

Appendix 3 to Multi-stage TRIZ Certification Regulations

TRIZ Level 5 (TRIZ Master) Certification Regulations

Updated version as of January 27, 2022

1. TRIZ Level 5 (TRIZ Master) Certification Regulations is an appendix to Multi-stage TRIZ Certification Regulations accepted at MATRIZ and assuming a 5-level certification system. 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. TRIZ Master degree is conferred for research-related contribution to TRIZ development and for outstanding achievements in the field of practical application of TRIZ, or in the field of teaching TRIZ. TRIZ Master degree is conferred based on defended thesis.
2. The main goals of organizing level 5 (top level) certification in MATRIZ are:
 - development of TRIZ as an applied discipline, including the development of methodological grounds of TRIZ, tools for problem analysis and synthesis of inventive problem solutions, etc.;
 - promotion of activation of research activities in the field of TRIZ and social recognition of personal contribution of researchers in the development of TRIZ as an applied discipline and practical application of TRIZ;
 - broadening the scope of opportunities for practical use of TRIZ,
 - promotion of activation of practical use of TRIZ and social recognition of personal contribution of TRIZ practitioners and TRIZ trainers.
3. All TRIZ Master diplomas, issued by the International TRIZ Association, give equal rights to their owners, irrespective of the date of diploma issuance.
4. Every candidate for TRIZ Master certification must be certified on Level 4. It is necessary for the applicant to have scientific or practical publications in TRIZ (including abstracts of papers presented at the international conferences) related to the subject matter of the thesis (research work) to be defended or results of practical application of TRIZ.

It is mandatory for thesis defense that every candidate should have published at least two articles in an indexed source on the thesis topic.

Notes:

- *"Indexed source" means a journal or conference proceeding indexed by the databases of quality scientific publications: SCOPUS and/or Web of Science.*

Instead of indexed papers, TRIZ practitioners should have at least 10 granted patents for different inventions made personally by the candidate using the tools of classical and modern TRIZ. Not less than 3 inventions must be implemented in practice, which should have documentary confirmation.

Notes:

- *"Different inventions" are those that are protected by patents belonging to different patent families.*
- *Utility Models are not considered inventions.*
- *Candidate's personal contribution to the invention is confirmed by the fact that the candidate is the only inventor indicated in the patent. If there are two co-authors (including the candidate), the candidate receives 1/2 of the contribution and must have at least 20 such patents; if there are three or more co-authors, the candidate receives 1/3 of the contribution and must have at least 30 such patents.*

5. In order to pass level 5 certification, the applicants should prepare a thesis on TRIZ and defend it at TRIZ Master Certification Council (TMCC) session.

Each applicant for the thesis defense should pass through a pre-defense procedure that involves only the applicant and the pre-defense committee members. The pre-defense may be in person event or via electronic means (Skype, Zoom, etc.). TMCC selects 2-3 prominent TRIZ experts that have experience in the particular area of thesis' topic. This committee performs a pre-defense and submits their recommendations to TMCC in a written form. Based on the recommendations TMCC decides whether to allow the defense or not. Members of this group could be later selected as members of the TMCC.

Some of the pre-defense committee members may be L4 TRIZ experts (not mandatory TRIZ Masters only) specializing in the topic of dissertation, and experts from science/engineering domain.

6. TMCC sessions take place predominantly during one of the annual international TRIZ conferences as agreed upon with the organizers of the said conferences. Each applicant should be present at the session of TRIZ Master Certification Council. In an exceptional case, when the candidate unable to attend in person, the virtual participation could be allowed under a special request, e.g., via Skype, Zoom, etc. Virtual participation must be approved by TMCC in advance.

In addition, in case of force majeure, when the annual international TRIZ conference is canceled or postponed until next year, the defense can be carried out completely online - with the virtual presence of not only the candidate, but also the TMCC members.

Note: TMCC can consider no more than 4 thesis defenses during any session. The applications submitted earlier have a higher priority.

7. The date and the venue of next session of TMCC is established by the MATRIZ Presidium no later than 4 months prior to the session.
8. The Chairman and Academic Secretary of the TRIZ Master Certification Council are responsible for forming the composition of TMCC (if possible, no later than a month prior to the session) that should include from 7 to 12 persons out of 12 permanent members of TMCC.

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 are allowed to be a TMCC member. The list of permanent TMCC members is reviewed and approved by the MATRIZ Presidium not later than one week after submission of the list and published on MATRIZ website.

After the list of TMCC members for a specific TMCC session is approved by the MATRIZ Presidium, the information about it is published on the MATRIZ website.

