Thin bases of order h, J. Number Theory, **98** (2003), 34-46

- reference [5]: for "n-ter" read "h-ter"

Shifted convolution sums and subconvexity bounds for automorphic L-functions, IMRN **2004**, 3905-3926

- first display in Section 4 should read $\lambda \gg \frac{Q^2}{(N\ell_1\ell_2)^{1+\varepsilon}}$

Non-vanishing of class group L-functions at teh central point, Ann. Inst. Fourier **54** (2004), 831-847

- Lemma 3.1: the first term needs an additional factor $\sqrt{D}$.

Uniform bounds for Fourier coefficients of theta-series with arithmetic applications, Acta Arith. **114** (2004), 1-21

- p.17: the first term of the last line of the display after (4.7) should be $2^{3\nu/2}m^{1/4}$, and this inequality holds for $2^\nu \leq \min(w^2, m^{3/8})$. To cover the remaining range, one can use Lemma 4.4 instead of Lemma 4.1a in the next display getting

$$\begin{aligned} &r(f_1, 2^{2\nu}m) - r(f_2, 2^{2\nu}m) \\ &\ll (Nm2^\nu)^\varepsilon HN^3 2^{\nu/2} N(m^{1/4}vw + m^{13/28}(vw)^{3/14}) \\ &\ll HN^{7/2+\varepsilon}(2^{2\nu}m)^{13/28+\varepsilon} \end{aligned}$$

  if $2^\nu \geq \max(w^{1/2}, w^{7/3}m^{-1/2})$. This extra estimate is not necessary if one uses Proposition 2.1 in [Ternary quadratic forms..., CRM lecture notes **46** (2008), 1-17].
- p.13, line 4: the bound $|\alpha(\mathbf{x}, A, \rho_j)| \ll_k (\Delta, c_j)^{1/2}\Delta^{-1/2}$ does not follow immediately. This is repaired in Lemma 12 of [Waibel, Uniform bounds for norms of theta series and arithmetic applications]

Rankin-Selberg L-functions on the critical line, Manuscr. Math. **117** (2005), 111-133

- (3.1) should read: $\lambda \gg \frac{Q^2}{L^{2+\varepsilon}}$

Representation numbers of quadratic forms, Duke Math. J. **135** (2006), 261-302

- Display after (7.2): for $\chi_j^{\tau_j}(p)$ read $\chi_j^{\tau_j}(\mathfrak{p})$ where $p = \mathfrak{p}^2$.

A Burgess-like subconvex bound for twisted L-functions (with appendix 2 by Z.Mao), Forum Math. **19** (2007), 61-106

- p.98 line -3: for $\pi \otimes \chi$ read $\pi \otimes \chi\chi_{-4}^k$.

Sums of Hecke eigenvalues over quadratic polynomials, Int. Math. Res. Not. **2008**, article ID rnn059, 29pp.

- second last display on p.7: the Eisenstein series are wrongly defined. It should be
$$E_{\mathfrak{a}}(z;s) := \sum_{\gamma \in \Gamma_{\mathfrak{a}} \backslash \Gamma} \overline{\vartheta}(\gamma) j(\gamma z)^{-k} j(\sigma_{\mathfrak{a}}^{-1}, \gamma z)^{-k} |j(\sigma_{\mathfrak{a}}^{-1}\gamma, z)|^k (\Im \sigma_{\mathfrak{a}}^{-1}\gamma z)^s$$
where $\vartheta(\gamma) = \chi(d)\epsilon_d^{-1}\left(\frac{c}{d}\right)$ and $j(\gamma, z) = cz + d$. Similarly the display before (2.7) needs to be adjusted as in [14, p.3876].
- Lemma 3: For K_{ir} read K_{2ir}
- (3.4) and the previous display: for $e(\mp sh/2)$ read $e(\mp sh/(2c))$

Ternary quadratic forms and sums of three squares with restricted variables, CRM lecture notes **46** (2008), 1-17

- before (1.8): remove the sentence "Note that we must have $\alpha_1\alpha_2 = 0$, since q is primitive."
- p.8, line -7: for "Theorem 1 and Remark 1" read "Theorem 2"
- estimate in the second line of the proof of Lemma 2.3: for $n^{3/2}\Delta^{-1/2} + n^{1+\varepsilon}$ read $x^{3/2}\Delta^{-1/2} + x^{1+\varepsilon}$
- display after (2.5): for $s(n, \rho_j)$ read $|s(n, \rho_j)|$
- second display after (2.5): for $\mathbf{x}$ read $\mathbf{h}$
- (2.6): add $(nN)^\varepsilon$ at the end.
- Proposition 3.1: for $n \equiv 3 \pmod 8$ read $n \equiv 3 \pmod{24}$

