

*Seminar of the Research on Mathematics Education:  
Invitation to the research on mathematics teacher education*

数学教育学セミナー  
～教師教育研究への誘い～

この度、教師教育をテーマに数学教育学のセミナーを開催することになりました。発表者には、日本で一年半のポストドク研究生活を送ってきたヴァレリー・バトーさんを始め、日本からも二名の先生にお話いただきます。三者三様のアプローチで教師教育（特に日本の）の深い理解へと迫ります。教師教育についての研究は、他国と比べるとわが国ではまだまだ少ない感じがしますが、こうした機会を通して活性化していけたらと考えております。セミナーでは、発表時間、討議の時間を多く設け、教師教育の研究に共通の関心を持つ参加者が発表内容を深く理解し、研究を協力して発展させる場となるとともに、同様の関心を持つ研究者間のコミュニケーションの場になることを期待しております。是非ふるってご参加ください。なお、セミナーは基本的に英語で行う予定です（必要があれば部分的に通訳します）。

セミナー後、近くで懇親会を予定しております（場所未定）。懇親会に参加ご希望の方は、宮川までお知らせください。

**DATE:** 11 January 2020, 13:00 – 17:30

**VENU:** Waseda University, Bld. 14, Room 717

(〒169-8050 東京都新宿区西早稲田 1-6-1)

**PROGRAM**

**13:00 – 13:10 Introduction**

**13:10 – 14:25 Valérie BATTEAU** (Waseda University & HEP Vaud, Switzerland)

*Interventions and choices of primary school teachers during the collective teaching for the development of mathematical thinking*

Break (15 min)

**14:40 – 15:55 Keiko HINO** (Utsunomiya University)

*Learning pathway of mid-career teacher in a mathematics professional development program: Focusing on growth of teacher's perspective*

Break (15 min)

**16:10 – 17:25 Koji OTAKI** (Hokkaido University of Education)

*A struggle of epistemological vigilance for doing “scientific” research on lesson study*

**18:00 – 20:00 Dinner party** (place to be announced)

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**Valérie BATTEAU** (Waseda University & HEP Vaud, Switzerland)

**Title:** *Interventions and choices of primary school teachers during the collective teaching for the development of mathematical thinking*

**Abstract:** The mathematics teaching in Japanese primary school is marked by the collective dimension and the importance to *mathematical thinking* in the problem solving approach. This research aims to understand how the teacher manages the collective teaching during the whole-class phase, named *neriage* and *matome*, in order to develop *mathematical thinking*. This research unfolds in a French theoretical framework, named double didactical and ergonomical approach that takes into account the teacher and students' activity. The research question is: how does the analysis in *cognitive* and *mediative* components of practices, choices of tasks and teacher's interventions, let us to identify the management of the collective teaching by the teacher in order to develop *mathematical thinking*? This qualitative study focuses on three primary school teachers' practices and points out key elements in the *cognitive* and *mediative* components. The first teacher uses the diversity of students' strategies by identifying common elements during the *neriage* and also with a double movement, decontextualization and recontextualization of the mathematical expression, initiated during the *neriage*. The key element for two others teachers relies on variations of values of didactical variables for the problem that intervene for the choice of tasks and during the *neriage* with additional sub-tasks.

**Keiko HINO** (Utsunomiya University)

**Title:** *Learning pathway of mid-career teacher in a mathematics professional development program: Focusing on growth of teacher's perspective*

**Abstract:** What and how mathematics teachers learn in mathematics professional development (MPD) program? In this presentation, we examine pathway of mid-career teacher learning in a MPD program, in which participant teachers conduct lesson study with university researchers and study student's learning in research lesson by collecting and discussing multiple sources of data. We approach the issue of teacher learning by focusing on "teacher's perspective" relating to theory. Through an analysis of practical research activities of two teachers, we will show significance of teacher's perspective that mediates theory and practice. It enhances teachers' processes of "contextualizing" and extends their views of learning and teaching of students.

**Koji OTAKI** (Hokkaido University of Education)

**Title:** *A struggle of epistemological vigilance for doing "scientific" research on lesson study*

**Abstract:** This talk is based on our upcoming presentation in the ICMI-study 25 on February in 2020: teachers of mathematics working and learning in collaborative groups. I will introduce some newborn theoretical resources for studying lesson study and more general schoolteachers' working, from the perspective of the anthropological theory of the didactic. A crucial assumption of my talk is the following: Almost nothing is as "invisible" as schoolteachers' working in what we study within didactics.