The Chairman of TMCC may substitute TMCC members, who unexpectedly withdrew, for someone out of TRIZ Masters present at the TMCC session.

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.

9. The Chairman of TRIZ Master Certification Council is appointed by MATRIZ Presidium for the same period as the elected Presidium (2 years). The Chairman of TMCC directs its activities, works out the policy of functioning of TMCC, presides over TMCC sessions or appoints the Chairman from the members of the TMCC.

10. The Chairman of the TRIZ Master Certification Council appoints the Academic Secretary of the TRIZ Master Certification Council, whose functions include solving of organizational problems of the TRIZ Master Certification Council functioning, conducting the documentation and other organization and information work associated with the preparation for conducting the level 5 certification (TRIZ Master).

11. TRIZ Master Certification Council appoints opponent(s), (no more than two), of the thesis under consideration. The opponent(s) opinion should be submitted 2 weeks before the TMCC session. Recommended structure of the opponent(s) opinion is given below:

- Recommended structure and content of the opponent's review
 - *Relevance of the work.*
 - *Goals of work.*
 - *Scientific significance of obtained results (for TRIZ practitioners this item can be omitted.)*
 - *Practical value of results.*
 - *Implementation of the main provisions of research.*
 - *Novelty.*
 - *Structure of thesis*
 - *Disadvantages of the work.*
 - *Characteristics of presented work.*
 - *Conclusion.*

Note: If both official opponents provide negative opinion of the thesis, then the applicant is not allowed to proceed with the defense.

12. No later than three months prior to the session of TRIZ Master Certification Council, the applicant should send to MATRIZ (addressed to the President of MATRIZ and the Chairman of TMCC (a copy should be sent to the Academic secretary of TMCC) an application in English. It should contain a letter addressed to the President of MATRIZ with a request to consider the application, contact information, last, first name and middle name of the applicant, number of certificate of level 4 TRIZ specialist (or a copy of diploma of TRIZ methodologist signed by G. S. Altshuller), title of the thesis, name and contact information of thesis scientific/research supervisor (TRIZ Master), short abstract of the thesis (no less than 1000 symbols) and a picture of applicant.

Note: All applicants should satisfy requirements described in the current Level 5 (TRIZ Master) Certification Regulations. There should be no exception under any circumstances.

13. No later than six weeks prior to TMCC session, the applicant should send to MATRIZ TMCC (addressed to the Chairman of the TRIZ Master Certification Council and to the Academic Secretary) all information necessary for the review of the thesis: the thesis itself, author's abstract, review written by the research supervisor (it is acceptable to submit this review immediately prior to the TMCC session), and curriculum vitae of the applicant. All materials are prepared in English.

All TMCC members should have access to all materials of the applicant's thesis

All thesis materials (the thesis itself, abstract, and supervisor's review) must be published on MATRIZ website within 10 days after their submission to the TMCC. Any individual TRIZ expert or regional TRIZ organization have rights to send their comments on the published thesis to the TMCC.

14. Main requirements for the thesis

Thesis on TRIZ is a methodological qualification work, in which the author developed theoretical provisions, the set of which could be characterized as a new research achievement (e.g., a new direction of methodology development, which is identified and developed by the applicant; essential revision of traditional subject fields), or solved a significant research problem, or rendered substantiated solutions, the implementation of which contributes significantly to a certain field of engineering, or made new inventions using TRIZ (for TRIZ practitioners), or applicant proposed new TRIZ training methods or materials that significantly increase effectiveness of TRIZ training (for TRIZ trainers). References to the earlier works of the applicant are allowed only if they were published before the defense event.

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.

The thesis should contain a systematized concept, embracing the subject field corresponding to the theme.

The thesis should meet the following criteria:

- Novelty, which could be obtained either as a result of studying another subject field, or by applying new methods and means of cognition to the subject field, which was researched before, or the study of new subject field using new technologies, or by using TRIZ for solving challenging practical challenges; or implementing new training methods or materials;
- significance of the topic of research;
- instrumentality and efficiency of proposed conclusions;
- presence of practical results;
- reproducibility of results in using proposed methods.

Quality of thesis design and presentation is also considered to be an important criterion for thesis defense.

15. The volume of the thesis should be no less than 30 pages. The volume of the dissertation abstract should be no less than 5 pages. Dissertation abstract and the thesis are presented in both electronic form and in hard copies: Thesis - in the number of 7 copies (1 – to the TRIZ Master Certification Council, 2 – to the opponents, 2 - to the Fund of materials of MATRIZ and to Fund of TRIZ materials of Tchelyabinsk District Universal People's Library (TDUPL), 1 copy to the scientific advisor and 1 copy to the applicant); dissertation abstract – no less than 18 copies (12 – to the members of TRIZ Master Certification Council, 2 – to the opponents, 1– to scientific advisor, 2 – to the Fund of materials of MA TRIZ and to Fund of TRIZ materials of Tchelyabinsk District Universal People's Library (TDUPL), 1 – to the applicant).

