Editorial

We are happy to present you the new issue of Nomad. This issue is special in many ways. Firstly, it is a double issue. This is not very special as Nomad has published six double issues in its history, but we try hard to make this list impressive. Secondly, this is the last issue of volume 2012, and it comes out well into 2013. This is not the first time that an issue of Nomad is delayed to the next year. As editors of Nomad, we work hard to avoid such delays and we have good hopes that we soon will succeed. Thirdly, with 12 articles and close to 200 pages, this is the largest issue in the history of Nomad. Would that be an acceptable apology for the delay? And finally, this is a thematic issue. The last thematic issue of Nomad came out in 2011 (Volume 16, No 1-2), and it has been the habit for Nomad in years prior to 2010 to publish thematic issues. The editorial team of Nomad intends to continue this tradition also in the future, so this issue includes a call for papers for a forthcoming thematic issue "Mathematical knowledge for teaching – Nordic contributions". We also encourage suggestions for new thematic issues. In case you would like make such a suggestion, please contact us at nomad-editors@ncm.gu.se.

This thematic issue is based on selected papers from the 18th MAVI (Mathematical Views) conference, which took place at the University of Helsinki, Finland from September 12 to September 15, 2012. The MAVI conferences were initiated in 1995 by Erkki Pehkonen and Günter Törner. You can read about the history of MAVI in the article by Erkki Pehkonen in this issue. The conference was attended by 44 participants and 28 papers were presented. Each presented paper was peer reviewed by three conference participants before presentation. After the conference, 14 papers with the most positive reviews were invited for the thematic issue of Nomad. Liljedahl had already published his paper elsewhere, but we accepted his manuscript based on a presentation at MAVI 17 instead. The authors developed their papers based on the feedback they had received before and during the conference. The revised papers were sent out to one reviewer who had already reviewed the conference paper and to one external reviewer who had not been at the conference. Two of the papers were rejected in the review process, which led to the twelve articles published in this double issue of Nomad. An earlier version of Liljedahl's paper has appeared in the proceedings of MAVI 17, and earlier versions of the other eleven papers will appear in the conference proceedings of MAVI 18.

This thematic issue opens with two articles that take a broad perspective to mathematics related beliefs. Pehkonen's article of the history of MAVI is a good introduction to the research area and an invaluable case report of initiation and expansion of an international research community. The second article will lead the reader into more refined discussions of what beliefs are. Liljedahl, Oesterle and Bernèche have written a critical analysis of the issue of stability in belief research. Their analysis challenges the use of stability as a defining characteristic of beliefs.

The following three papers look into students' mathematics related affect. Laine, Näveri, Ahtee, Hannula and Pehkonen analyze the affective tone in third-graders' drawings of their mathematics classroom. Children's drawings provide rich data to analyse students' view of their mathematics lessons and the method is able to capture differences in emotional climates across different classrooms. Surprisingly, this is the only paper in the issue that looks at student affect in compulsory education. The other two papers on student affect (Andrà & Magnano and Furinghetti, Maggiani & Morselli) focus on Italian tertiary mathematics students' affect at the beginning of their university studies. Andrà and Magnano open a new venue for belief research using decision tree analysis, a data mining technique in their extensive data set to identify early signals that would predict whether students' transition to university studies would be successful. Furinghetti et al., on the other hand, studied qualitatively a group of nine students with a specific focus on a known problem of the transition, namely formal mathematical proving.

The next three papers focus on the mathematical affect of elementary teachers. Coppola, Di Martino, Pacelli & Sabena and Lutovac & Kaasila have studied future elementary teachers' affect during teacher education. Coppola et al. analyze the relationship among 189 primary school pre-service teachers' emotional disposition towards mathematics and towards the idea of having to teach it. They observed that quite many pre-service teachers had negative experiences as mathematics learners, attributing their experiences largely to their teachers. Yet, most of those with negative experiences were looking forward to teaching mathematics in the future, having a mission for redemption. Lutovac and Kaasila go deeper with their analysis of two elementary education teachers, who had reported such negative experiences with school mathematics. They analyse the mathematical identity work of one Finnish and one Slovenian pre-service teacher as a dialogue between the past and the future. Lutovac and Kaasila attribute the two different types of mathematical identity work to their respective mathematics education courses' facilitation of students' identity work. Palmér's article continues the discussion of the development of primary teachers' professional identity over the

first years in school. She presents one case study of a novice teacher, analysing the apparent inconsistency between the novice teacher's expressed beliefs and her practice.

The following three papers by Gómez-Chacón, Portaankorva-Koivisto, and Lepik, Pipere & Hannula continue on teacher beliefs, only moving to mathematics teachers on secondary level. Gómez-Chacón takes a close-up view at mathematics teacher students' affect. In her paper the focus is not only on the relatively stable "global affect", but also on the continuously changing "local affect" during problem solving using a dynamic geometry system. Portaankorva-Koivisto's paper had a more traditional focus, exploring beliefs of 16 pre-service mathematics teachers. However, her research utilized a less frequently applied method, analysing respondents' metaphors for mathematics, teaching and teacher role. The results indicate that within the richness of responses, there seems to be some consistency across the different metaphors produced by the same respondent. The paper by Lepik et al. is in a sense a very traditional survey of mathematics-related beliefs in Estonia, Latvia and Finland. One interesting result of this survey is that the so-called traditional and constructivist teaching approaches are not mutually exclusive alternatives, but there are teachers who agree with both views at the same time as well as teachers who agree with neither views, the latter being more popular in Finland than in the two Baltic countries.

The last paper of this special issue is Kontorovich & Koichu's case study of an expert, who designs problems for national and international mathematics competitions. Their qualitative analysis gives an example of the symbiotic relationship between cognitive and affective domains in expert problem posing.

Altogether, this special issue provides varied perspectives to research on mathematics related affect. Most notably the papers present a rich selection of research methods, some of which are quite new in mathematics education research. May this issue of Nomad bring enjoyment and inspiration to its readers.

Thanks to authors and reviewers 2012

List of reviewers 2012

Anne B. Fuglestad
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Call for papers

We would hereby like to welcome submissions for an upcoming thematic issue of Nordic Studies in Mathematics Education (Nomad). The topic of the thematic issue is "Mathematical knowledge for teaching – Nordic contributions", and we encourage potential authors to submit articles that report or discuss Nordic contributions related to research on "mathematical knowledge for teaching" (MKT). Teachers play an important role when it comes to determining the quality of students' learning, and teachers' knowledge of content is an important aspect of teacher quality. Building upon the theories of Lee Shulman, Deborah Ball and her colleagues at the University of Michigan have developed a practice-based theory of MKT. MKT can be defined as the mathematical knowledge that is needed to do the work of teaching mathematics, and the MKT framework has been described as one of the most promising efforts to find out what kind of mathematical content knowledge that is needed for high-quality teaching. Based on classroom studies, the researchers at the University of Michigan have developed measures to assess teachers' MKT, and they have found strong connections between teachers' level of MKT and their mathematical quality of instruction—as well as to students' achievements. In the last couple of years, researchers have started to use the MKT measures outside the U.S. as well, and several interesting discussions have emerged. We encourage authors to submit articles related to different aspects of MKT in a Nordic context. The deadline for submitting manuscripts for this thematic issue is November 30, 2013.

Reidar Mosvold and Janne Fauskanger
Guest editors for the thematic issue on MKT