Hybrid bounds for twisted L-functions, Crelle **621** (2008), 53-79

- (4.9): $J_{k-1} = i^{k-1}\phi_{k-1,0}$
- on p.75 it is assumed that V is independent of t. This is a priori not the case. Instead of the approximate functional equation (2.12) one should use Proposition 1 of "A hybrid asymptotic formula for the second moment..." This introduces an error of $D^{1/2}T^{-A}$ in (7.2) and the argument goes through as claimed. (7.3) holds only on the support of ψ (which is all that is needed) and for the display after (7.4) one has to first write V as an inverse Mellin transform.
- (8.8): for N_0 read N

On the central value of symmetric square L-functions, Math. Z. **260** (2008), 755-777

- equation (2.10) and the last display in Section 3: the h-sum should be removed
- equation (3.1): for $\chi_{D(d)}$ read $\chi_D(d)$

Sums of smooth squares, Compositio Math. **145** (2009), 1401-1441

- last display: for $p_1^{1/4}$ read $p_1^{1/2}$. Correspondingly, in Section 5, line 3, the exponent 1/148 should be 1/152, and the value of θ in Theorem 2 should be $375/608 = 0.6167...$ instead of $365/592 = 0.6165....$

Iterates of Vinogradov's Quadric and Prime Paucity, Michigan Math. J. **59** (2010), 231-240

- in Lemma 2 and 3 add the assumption that the two sets in the display before (22) have cardinality 3. Note that this condition is violated only if $\alpha\beta$ or $\alpha\bar{\beta}$ are in $\mathbb{Z}\rho$ with $\mathcal{N}\rho = 3$.
- p.240: call products $\delta_0 \cdots \delta_{K-1}$ distinguished if there exists a subset $I \subseteq \{0, \ldots, K-1\}$ such that $\prod_{i \in I} \delta_i \prod_{\imath \notin I} \bar{\delta}_i$ is in $\mathbb{Z}\rho$ with $\mathcal{N}\rho = 3$. If a product is not distinguished, the new versions of Lemma 2 and 3 are still applicable. The distinguished products contribute only $N^{1+\varepsilon}$ to the final sum.

Twisted L-functions over number fields..., GAFA **20** (2010), 1-52

- p.7, line -2: add "...to a section $\phi \in H$ such that the restriction of $\phi(s)$ to $\mathcal{K}$ is independent of $s \in \mathbb{C}$."
- p.11, lines -11 to -9: q has to be restricted to a fixed parity $q \equiv \kappa \pmod 2$ for $\kappa \in \{0, 1\}$.
- the second last display on p.30 is not correct as claimed, but a variant of it is true. See `http://www.renyi.hu/~gharcos/hilbert_erratum.pdf` for a corrigendum
- Section 2.12: some notational changes are necessary: In lines -5 to -1 of p. 32, the ideal classes should be understood in the narrow sense, while the generator γ and the product $r_1 r_2$ should be totally positive. The Kuznetsov formula (92) should be corrected as follows: on the left hand side the restriction $\varepsilon_\pi = 1$ should be omitted, and on the right hand side the summation over U/U^2 should be restricted to U^+/U^2. Accordingly the proof must be slightly modified. The analysis must be carried out on the larger space

$$FS = L^2(GL_2(K)Z(K_\infty)\backslash GL_2(\mathbb{A})/\mathcal{K}(\mathfrak{c})) = \bigoplus_{\omega \in \widehat{C(K)}} L^2(GL_2(K)\backslash GL_2(\mathbb{A})/\mathcal{K}(\mathfrak{c}), \omega).$$

  In particular, whenever we refer to $L^2(GL_2(K)\backslash GL_2(\mathbb{A})/T\mathcal{K}(\mathfrak{c}), \omega)$, it should be understood as $L^2(GL_2(K)\backslash GL_2(\mathbb{A})/\mathcal{K}(\mathfrak{c}), \omega)$ without T. Accordingly, each restriction $\varepsilon_\pi = 1$ or $\varepsilon_\varpi = 1$ should be disregarded in the text. Then Lemma 6 and Theorems 2-3 remain valid, and for the latter we do not need to assume that π_1 and π_2 have the same signature character, cf. [Remarks 11 & 13]. Complete details can be found in P. Maga, A semi-adelic Kuznetsov formula over number fields, `arXiv:1209.5220`.
- p.45, lines -10 to -9: all 5 occurrences of $\mathfrak{c}$ should be $\mathfrak{t}$.

Sup-norms of Eigenfunctions on Arithmetic Ellipsoids, IMRN 2011

- p.3, 4 lines after (1.3) for "Holowinsky and the Blomer" read "Holowinsky and Blomer"
- p.7, line -4 in Section 2.1: for "even finite number" read "even number"
- p.18, line 10: for $1, x$ read $1, x_\infty$.

