

- MA TRIZ Certification Level 1
- MA TRIZ Certification Level 2
- MA TRIZ Certification Level 3

專業認證培訓系列 + 國際認證考試



開班單位：中華系統性創新學會

協辦單位：國際萃智協會

亞卓國際顧問股份有限公司

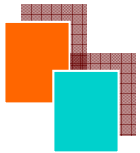
Web site : <http://www.systematic-innovation.org>

[http:// www.sme-edu.org.tw](http://www.sme-edu.org.tw)

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課程介紹

OVERVIEW

In this course, we move from the “big picture” perspective presented in the Introductory Course to knowledge and hands-on practice in applying TRIZ innovation tools at a basic level. This course is primarily focused on the fundamental principles of product innovation utilizing TRIZ tools. It provides participants with basic skills that can be applied to simple product innovation problems in their daily work. The course is delivered using a combination of lecture materials and hands-on exercises

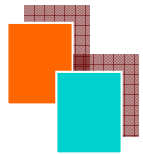
What Participants Will Achieve

- Ability to apply TRIZ tools and solve innovation problems at the basic level
- Ability to develop basic functional queries required to access an external Knowledge Network

Who Should Attend

Engineering Managers, Product/Process Development Engineers; Application Engineers, Educational Instructors; Those who desire to be systematic inventors.





講師介紹

POSITIONS

- Vice-President of International TRIZ Association (MATRIZ) (國際萃智協會 副會長 & 理事)
- Adjunct Professor at Massachusetts Institute of Technology (MIT 兼任教授); Honorary Professor of the University of Edinburgh, UK. (英國愛丁堡大學 榮譽教授)
- Director of Innovation Leadership at a consulting firm GEN3 Partners in Boston; (GEN3 教育訓練中心主任)

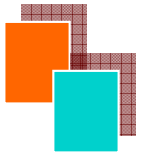
EDUCATION

- Dr. Ikovenko holds two doctorate degrees (美國 工業工程 及 蘇聯 環境工程與科學 雙博士)
- Ph.D in Industrial Engineering
- Dr.-Eng. in Environmental Engineering and Sciences
- Master degree in Patent Law

EXPERIENCES

Dr. Sergei Ikovenko is one of leading consultants and project facilitators in innovation technology of design. He has conducted more than 600 courses on innovation and TRIZ (Theory for Inventive Problem Solving) topics for Fortune 500 companies worldwide. Dr. Ikovenko was the primary instructor to deliver corporate TRIZ training programs at Procter & Gamble, Mitsubishi Research Institute, Samsung, Intel and other companies. He is a primary Innovation instructor of Siemens Innovation Tool Academy and General Electric Global Research. Dr. Ikovenko has taught seminars at MIT, Harvard University, Carnegie-Melon University, California Institute of Technology, Stanford University, Vanderbilt University, University of London, Oxford University, and other leading educational institutions worldwide.





講師介紹

AWARDS

- Awarded 77 patents in various engineering fields.
- Special awards for development of innovation at Procter & Gamble and Unilever.
- Award from Samsung Electronics for integrating TRIZ into -Samsung Six Sigma Black Belt training.
- Holds numerous silver and gold awards from international engineering shows and exhibitions for his inventions.
- Innovation Award from Oak Ridge National Lab of the Department of Energy, USA.

PUBLICATIONS

Author of more than 97 publications, and an active member of ASME, ACS, and ASEE.

CERTIFICATIONS

- TRIZ Master; Dr. Ikonenko has studied and taught TRIZ since 1986 and holds a certificate of TRIZ instructor from G. Altshuller, the founder of TRIZ.
- Certified Six Sigma Black belt, QFD Black Belt and Lean Master-Practitioner.
- A license of Professional Engineer from the Commonwealth of Massachusetts,





