In the last year of the project 9 papers have been submitted by the members of the research team; these papers are listed as papers 57, 58, 61, 62, 63, 65, 66, 67 and 69 in the publication list, and they appeared either in strong international journals or in important special volumes. A short survey of these papers follows; the numbers in square brackets are the reference numbers described above. The most important results have been achieved by Pintz in prime number theory, by Gyarmati, Mérai and Sárközy in theory of pseudorandomness, and by Hegyvári and Szalay in additive number theory.

In [57] Csapodi and Hegyvári study the irrationality of certain decimal fractions. In [35] Dartyge, Gyarmati and Sárközy initiated the study of the irregularities of distribution of binary sequences relative to short arithmetic progressions. In [58] they continue the work by giving both lower and upper bounds for these irregularities for certain important special sequences. In [61] Hegyvári gives bounds for additive and multiplicative character sums of multiplicative and additive Hilbert cubes in prime fields. In [62] Hegyvári and Hennecart study the covering property of the expanding polynomial f(x,y,z) = x+yz in different structures. By using a theorem of Folner, in [63] Hegyvári and Ruzsa study the structure of difference sets of sets of integers having a positive upper density. In the 20eth century Ingham, Turán and Knapowski studied the connection between the size of the error term in the Prime Number Theorem and the zeros of the Riemann zeta function. In {65] Pintz improved significantly on their results, and he applied these results to compare the average size of the error term with the large values of it. In [66] Pintz presents the survey and analysis of some recent extremely important results in prime number theory. In [67] Szamuely and Zábrádi give a detailed presentation of Beilinson's new proof of the comparison isomorhism between deRham- and étale cohomologies of varieties over the field of p-adic numbers. In [69] Zábrádi shows that the category of continous representation of the d-th direct power of the absolute Galois group of the field Q_p of p-adic numbers on finite dimensional vector spaces over the field F_p of p elements (resp. on finitely generated modules over the ring Z_p of p-adic integers, resp. on finite dimensional vector spaces over Q_p) is equivalent to the category of étale (phi,Gamma)-modules over a d-variable Laurent series ring over F_p (resp. Z_p, resp. over Q_p).

Summarizing: during the 5 years of the projects the members of the team have published altogether 71 research papers mostly in strong international journals. In particular, in these papers important results have been achieved in prime number theory, theory of pseudorandomness and additive number theory.

The files of the papers published during the research period since the summer of 2012, or at least the links to the files are presented in the homepage of this research:

http://bolyai.cs.elte.hu/otka-open-access/K100291/