Special Issue of the Logic Journal of the IGPL
on
Non-Classical Mathematics

Guest editors: Giovanni Sambin, Greg Restall and Libor Behounek

The 20th century has witnessed several attempts to build (parts of) mathematics on grounds other than those provided by classical logic. The original intuitionist and constructivist renderings of set theory, arithmetic, analysis, etc. were later accompanied by those based on relevant, paraconsistent, contraction-free, modal, and other non-classical logical frameworks. The subject studying such theories can be called non-classical mathematics and formally understood as a study of (any part of) mathematics that is, or can in principle be, formalized in some logic other than classical logic.

The scope of this special issue includes original papers on any mathematical discipline that can be formalized in a non-classical logic or in an alternative foundational theory over classical logic, and topics closely related to such non-classical or alternative theories. Particular topics of interest include (but are not limited to) the following:

- **Intuitionistic, constructive, and predicative mathematics:** Heyting arithmetic, intuitionistic set theory, topos-theoretical foundations of mathematics, constructive or predicative set and type theories, pointfree topology, etc.
- **Substructural and fuzzy mathematics:** relevant arithmetic, contraction-free naïve set theories, axiomatic fuzzy set theories, fuzzy arithmetic, etc.
- **Inconsistent mathematics:** calculi of infinitesimals, inconsistent set theories, etc.
- **Modal mathematics:** arithmetic or set theory with epistemic, alethic, or other modalities, modal comprehension principles, modal treatments of vague objects, modal structuralism, etc.
- **Alternative classical mathematics:** alternative foundational theories over classical logic, non-standard analysis, etc.
- **Topics related to non-classical mathematics:** metamathematics of non-classical or alternative mathematical theories, their relative interpretability, etc.

Submission of papers:
Papers should be submitted by email to behounek@cs.cas.cz and should follow the instructions for submission to the Logic Journal of the IGPL described at
http://www.oxfordjournals.org/our_journals/igpl/for_authors.html
(Notice that accepted papers longer than about 30 printed pages may incur extra page charges.)
All papers will be refereed according to the standards of the journal.

Deadline for submission of manuscripts: ~~**January 31, 2010**~~ **Extended: February 28, 2010**
(Individual extensions by a few weeks can be arranged.)