16. Recommended structure of the thesis, dissertation abstract and review of the scientific advisor are given below:

- Recommended structure and content of the thesis abstract
 - *General characteristic of the thesis.*
 - *Relevance of the topic of the thesis.*
 - *Goals and tasks of the work.*
 - *Scientific or practical (for TRIZ practitioners) novelty of the work.*
 - *Practical significance of the work.*
 - *Main provisions to be discussed at the thesis defense.*
 - *Personal contribution of the applicant.*
 - *Implementation of the main provisions of research.*

- *Publications or patents (for TRIZ practitioners).*
 - *Structure and volume of work.*
- Recommended structure and content of the thesis
 - *Introduction.*
 - *Relevance of the topic of work*
 - *Goals of work.*
 - *Review of the known approaches to the analyzed problem. (For TRIZ practitioners – review of previously known solutions for the problems addressed by their inventions)*
 - *Detailed statement of the problem.*
 - *Methods of solving the stated problem.*
 - *Results of performed work.*
 - *Practice of application.*
 - *Analysis of results of performed work.*
 - *Personal contribution of the applicant.*
 - *Conclusions and recommendations on application.*
 - *List of published works on the topic of the thesis. For TRIZ practitioners – list of their patents on inventions developed with application of TRIZ*
 - Recommended structure and content of the adviser's review
 - *Relevance.*
 - *Goals of work.*
 - *Main results.*
 - *Practical value of results.*
 - *Novelty.*
 - *Recommendation*

17. Recommended process for the session of MATRIZ TMCC:

- 1.5 hours are planned for the presentation and discussion of each of the theses;
- this time budget includes short introduction of scientific/research supervisor (5 minutes), the speech of the applicant (30 minutes), speeches of opponents (5 - 10 minutes each), questions to the applicant and his/her answers (30 minutes), concluding speech of the Chairman of the TMCC (5 minutes);
- Questions to the applicants could be asked first only by the present members of TMCC. If there are no questions from the members of TRIZ Master Certification Council, questions can be asked by other persons present at the thesis defense session within the overall time budget; TRIZ Master Certification Council session is conducted by its Chairman or by the member of this council appointed by the Chairman.
- Members of TMCC before the voting have a closed session to discuss the potential decision

The session of TMCC is open for any member of TRIZ community.

18. To arrange for the organization of its work, TMCC appoints a Returning Board from its members, which consists of three people (one is appointed the Chairman).

Decision concerning the thesis is taken based on secret ballot. 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.

The following number of "YES" votes is required for a positive decision.

Number of TMCC members who took part in voting	Minimal number of "YES" votes required
12	8
10-11	7
9	6
7-8	5

Improperly filled voting ballot is considered as a "NO" vote.

TMCC members, who are scientific/research supervisors of a candidate, don't take part in voting on the thesis, in the preparation of which they participated.

TRIZ Master Certification Council has the right to make decisions on the modification of the time schedule and program of its work.

19. MATRIZ Presidium accepts the decision of TRIZ Master Certification Council (having checked it for compliance with the provisions and regulations accepted in MATRIZ) and hands it over to MATRIZ President for approval, after which the Secretariat of MATRIZ President prepares and sends to new TRIZ Masters the diplomas, which are signed by MATRIZ President and Chairman of the TMCC or Chairman of the TMCC session. The signatures are verified by MATRIZ seal.
20. Specialists certified for level 5 (top level) of TRIZ get the TRIZ Master diplomas drawn up on a specially prepared form of MATRIZ (Appendix 15). The ground for TRIZ Master degree conferral - the development of TRIZ as a methodology, achievements in practical application of TRIZ, or achievements in teaching TRIZ - is indicated in the Diploma in addition to the name of new TRIZ Master.
21. Information on new TRIZ Masters is published at the MATRIZ website within a week after the defense of the thesis.
22. All disputable issues on the decisions of TRIZ Master Certification Council are addressed by MATRIZ Presidium and are approved by MATRIZ President.
23. The present provisions and alterations to them are accepted by MATRIZ Presidium and approved by MATRIZ President. Alterations made in the present Regulations have no retroactive effect and hence cannot be applied to decisions made before the date, on which amendments and alterations were made.