



Level 5 (TRIZ Master) Certification Regulations

Last Updated: April 30, 2023 by TRIZ Masters Dr. S.Litvin, Chairman of MATRIZ Official TMCC and Dr. O.Abramov, Academic Secretary of MATRIZ Official TMCC

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1. General provisions

- 1.1. Assuming a 5-level certification system, MATRIZ Official adopts TRIZ Level 5 (TRIZ Master) Certification Regulations. TRIZ Master qualification corresponds to Level 5 and is the top professional level within this system.
Issuance of TRIZ Master diplomas to specialists who made the largest contribution to TRIZ development, is destined to continue traditions, laid in the International TRIZ Association by its first President G. S. Altshuller.
- 1.2. The main objectives of the 5th (highest) level of certification in MATRIZ Official are:
 - development of TRIZ as an applied discipline, including development of methodological foundations of TRIZ, tools for problem analysis and synthesis of inventive problem solutions, etc.;
 - intensification of research activities in TRIZ and public recognition of the personal contribution of researchers to the development of TRIZ and to the practical application of TRIZ;
 - expansion of practical application of TRIZ;
 - intensification of practical application of TRIZ and public recognition of personal contribution of TRIZ practitioners and TRIZ trainers.
- 1.3. The TRIZ Master degree is awarded on one of the following three grounds:
 - contribution to TRIZ-related research and development (for TRIZ developers / researchers),
 - outstanding achievements in the practical application of TRIZ (for TRIZ practitioners), or
 - contribution to the effectiveness of TRIZ education (for TRIZ trainers / teachers).
- 1.4. TRIZ Master degree is awarded based on a defended thesis.
- 1.5. All TRIZ Master diplomas issued by MATRIZ Official, give equal rights to their owners, regardless of the date the diploma was issued and the ground of the new TRIZ Master.
- 1.6. The present Regulations and any amendments to them must be accepted by the Board of MATRIZ Official and approved by the President of MATRIZ Official. Amendments made to these Regulations shall not have retroactive effect and, therefore, cannot be applied to the decisions made before the date of these amendments.

2. Requirements for Level 5 candidates

- 2.1. Every candidate for TRIZ Master certification must be already certified on Level 4.
- 2.2. The candidate must have enough scientific or practical publications on TRIZ, including those related to the topic of the thesis, to score at least 10 points according to the scoring system presented in Table 1 (the total score calculated from the table is rounded).

Table 1. Scoring system for publications

Publication* type	Number of points scored by TRIZ developers and trainers			Number of points scored by TRIZ practitioners		
	The candidate is the only author or a corresponding author (for papers)	Two co-authors including the candidate	Three or more co-authors including the candidate	The candidate is the only author or a corresponding author (for papers)	Two co-authors including the candidate	Three or more co-authors including the candidate
Granted patent**	0.5	0.25	0.17	1	0.5	0.33
Patent implemented in a product or technology	1.5	0.75	0.5	3	1.5	1
Book or a chapter in the book indexed in Scopus or WoS	6	3	2	2	1	0.5
Book or a chapter in the book indexed in Google Scholar or similar indexing system	4	2	1.5	1.33	0.67	0.5
Book or a chapter in the book that is not indexed	2	1	0.67	0.67	0.33	0.25
Paper indexed in Scopus or WoS	3	1.5	1	3	1.5	1
Paper indexed in Google Scholar or similar indexing system	2	1	0.67	2	1	0.67
Non-indexed paper reported at an International TRIZ conference such as TRIZfest, TRIZ Future or ITC	2	1	0.67	2	1	0.67
Paper*** published in some other non-indexed source	1	0.5	0.33	1	0.5	0.33

Comments to Table 1:

** (1) The publication used for scoring must be original, i.e., the same work published in different sources contributes to scoring only once.*

(2) For TRIZ developers/researchers, only research papers are considered calculating points.

(3) For TRIZ practitioners, only papers with practical case studies are considered.

(4) For TRIZ trainers/teachers, only papers related TRIZ training are considered.