Subconvexity for a double Dirichlet series, Compositio Math. **174** (2011), 355-374

- p.358, sentence after (9): $\psi_2(n) = -1$ if ... and $\psi_{-2}(n) = -1$.

- Equation (11): $\delta_0 = \begin{cases} d_0, & \psi = \psi_1, d \equiv 1\,(4) \text{ or } \psi = \psi_{-1}, d \equiv 3\,(4), \\ 4d_0, & \psi = \psi_1, d \equiv 3\,(4) \text{ or } \psi = \psi_{-1}, d \equiv 1\,(4),. \\ 8d_0, & \psi = \psi_2 \text{ or } \psi_{-2} \end{cases}$
- Equation (18), although quoted from [IK], is nevertheless incorrect (counterexample: $z = -s + 1/10$), but the polynomial dependence plays no role in the application of (18) on p. 368
- Equation (31): remove $\psi'(d)$ in the numerator in the first line
- p.362, line -4: for "and (11) together with (8) - (29), we find" read "and (11), together with (8), to (29), we find"
- p.365, first display: $C = \left|\frac{1}{4} + \frac{i(u+t)}{2}\right| \cdot \left|\frac{1}{4} + \frac{iu}{2}\right|$ (i.e. remove $C(0,u)$)
- p.365, display after (39): add a factor π^{-2z} to the first term on the right side and remove this factor in (43)
- p.368, 4th display, second line: for $n^{1/2\pm it-s}d_0^{1/2+iu-w}$ read $n^{1/2\pm it+s}d_0^{1/2+iu+w}$
- p.372, display before (67): $D_{\psi,\psi'}(t,u,p;W) \ll U^{\varepsilon}((TU)^{1/4} + T^{1/6}U^{1/3}) \ll (TUS)^{1/6+\varepsilon}$

Friable values of binary forms, Comm. Math. Helv. **87** (2012), 639-667

- Proposition 3: for $\check{F}$ read $\tilde{F}$

Subconvexity for twisted L-functions on $GL(3)$, Amer. J. Math. **134** (2012), 1385-1421

- p.1386, first display; p.1391, second and 6th display; display above (19); display above (21); (21); p.1405 first, third and 5th display; p.1406, first display: add summation condition $(m,q) = 1$.
- Lemma 2: for ω_j^* read $\omega_{f_j}^*$
- statement of Lemma 9: it should be
$$\mathcal{D} := \{z \in \mathbb{C} : \inf\{|z-y| : y \in [a,b]\} < \rho\}$$
(replace $>$ with $<$)
- p.1397, 4th display: the second line should read
$$\left(e\left(\mp\frac{s}{4}\right)\left(e\left(\pm\frac{\alpha_1}{2}\right) + e\left(\pm\frac{\alpha_2}{2}\right) + e\left(\pm\frac{\alpha_3}{2}\right)\right) + e\left(\pm\frac{3s}{4}\right)\right)$$
- p.1398, first display, last line: the exponent in the denominator should be $(1+\ell)/4$ instead of $(1+j)/4$.
- p.1400, line 1: for "$e(2\sqrt{y}D)$ or $\phi(y) = e(\pm 3(xy)^{1/3})$" read "$2\sqrt{y}D$ or $\phi(y) = \pm 3(xy)^{1/3}$".

Period integrals an Rankin-Selberg L-functions on $GL(n)$, GAFA **22** (2012), 608-622

- p.612, first display: in the first integral a factor y^k is missing.
- (3.5) should read
$$\asymp \prod_{j,k=1}^{n-1} \left|\frac{\Gamma_{\mathbb{R}}(s + n(\nu_j + \ldots + \nu_k))^2}{\Gamma_{\mathbb{R}}(1 + n(\nu_j + \ldots + \nu_k))}\right|.$$
- display after (3.10): for $x^t y^t y x$ read $x y y^t x^t$

Non-vanishing of L-functions, the Ramanujan conjecture, and families of Hecke characters, Canad. J. Math. **65** (2013), 22-51

- Lemma 6.2: The constant C depends also on ϕ.

Distribution of mass of holomorphic cusp forms, Duke Math. J. 162 (2013), 2609-2644

- Display before (8.4): for $\frac{d}{dx}$ read $\frac{d}{dt}$

On the 4-norm of an automorphic form, J. EMS **15** (2013), 1825-1852

- (2.8): the notation $L(1, \mathrm{Ad}^2 f)$ differs from the usual meaning by a factor $(1-1/q)$.
- (2.12): the last formula should be $q^{1/2}|\lambda_g(q)| \ll 1$ instead of $q^{-1/2}|\lambda_g(q)| \ll 1$
- (2.16) and (2.18): the integral in the diagonal should be from $-\infty$ to ∞.