• 證照制度

MA TRIZ 證照制度分爲5級，Level 1-3 爲考照制度，Level 4 & 5 爲申請制度。各 Level 需循序以進。Level 1-3 有明確課程及考試/專題實作內容。Level 4 TRIZ Expert (萃智專家) 需要通過Level 3 後有顯著創新貢獻，含相當質與量的專利才能申請。Level 5 爲 TRIZ Master (萃智大師)。除了早年 Altshuller 欽點的 68 名外，需要Level 4 後在創新領域有獨創新理論或工具，通過 dissertation(博士級論文)之審核及口試。目前全世界只有 2 位通過 MATRIZ Dissertation. 本課程講師 Sergei Ikoenko 爲其中之一。MATRIZ 證照代表國際最權威單位，創新解題能力的認可。

• 國際MA TRIZ組織

MATRIZ 爲國際萃智協會之俄文的縮寫。英譯爲 International TRIZ Association 該協會爲 Genrich Altshuller 所創辦，是目前國際公認最權威的萃智組織，全世界約 25 個創新組織爲其聯盟的團體分會。

其團體分會需經過嚴格審查，代表該團體具核可的 TRIZ 創新工具之能力，可推動 MATRIZ 之活動，中華系統性創新學會爲國際萃智協會之台灣唯一核可的聯盟團體分會。





• 考證方式

MATRIZ level 1 考試方式為選擇題及簡答題。用詞為 classical TRIZ 之用詞。主要考基礎觀念。上課都會涵蓋。本課程提供紮實的證照課程培訓與實務解題訓練。課程結束後欲取得國際證照者可立即參加證照考試。不參加考試，出席率超過80%者亦可取得學會上課證明。全程 TRIZ Master 英文授課，中文重點複習，增強考證實力。

• 考證資格

參加

TRIZ Master Dr./Professor Sergei Ikovenko

專業培訓課程後，才能擁有參與 MATRIZ 認證考試的資格。





MA TRIZ Certification Level 1



初級: <萃智從業專員>Practitioner



The Society of Systematic Innovation

Program Elements

01	Function Analysis	(功能分析)
	– Component Analysis	(元件分析)
	– Interaction Analysis	(互動分析)
	– Function Modeling	(功能模式化)
02	Cause-Effect Chains Analysis	(因果鏈分析)
03	Trimming	(簡約設計)
	– Radical Trimming	(激烈消剪)
04	Feature Transfer	(特性轉移)
05	Identifying Key Problems	(辨識關鍵問題)
06	Function-Oriented Search	(功能導向搜尋)
07	Inventive Principle Applications	(發明原則應用)
08	– Resolving Engineering Contradictions (Matrix) – Resolving Physical contradiction (Algorithm)	(解決工程衝突)(矩陣) (解決物理衝突)(演譯法)
09	Introduction to Standard Inventive Solutions	(標準解簡介)
10	Introduction to Trends of Engineering System Evolution	(工程系統趨勢簡介)



MA TRIZ Certification Level 2

進階: <萃智進階專員> Specialist



Table of Contents

Program Elements		
01	S-Curve Analysis	S 曲線分析
02	Selected Trends of Evolution	演化趨勢
03	Nuances of Cause Effect Chains Analysis	因果鏈分析之細節
04	Nuances of Feature Transfer	特性轉移之細節
05	Inverse Function-Oriented Search	反功能導向分析
06	Standard Inventive Solutions	標準發明解
07	Algorithm for Inventive Problem Solving (intro) (ARIZ)	創新性問題解決演譯法介紹
08	Modeling Problems and Solutions	模式化問題與解答



MA TRIZ Certification Level 3



<萃智專家人員> Expert



Table of Contents

Program Elements		
00	ARIZ (master knowledge)	創新性問題解決演譯法
01	Product Innovation Roadmap	產品創新路徑圖
02	Flow Analysis	流程分析
03	Function Analysis for Processes. Trimming for processes.	製程功能分析, 修剪流程
04	Innovation Benchmarking	創新標竿
05	Algorithm for Using Standard Solutions (AIST)	使用標準解之演譯法
06	Clone Problems Application	相似問題應用
07	Super-Effect Analysis	超效應分析
08	Trends of Engineering System Evolution (TESE)	工程演化趨勢
09	TRIZ Forecasting	萃智預測方法
10	Patent Strategies	專利策略
11	Failure Anticipation Analysis	失效預期分析