*** Only one patent from each patent family is used to calculate points, i.e., each invention is counted only once in the calculation of points.*

**** Articles published in predatory journals and books published by predatory publishers (see, for example, <https://www.openaccessjournal.com/blog/predatory-journals-list/> and <https://beallslist.net/#update>) do not count.*

- 2.3. TRIZ developers/researchers and TRIZ trainers/teachers must have at least two published papers on the topic of his/her thesis.
Note: publications in predatory sources are not accepted.
- 2.4. TRIZ practitioners must have at least 3 inventions put into practice that were made using TRIZ, which must have documented evidence such as:
- Reference to a specific product or technology that is (has been) used in practice, with reference to the candidate's patent used in that product or technology, or
 - An official letter from a company/client that is (has been) using a technical solution created by the candidate. The candidate's personal contribution to the creation of that solution must be confirmed either directly by the company/client or by a separate letter from the organization that hired the candidate to create the solution.

3. Requirements for Level 5 thesis

- 3.1. To pass level 5 certification, candidates should prepare a thesis on TRIZ and defend it at TRIZ Master Certification Council (TMCC) session.
- 3.2. The thesis is a methodological qualification work, in which
- TRIZ developers/researchers present a new scientific achievement, such as a new direction of methodological development identified and developed by the candidate, or a significant revision of traditional TRIZ subject areas made by the candidate, etc.
 - TRIZ practitioners present their substantiated solutions, the implementation of which contributes significantly to a certain field of engineering, or new inventions that they made using TRIZ.
 - TRIZ trainers/teachers present new TRIZ teaching methods they have developed or materials that significantly improve TRIZ teaching, etc.
- 3.3. TRIZ thesis should be written by the applicant alone. It should contain a set of new results and assertions set forth by the author for public defense. It should be characterized by intrinsic unity and should be a manifestation of the personal contribution of the author.
- 3.4. The thesis should meet the following criteria:
- Novelty of the findings;
 - Significance of the thesis topic and candidate's contribution;
 - Availability of practical results (mandatory for TRIZ practitioners);
 - Instrumentality and effectiveness of the proposed methods and tools (for TRIZ developers and trainers);
 - Reproducibility of the results when using the proposed methods and tools (for TRIZ developers and trainers).
- The quality of the design and presentation of the thesis is also considered as an important criterion in the defense of the thesis.
- 3.5. The volume of the thesis should be within 30 – 120 pages. The volume of the thesis abstract should be within 5 – 10 pages. Both the abstract and the thesis are submitted in electronic form.

The Recommended **structure and content of the thesis abstract** is as follows:

- *General characteristic of the thesis*
- *Practical significance of the thesis topic*
- *Objectives and tasks of the work*
- *Conceptual (for TRIZ practitioners - practical) novelty of the work*
- *Practical significance of the work*
- *Main provisions to be discussed at the thesis defense*
- *Personal contribution of the candidate*
- *Implementation of the main provisions of research*
- *Publications (for TRIZ practitioners – patents)*
- *Structure and volume of the work.*

The recommended **structure and content of the thesis** is given below:

- *Introduction*
- *Practical significance of the thesis topic*
- *Objectives of the work*
- *Review of the known approaches to the analyzed problem (for TRIZ practitioners – review of previously known solutions for the problem(s) addressed by their invention(s))*
- *Detailed statement of the problem*
- *TRIZ methods of solving the problem stated*
- *Results of the work performed*
- *Practice of application of the results obtained (For TRIZ developers, this could be a case study illustrating the effectiveness of a newly developed tool by applying it to some problem, which may even be a problem already solved by other tools)*
- *Analysis of the results*
- *Personal contribution of the applicant*
- *Conclusions and recommendations on application of the results obtained*
- *List of published works on the thesis topic (for TRIZ practitioners - list of their patents).*

4. Level 5 certification procedure

- 4.1. **No later than three months prior** to the TMCC session, the candidate must send an application in English to the President of MATRIZ Official and the Chairman of MATRIZ Official TMCC; a copy should be sent to the Academic Secretary of the TMCC.
- 4.2. The application should contain:
 - Letter to the Chairman of MATRIZ Official TMCC requesting consideration of the application
 - Contact information with the full name of the applicant
 - Level 4 TRIZ specialist certificate number (or a copy of TRIZ methodologist diploma signed by G. S. Altshuller)
 - Proof that the candidate has a sufficient number of scientific or practical publications mentioned in paragraphs 2.2, 2.3 and 2.4 of this document
 - Title and short (no less than 1000 symbols) abstract of the thesis

