

Regulations -- SZTE Doctoral School of Mathematics

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0. Preamble

This regulation is prepared **taking into account higher-level regulations**; in most cases **it only supplements them**. The Doctoral School operates a **website** from which the mentioned **higher-level regulations** can be easily **found**. These higher-level regulations currently include:

- the National Higher Education Act (abbreviated Nft; more precisely Act CCIV of 2011 with effective changes from September 1, 2016)
- the Government Decree (specifically Government Decree 387/2012 (XII.19.) on doctoral schools, doctoral procedures, and habilitation)
- the SZTE Doctoral Regulations
- the DDC Regulations (more precisely: Regulations of the SZTE Faculty of Science and Technology Doctoral Council).

Furthermore, on the mentioned website, the Doctoral School draws attention in a regularly updated separate information document to which paragraphs of the higher-level regulations are most important for doctoral candidates concerning doctoral training and degree acquisition.

1. Structure and Governing Body of the Doctoral School

1. The Doctoral School of Mathematics and Computer Science (hereinafter **DS** or **(Doctoral) School**) is coordinated and directed by the Doctoral School Council (hereinafter **DSC** or **Council**).
2. The DSC chairperson is the head of the DS, who receives their appointment according to the University Doctoral Regulations for a fixed term.
3. Other Council members are elected by the core members of the DS from among core members and supervisors and are appointed by the University Doctoral Council.
4. The core members' council is entitled to propose amendments to the DS Regulations by an absolute (incl. absent members) majority. Regarding training programs and their leaders, this right is delegated to the DSC.
5. The head of the DS may have a deputy according to SZTE Doctoral Regulations. Additionally, a second deputy may exist to handle certain affairs. Deputies are elected by the DSC on the chair's proposal.
6. The DSC may invite any core member, supervisor, or educator of the School to meetings with consultative rights, either permanently or temporarily. If a DSC member does not meet MAB requirements in the Doctoral Database for a period, they retain only consultative rights until those requirements are met.
7. Let n be the number obtained by subtracting the number of temporarily absent (min. 3 months) active voting DSC members from the total active (non-retired) voting members. DSC meeting is quorate if
 - more than $n/2$ voting members present, and
 - chair or deputy present.
8. DSC decisions are by majority vote; valid votes must meet quorum threshold above. Yes/no votes only for decision questions; ties broken by chair vote.
9. Decisions are generally by open vote. Secret ballots upon request of any present member. Personal matters always decided by secret ballot.
10. The DSC elects a permanent vote-counting and authentication committee and sets its operating rules.
11. In justified cases and on chair's initiative, DSC may decide without meeting electronically (e-mail) and/or ballot. Valid only if:
 - voters sufficient in an actual meeting,
 - less than quarter of voters object omitting meeting,
 - authentication committee confirms decision.
12. DSC agenda items and preparatory materials must be accessible 1–3 working days before meetings electronically. Meeting dates and agenda announced at least 3 working days before.
13. DSC meetings convened by DS head at least semi-annually. Early convening mandatory if at least 3 members request it on same matter.

2. Responsibilities and Powers of the Doctoral School Council

Interpretive note: all powers below pertain at most to DSC competence; changes in higher regulations may turn DSC *decision* into a *proposal* for a higher forum, or vice versa.

DSC responsible for **all** matters linked to the School assigned by higher regulations, including:

1. **Decides** on issues whose decision rights cannot be delegated:
 - managing DS income in agreement with Bolyai Institute leadership;
 - defining permanent or given *training reporting period* (study semester) subjects;
 - ranking applicants for doctoral training.
2. **Decides** on issues which may be delegated to respective training program leader, or is delegated in (*) marked cases:
 - appointing topic proposers, DS educators, and individual doctoral students' supervisors,
 - (*) approving topics announced to students and dissertation's subtopics,
 - (*) accepting reports for reporting periods of organized doctoral students,
 - (*) authorizing study trips;
3. **Proposes** regarding DS matters:
 - creating, terminating, modifying training programs,
 - persons for program leadership,
 - initiation of complex exams (or degree processes),
 - initiation of public phases,
 - composing complex exam subjects,
 - forming exam committees and defense review committees,
 - granting study deferrals,
 - awarding doctoral degrees,
 - doctoral students' employment,
 - appointing admission committee members,
 - electing new core members,
 - filling admission quotas assigned by the Faculty.

3. DS Training Programs and Their Leaders

DS primarily offers courses related to the following programs:

- Algebra program, led by Dr. Zádori László, university professor, Doctor of Science;
- Analysis program, led by Dr. Móricz Ferenc, professor emeritus, Doctor of Science;

- Dynamical Systems program, led by Dr. Krisztin Tibor, university professor, member of the Hungarian Academy of Sciences;
- Stochastics program, led by Dr. Pap Gyula, university professor, Doctor of Science;
- Geometry, Combinatorics and Theoretical Computer Science program, led by Dr. Hajnal Péter, university associate professor, Candidate of Science.

As a research topic – exceptionally – one may announce topics not falling into the above programs. The above programs also include didactic courses and research topics.

- Coordinator responsible for didactic training and research: Dr. Kosztolányi József, associate professor, PhD.

4. DS Administration

1. DS administrative matters are handled under the Chair's direction by deputies and a person designated from the Bolyai Institute Office, hereinafter Administrator.
2. Administration includes continuous operation of the DS website. The website has partly public and partly confidential internal sections accessible only to the DSC, core members, and Administrator.
3. Minutes and decisions of DSC meetings are prepared and published electronically on the internal website. Minutes are authenticated by the chair and authentication committee and stored by the Administrator.

