M.Eng. project, *Statistical Quality Control for electronic device manufacturing at Sanyo DI*
5. M.Eng. project, *Response Surface Methodology and small experimental designs for Logistics*, proposing a computational statistics to study profit optimization in Logistics [Dec 2011]

6. M.Eng. project, *Constructions of Hadamard matrices and designs*, be used intensively in Industrial Manufacturing, Agriculture and Software Engineering [2010]
7. M.Eng. project, *Selecting Meaningful Predictor Variables: A Case Study with Bridge Monitoring Data* [completed Spring 2010]
8. M.Sc. (Masters of Science), *Time Series Methods for Bridge Health Monitoring* [2009]. Both topics 7. & 8. investigated statistical techniques for data mining of multivariate data sets.
9. M.Eng. project, *Balanced Experiment Designs: Construction Algorithms and Their Parallelization*, studying construction of balanced factorial designs [done 2008, Phan Huu Trong Hien later got his Ph.D. in 2014 at Latrobe University, Australia]
10. M.Eng. project, *Mathematical Techniques for Biological Sequence Alignments*, using algebraic geometry in multiple sequence alignments [completed 2008]
11. M.Eng. project, *Computational Algebra Methods for Maximal Likelihood Estimation*, using algebraic statistics techniques for phylogenetics trees study [2008]
12. M.Eng. project, *Resource Allocation for Software Reliability*, aimed at investigating few specific reliability problems in Software Engineering using random processes [2008]

#### **Adviser to undergraduates in Statistics and Applied Mathematics, all B.Eng. thesis**

1. *Statistical Simulation for some dynamic models in business: and sport centers*, Feb 2011
2. *Simulation of work-flow lines from the statistical viewpoint*, 2008, aimed at using probabilistic simulation techniques for queuing management (Honour program in Computing, Eng. Viet Linh Huynh, later got his Ph.D. in 2016 at UC David, the U.S.)
3. *Heuristic Methods for Combinatorial auction*, 2008, using integer programming models combining with heuristic techniques in winner determination of combinatorial auction problem
4. *Combinatorial auction in E-commerce*, Jan. 2007, using integer programming and Groebner basis method to determine winner solutions (Honour program in Computing, Eng. Vinh Tan Tran now is in the final phase of his Ph.D. at Montana State University in Bozeman)
5. *Optimization in Project Management: a case study in building houses and industrial factories*, 2007, using CPM & PERT methods in project planning and control in operation research
6. *Using factorial designs for software production, a case study at FPT Software Cor., HCMC*, 2006 employing orthogonal arrays for catching flaws in software testing

## **Teaching** (from January 2006)

### **Graduate courses**

- [at Faculty of Science, Mahidol University](#): (from 2018)
  - \* Deterministic Operations Research
  - \* Statistical Inference
- [at Faculty of Environment & Natural Resources, H.U.T](#): (2015- 2017)
  - \* Applied Statistics for Environmental Engineering
  - \* Applied Statistics for Public Policy in Environment and Resource; PPEP is a new program, joint and supported by Duke University and G.E. Cooperation - USA.
- [at Faculty of Computer Science and Engineering, H.U.T](#): (2007-2014):
  - \* System Performance Evaluation
  - \* Scientific Research Methodology
  - \* Computational Algebraic Statistics

- [at Faculty of Applied Science, H.U.T](#) (until 2010):
  - \* Symbolic Computation
  - \* Mathematical Modeling and Simulation
- [at Faculty of Mathematics, University of Science, VNUHCM](#), (2006- 2009):
  - \* Algorithm Analysis and Computer Algebra.