- The name and contact information of candidate's scientific advisor (TRIZ Master)
 - A fresh photo of the candidate
- 4.3. **No later than six weeks prior** to TMCC session, the candidate should send to MATRIZ Official TMCC (addressed to the Chairman and to the Academic Secretary of the TMCC) all information necessary for thesis consideration (all in English):
- Thesis itself,
 - Thesis' abstract,
 - Curriculum Vitae of the applicant,
 - Review written by the scientific advisor.

The recommended **structure and content of the advisor's review** is given below:

- *Relevance of the candidate's work*
 - *Objective(s) of the work*
 - *Main results achieved by the candidate and their scientific significance (the latter can be omitted for TRIZ practitioners)*
 - *Practical value of the results*
 - *Implementation of the main provisions of the work*
 - *Novelty of the results*
 - *Structure of the thesis*
 - *Disadvantages of the work (if any)*
 - *Characteristics of the work presented*
 - *Recommendation for awarding the title of TRIZ Master to the candidate.*
- 4.4. The thesis, abstract and scientific advisor's review must be published on the MATRIZ Official website within 10 days of its submission to the TMCC. All TMCC members must have access to all candidate's thesis materials. Any individual TRIZ expert or regional TRIZ organization has the right to send their comments on the published thesis to the TMCC.
- 4.5. Each candidate must undergo a pre-defense procedure, in which only the candidate and the members of the pre-defense committee participate. The pre-defense can be face-to-face or online. TMCC selects for the committee 2-3 renowned TRIZ experts with experience in the topic of the thesis. This committee conducts a pre-defense and submits its recommendations to the TMCC in writing. Based on the recommendations, the TMCC decides on the candidate's admission to the defense. Members of the pre-defense committee may then be members of TMCC.
- 4.6. Some members of the pre-defense committee may be L4 TRIZ experts specializing in the thesis topic and experts from the relevant field of science/engineering.
- 4.7. TMCC sessions take place predominantly during one of the annual international TRIZ conferences by arrangement with the organizers of these conferences. Each candidate must present at the TMCC session in person. Presenting the thesis online may be accepted in some exceptional circumstances with an approval of the Board of MATRIZ Official. The candidate must submit a corresponding request to the President of MATRIZ Official and Chairman of TMCC.

Note: TMCC may consider no more than four thesis defenses in any session. Applications submitted earlier have a higher priority.

- 4.8. In case of force majeure, when the annual international TRIZ conference is cancelled or postponed to the next year, the defense can be conducted completely online - with the virtual presence of the candidate and members of the TMCC.
- 4.9. The date and venue of each TMCC session is set by the MATRIZ Official Board no later than 4 months prior to the session.
- 4.10. The Chairman and Academic Secretary of the TMCC are responsible for appointing members to the TMCC session (preferably, no later than a month prior to the session), which should include 7 to 12 persons out of 13 permanent members of TMCC.
- 4.11. After the list of TMCC members for a specific TMCC session is approved by the MATRIZ Official Board, the information about it is published on the MATRIZ Official website.
- 4.12. The Chairman of TMCC may substitute TMCC members, who unexpectedly withdrew, for someone out of TRIZ Masters present at the TMCC session.
- 4.13. In the case of impossibility of an in-person presence on the defense of at least 7 permanent members of the TMCC, a virtual presence on the defense of up to 3 permanent members of the TMCC is allowed.
- 4.14. The TMCC appoints opponent(s) (no more than two) of the thesis under consideration. Opponent reviews must be submitted at least 2 weeks before the TMCC session. The recommended **structure and content of the opponent's review** is given below:
- *Relevance of the candidate's work*
 - *Objective(s) of the work*
 - *Scientific significance of obtained results (can be omitted for TRIZ practitioners)*
 - *Practical value of the results*
 - *Implementation of the main provisions of the work*
 - *Novelty of the results*
 - *Structure of the thesis*
 - *Disadvantages of the work*
 - *Characteristics of the work presented*
 - *Conclusion whether the candidate can receive the title TRIZ Master.*

Note: If both official opponents give a negative review, the candidate is not allowed to defend the thesis.