5. Degree Acquisition Procedure Rules

Higher-level regulations are authoritative. Beyond and within these, additional rules apply.

1. Complex exam requires examination in two mathematical subjects selected by DSC considering candidate's courses. One can be didactics if the candidate's topic is didactics.
2. For results of mathematical didactic research, theses of the following types are accepted (or serving as their basis):
 - classical thesis on didactic methods, application or evaluation;
 - textbook, textbook series, new subject documentation with scientific review and evaluation;
 - teaching and application aids, software, program packages, didactic "products" with scientific description, evaluation, and illustrations.
3. Publication requirements
 - A. Formal condition for submitting thesis: candidate must have *two* accepted (or published) scientific publications ("two publications") fulfilling below criteria.
 - B. Each published at a *recognized venue*, meaning peer-reviewed, and meets at least one condition below.
 - **(Ba)** The publication is an article in a *mathematics or mathematics didactics journal* listed at submission time in *SCImago* ranking or indexed by *Science Citation Index* or has

impact factor.

- **(Bb)** The publication (journal article, conference paper/chapter, collection or monograph) is indexed or expected to be indexed by at least one of Mathematical Reviews, Zentralblatt für Mathematik, Computer Reviews, Zentralblatt für Didaktik der Mathematik.
- **(Bc)** By DSC special decision, quality meets requirements of (Ba)–(Bb) and published at recognized venue.

C. At least one publication must be a *journal article*; except in special cases DSC may accept equivalence if published in a highly reputable international outlet.

D. At least one publication is written in English.

E. At least one publication is part of the thesis and all publications are cited in the thesis (at least under “author’s other publications”).

F. Upon submission, candidate must attach beyond required appendices:

- a. proof of acceptance for publications (if unpublished);
- b. signed statement from supervisor citing (A)–(E) that to the best of their knowledge conditions are met and requesting (Bc) if needed.
- c. if justified, (a), (b) or co-author statements may be substituted by DSC decision confirmed by DS head.

4. Thesis submission only after successful (supportive) internal defense.

5. Beyond higher-level regulations, candidate must electronically submit thesis with theses booklet in PDF to DS head (or Administrator if unavailable); automatically consents to public availability on DS website.

6. Among two legally required foreign languages, one must be English (unless candidate’s native language), second preferably French, German, or Russian. If second language is not among four listed and not candidate’s native language, first foreign language must be English. Other neighbors’ languages or EU official languages with regular mathematical publications are accepted second languages, though credit by language exams for most not ensured by DS. For other languages, DS Council decides individually considering usefulness to candidate’s work.

7. For initiating a complex exam procedure (briefly: procedure), DS head appoints a referee, preferably among DSC members, who verifies prerequisites, introduces the request, and recommends support. Except when initiation guaranteed by law, DSC votes secretly on initiation. DSC forms proposals on exam subjects and committees by open vote based on referee recommendation.

8. For submitted thesis, referee examines if thesis fulfills formal and publication requirements and informs DSC about public procedure feasibility and committee composition upon referee’s recommendation.

9. DSC members must be invited to the public defense, with theses booklet. Also invited are Bolyai Institute educators, researchers, doctoral students, and candidates. All invitees must be informed about thesis and theses electronic availability.

6. Studies of Doctoral Students in Organized Training

1. DS announces admission topics and scoring algorithm publicly on its website. DSC ranks applicants based on admission committee opinion and past results.
2. Doctoral student's studies and research are supervised by their supervisor; if no supervisor in first year, a mentor from DS educators is appointed by DSC.
3. Doctoral students follow credit system set and regularly reviewed by DSC (see Appendix 1).
4. Doctoral student must submit progress report before official end of each reporting period electronically to DS head via supervisor and signed by Administrator. Report form in Appendix 2.

7. Admission to Doctoral Studies

1. Admission is regulated by Discipline-specific Doctoral Council; scientific result points regulated by Doctoral School.

Let x be maximum points for scientific achievements of a newly graduated applicant. Value of accepted article in international mathematics journal or prize-winning student conference thesis worth between $2x/3$ and x depending on significance, journal ranking, number of co-authors, local or national nature of student conference and prize. Other publications or scientific presentations rated proportionally with individual evaluation. Participation in university teaching (demonstrator work) also measures research aptitude, counted under scientific achievements with maximum $x/3$ points.

2. Foreign applicants applying (and eligible) for scholarship evaluated same as domestic applicants with normalization of academic results.
3. For foreign applicants not applying for scholarship, Doctoral School may individually evaluate regardless of point scoring based on available information.

8. Validity and Entry Into Force

This regulation enters into force on the day of approval by Discipline-specific Doctoral Council. The regulation applies to doctoral candidates starting four-year training. Candidates who started earlier (except exceptions below) remain subject to previous regulation (effective Nov 2015). Higher-level regulations distinguish exactly the scope of candidates under former and current regulations.

Publication requirements in current regulation also apply to earlier candidates.

The regulation was unanimously supported by DS core members (13 total, 7 present at vote) on Sept 18, 2017 with 7 yes, 0 abstentions, 0 no votes. Approved by Discipline-specific Doctoral Council Oct 4, 2017.

Interpretive note (Feb 23, 2018): omission of additions about three-level scale in Credit

Table and deletion of credits for complex exam in drafts from Sept 18 and Oct 4, 2017 versions, but these are automatically valid by prior DSC decisions and higher rules.