

## Representation of integers by quadratic forms in several variables

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### ABSTRACT.

In this work we consider the representation of positive integers by positive quadratic forms

$$F_p = \frac{p+1}{2} \sum_{1 \leq i \leq j \leq p} x_i x_j + p \sum_{1 \leq i \leq p+1} x_i x_{p+1}$$

in  $p + 1$ -variables for primes  $p = 3, 5, 7$ .

### REFERENCES

- [1] Hecke, E., *Mathematische Werke*, Zweite Auflage, Vandenhoeck u. Ruprecht, Göttingen, 1970
- [2] Petersson, H., *Modulfunktionen und Quadratische Formen*, Springer-Verlag, Berlin, Heidelberg, New-York, 1982
- [3] Tekcan, A. and Bizim, O., *On the Representation of Positive Integers by Quadratic Forms with Seven Variables*, South East Asian Bull. of Mathematics **28**(5) (2004), 875-886
- [4] Tekcan, A. and Bizim, O., *On the Number of Representations of Positive Integers by Quadratic Forms as the Basis of the Space  $S_4(\Gamma_0(47), 1)$* , Int. Jour. of Maths . and Math. Sci. **2004**(12)(2004), 637-646
- [5] Tekcan, A., *Representations of Positive Integers by a Direct Sum of Quadratic Forms*, Results in Mathematics **46** (2004), 146-163
- [6] Tekcan, A., *Representations of Positive Integers by Positive Quadratic Forms and the Fourier Coefficients of Cusp Forms*, South East Asian Bull. of Mathematics **31**(2)(2007), 349-362

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