- 4.15. Recommended process for the TMCC session of MATRIZ Official:
- The session is conducted by its Chairman or by the TMCC member appointed by the Chairman.
 - 1.5 hours are scheduled for the presentation and discussion of each thesis.
 - This time includes a brief introduction by the scientific/research advisor (5 minutes), the applicant's speech (30 minutes), the opponents' speeches (5 - 10 minutes each), questions to the applicant and his/her answers (30 minutes), final speech of the Chairman of the TMCC session (5 minutes).
 - Questions to the applicants are asked first by the members of TMCC who are present. If there are no questions from the TMCC members, other persons present at the session may ask questions within the general time budget.
 - Before voting, TMCC members meet in closed session to discuss a potential solution.
- Note: The TMCC session is open to any admitted participant of the Conference.

- 4.16. TRIZ Master Certification Council has the right to decide on changes in the schedule and program of its work.
- 4.17. To organize its work, the TMCC appoints from among its members a Returning Board consisting of three persons (one of them shall be appointed as the Chairman).
- 4.18. Decision concerning the thesis is taken based on a secret ballot as shown in Table 2. No less than 7 (seven) members of the TRIZ Master Certification Council must take part in the voting. The number of TMCC members who took part in the voting is determined by the Returning Board based on the number of submitted voting ballots.

Table 2. The number of "YES" votes necessary to make a positive decision.

Number of TMCC members who voted	Minimum number of "YES" votes required for a positive decision
12	8
10-11	7
9	6
7-8	5

Comments to Table 2:

(1) Improperly filled voting ballot is not considered in the voting.

(2) TMCC member, who is a scientific advisor of the candidate, does not take part in the voting on the thesis, in the preparation of which he/she participated.

- 4.19. The Board of MATRIZ Official formally recognizes the decision of TMCC (after checking it for compliance with provisions and regulations accepted in MATRIZ Official) and hands it over to the president of MATRIZ Official for approval. After approval by the President, the Secretariat of the President prepares and sends to new TRIZ Masters diplomas, which are signed by MATRIZ Official President and Chairman of the TMCC or a Chairman of the TMCC session. The signatures are certified by MATRIZ Official seal.
- 4.20. A TRIZ specialist certified for the 5th Level receives a TRIZ Master Diploma on a special form of MATRIZ Official. The basis for TRIZ Master's degree - the development of TRIZ as a methodology, achievements in the practical application of TRIZ or achievements in TRIZ teaching - is indicated in the Diploma in addition to the name of a new TRIZ Master.
- 4.21. Information on a new TRIZ Master is published on the website of MATRIZ Official within a week after the thesis defense, provided the certification fee is paid.
- 4.22. All disputable issues on decisions of the TRIZ Master Certification Council are addressed by the Board of MATRIZ Official in the presence of the Chairman and Academic Secretary of TMCC and are approved by the President of MATRIZ Official.

5. TMCC composition

- 5.1. The permanent TMCC is formed for a period of 2 years from the list of TRIZ Masters. Neither the President, nor the Executive Director of MATRIZ Official are allowed to be a TMCC member. The list of permanent TMCC members is reviewed and approved by the MATRIZ Official Board not later than one week after submission of the list and published on MATRIZ Official website.

- 5.2. The Chairman of the TRIZ Master Certification Council is appointed by MATRIZ Official Board for the same term as the elected board (2 years). The Chairman of TMCC directs its activities, develops the policy of the TMCC functioning, presides at TMCC sessions or appoints the Chairman from among the members of the TMCC.
- 5.3. The Chairman of the TRIZ Master Certification Council appoints an Academic Secretary, whose functions include organizing all the TMCC activities, documentation keeping, and other organizational and information work related to the preparation for Level 5 certification (TRIZ Master).