**Undergraduate courses** mostly for English speaking programs

- [at Faculty of Science, Mahidol University: Since 2017](#)  
B.Sc program and international programs in Industrial Mathematics and Actuarial Science
  - \* Economics and Actuarial Economics
  - \* Statistical Data Analysis 1
  - \* Operations Research
  - \* Computer Applications in Statistics
  - \* Linear Regression Analysis
  - \* Statistical Quality Control
- [at Faculty of Chemical Engineering, H.U.T](#): normal program and talent gifted program
  - \* Experimental Designs and Data Analysis (until 2017)
- [at Faculty of Computer Science and Engineering, H.U.T](#): international joint program and high quality program (English speaking classes, until 2017)
  - \* Discrete Structures
  - \* Mathematical Modeling
  - \* System Performance Evaluation (talent gifted program)

#### **Before 2016**

- [at Faculty of Electronic & Electrical Engineering, H.U.T](#), Advanced Program in Power Engineering, English program, with Univ. of Illinois at Urbana-Champaign (2008-2011):
  - \* Numerical Methods for Engineers
- [at International University, VNUHCM](#), English speaking program:
  - \* Algorithmic Problem Solving (2007-2009, joint with Nottingham Univ.)
  - \* Probability, Statistics and Stochastic Processes (2011)
  - \* Theoretic Models in Computing (2012)
- [at University of Information Technology](#), the Advanced Program in Computer Science, English speaking program, joint with Oklahoma State University, the U.S. (since 2011):
  - \* Discrete Mathematics for Computing
- [at Faculty of Information Technology, University of Science](#), the Advanced Program - English speaking in Computer Science, joint with Portland State Univ. the U.S. (2008-2012):
  - \* Discrete Structures, and
  - \* Applied Probability & Statistics for Engineers
- [at University of Economics and Finance, HCM City](#), (2009-2012):
  - \* Calculus in Economics, and
  - \* Applied Statistics in Economics

## Professional Self Training

**Computer Science undergraduate courses** (University of Science, VNUHCM, **Vietnam**, in 1995):

C programming, Artificial Intelligence, Data Bases, Data Structures,  
Principles of Programming Languages, and Mathematics for Computer Science.

**Computer related skills:** Operating Systems: Windows and Linux (OpenSuse, Ubuntu, Mint).

- Mathematical and statistical soft: Maple, Matlab, R; LINGO, DBMS systems as FoxPro
- Computer algebra systems: Group, Algorithms & Programming (G.A.P), and Singular

### Selective courses attended

*Symmetries Studies,*

Prof. Marlos Viana and Prof Arjeh Cohen, Eindhoven University of Technology,  
EIDMA course, March, 2005, Eindhoven, the **Netherlands**

*Total Positivity,*

Prof. Sergei Formin, Eindhoven University of Technology,  
EIDMA course, June 23-27, 2003, Eindhoven, the **Netherlands**

*Computational Algebraic Statistics,*

Professors. Henry Wynn, Lorenzo Robbiano and Giovanni Pistone,  
GROSTAT VI and First International School on Algebraic Statistics,  
February 17-20, 2003 Menton IUT STID, **France**  
Link <http://cocoa.dima.unige.it/conference/grostatvi/>

*Design in Combinatorics and Statistics,*

Prof. Cameron and Prof. Bailey, Department of Mathematics,  
September 13-19, 2002, Queen Mary College, Univ. of London, **UK**  
Link <http://www.maths.qmul.ac.uk/~pjc/design/shortcourse.html>

*Graph Theory in Combinatorics and Statistics*

Prof. Lovacz (Microsoft Research Center), April 2002,  
Eindhoven University of Technology, **Netherlands**

## Educational Certificates

**European University System**, Certificate 2016 an international seminar in the European quality Course system for Renewable Energy Development

**Higher Engineering Education Alliance Program** (HEEAP) Certificates- 2013, 2014 and 2016

**Accreditation Board for Engineering and Technology** (ABET) Certificate- 2010



## Presentations and Talks

- ◆ Keynote talk ‘On Renovation of Statistical Science Training Curriculum in Vietnam Universities’,  
December 11 – 12, 2015, at National Workshop, sponsored by VIASM (Vietnam Institute for  
Advanced Study in Mathematics), Phu Tho province, **Vietnam**
- ◆ ‘Tuning of Digital Camera with Statistical Designs’,  
March 9 – 10, 2015, at EU-SEA Workshop on Advanced Computing for Control & Real-Time  
Performance Optimization, North Pattaya, **Thailand**
- ◆ ‘Orthogonal Arrays: Construction and Application’,  
January, 2013 at International Conference on Mathematics and Applications,  
ICMA-MU, Mahidol University, **Thailand**
- ◆ ‘Mixed Orthogonal Arrays: Constructions and Applications’,  
December 28-31, 2011 at International Conference on Applied Probability and Statistics,  
The Chinese Univ. of Hong Kong, **Hong Kong**
- ◆ ‘Construction of Orthogonal Arrays: Introductory Review’,  
October 7, 2011, presented at Faculty of Information Science and Engineering,  
University of Canberra, **Australia**
- ◆ ‘Mixed Orthogonal Arrays: Introductory Review of Constructions’, August 26, 2011  
presented at Faculty of Mathematical Sciences, Montana State University, **USA**
- ◆ ‘Orthogonal Arrays: A Few Developments’, Jan 12, 2011  
presented at Faculty of Information Sciences and Engineering,  
University of Canberra, **Australia**
- ◆ ‘Selecting Meaningful Predictor Variables using Bridge Monitoring Data’, June 2-3, 2010  
presented at RCAEM Conference, Penang, **Malaysia**
- ◆ ‘A Combined Approach for Bridge Health Monitoring’, 22-26 June 2009  
presented at Asian Mathematical Conference 2009 (AMC2009)  
Kuala Lumpur, **Malaysia**
- ◆ ‘Construction of Orthogonal arrays: A Few Developments’, invited talk, Dec 2, 2008  
International Conference on Applied Probability and Statistics, Hanoi, **Vietnam**
- ◆ ‘Construction of strength 3 orthogonal arrays using symmetry’, May 17-21, 2005  
The BeNeLux Mathematical Conference, Gent, **Belgium**
- ◆ ‘Enumeration of strength 3 orthogonal arrays using symmetry’, May 13-15, 2005  
International Conference on Design of Experiments (ICDOE 2005): Theory and Applications,  
Memphis, Tennessee, **U.S.A.**

- ◆ ‘Some constructions of strength 3 orthogonal arrays’, June 14-18, 2004  
mODa 7 (Model Oriented Design and Analysis),  
"Kapellerput" Heeze, the **Netherlands**.
- ◆ ‘Computing  $t$ -balanced fractional factorial designs’, February 17-20, 2003  
GROSTAT VI, and International School on Algebraic Statistics,  
Menton IUT STID, **France**.

**Languages:** Vietnamese (mother tongue), English (fluent).

### Other Achievements

1. **Leader of software development group** for managing vocational examinations, Center for Techniques & Vocational Training, Mytho City, Vietnam, 1992- 1993.
2. **Deputy president of the Student Youth Organization**, University of Education, HCMC, Vietnam, September 1988 to June 1989.

## Referees

Prof. John J. Borkowski

Department of Mathematical Sciences, Montana State University, USA  
jobo@math.montana.edu, phone: +1 406 994 4606

Prof. Nabendu Pal

University of Louisiana at Lafayette  
nxp3695@louisiana.edu, phone: (337)-482-5279

Prof. Vladimir Savchenko

Faculty of Computer and Information Sciences  
Hosei University, 3-7-2 Kajino-cho Koganei-shi, Tokyo 184-8584 Japan  
vsavchen@k.hosei.ac.jp, or vldairy@yahoo.com, phone: +81-42-387-4537

Prof. A.M. Cohen (Ph.D. supervisor)

Department of Mathematics, Eindhoven University of Technology  
Postbox 513, 5600 MB Eindhoven City, The Netherlands  
amc@win.tue.nl, phone: +31 40 247-4270

Prof. Nguyen Huu Anh (Masters supervisor)

Department of Mathematics and Computer Science  
University of Science, VNUHCM  
227 Nguyen Van Cu street, District 5, HCMC, Vietnam  
huuanh45@gmail.com, phone: +84 9 0399 5540