Hybrid bounds for automorphic forms on ellipsoids over number fields, J. Inst. Math. Jussieu **12** (2013), 727-758

- Section 2.5, line 2: for "space functions" read "space of functions".
- second line, proof of Lemma 4.1: for α_1 and α_2 read α, β.
- two lines before (4.11): for $N\ell^{1/2}$ read $\mathrm{nr}_F(\ell)^{1/2}$
- (4.11): for δ_1 read δ_2

Applications of the Kuznetsov formula on $GL(3)$, Invent. math. **194** (2013), 673-729

- p.677, first display: for $(\mathrm{SL}(3,\mathbb{Z}) \cup U)\backslash U$ read $(\mathrm{SL}(3,\mathbb{Z}) \cap U)\backslash U$
- (1.4): the left hand side should be $C^{-1-\varepsilon}$
- display after (2.13): the leading constant should be 4 instead of 8
- Remark 1: for $y_1 = y_2 = \frac{3}{2\pi}T - \frac{1}{100}T^{1/3}$ read $y_1 = y_2 = \frac{3}{2\sqrt{2}\pi}T - \frac{1}{100}T^{1/3}$
- line below (3.5): constant $\to$ constants
- Lemma 2: the left hand side should have exponent $-1-\varepsilon$ instead of -1. The proof needs to be modified as follows: let $T := (1+|\nu_0|) \asymp 1+\max(|\nu_1|, |\nu_2|)$ and fix $\varepsilon > 0$.
  - in the third display of the proof we integrate y_1, y_2 over $[T^{-\varepsilon}, \infty)$. It is easy to see that for some absolute constant c there are at most $T^{c\varepsilon}$ copies of the fundamental domain intersecting $[T^{-\varepsilon}, \infty)^2 \times [0,1]^3$. Hence the fourth display becomes $\ll T^{c\varepsilon/2}\|\phi\|$.
  - By the exponential decay of the Whittaker function at $y_1, y_2 \geq T^{1+\varepsilon/3}$ we have

$$\int_{T^{-\varepsilon}}^{\infty}\int_{T^{-\varepsilon}}^{\infty} |\tilde{W}_{\nu_1,\nu_2}(y_1,y_2)|^2 (y_1^2 y_2)^{1/2} \frac{dy_1\, dy_2}{y_1 y_2}$$
$$\geq \int_0^{\infty}\int_0^{\infty} |\tilde{W}_{\nu_1,\nu_2}(y_1,y_2)|^2 (y_1^2 y_2)^{1/2} \frac{dy_1\, dy_2}{y_1 y_2} - T^{\frac{1}{2}(1+\frac{1}{3}\varepsilon)-\frac{1}{4}\varepsilon} \int_0^{\infty}\int_0^{\infty} |\tilde{W}_{\nu_1,\nu_2}(y_1,y_2)|^2 (y_1^2 y_2)^{1/4} \frac{dy_1\, dy_2}{y_1 y_2}$$
$$\gg ((1+|\nu_0)(1+|\nu_1|)(1+|\nu_2|)^{-1/2},$$

and we complete the proof as before with an additional factor $T^{c\varepsilon}$. (A stronger result is given in Theorem 3 of Brumley, Effective multiplicity one on GL_N and narrow zero-free regions for Rankin-Selberg L-functions.)

- Lemma 3: from [But, p.39] it follows only

$$S(m_1, m_2, n_1, n_2, D_1, D_2) \ll (D_1D_2)^{1/2+\varepsilon}(D_1, D_2)\big((m_1n_2, [D_1, D_2])(m_2n_1, [D_1, D_2])\big)^{1/2}.$$

  Stronger bounds follow from Dabrowski-Fisher. The second claim of the lemma remains still true.
- Section 7, line 4: for m_1x_2 read m_1x_1
- in the display after (7.3), the indices m_1, m_2 should be interchanged in the w_6-Kloosterman term S_3, the same in (8.2). Correspondingly, the Kloosterman sum in (9.3) should be $S(\epsilon_1, \epsilon_2 m, n, 1, D_1, D_2)$. For these sums, the analogue of (6.6) is

$$\sum_{D_1\leq X_1}\sum_{D_2\leq X_2} |S(\pm1, m, n, 1, D_1, D_2)| \ll (X_1X_2)^{3/2+\varepsilon}(nm)^{\varepsilon}.$$

- (8.7): for $X_1^2X_2$ read $(X_1X_2)^2$. Correspondingly, in the estimation of Σ_{2a} in the proof of Theorem 2 replace X with X^2.
- long display before (8.12): for $x_2 + i\sqrt{x_1^2 + 1}$ in the the last line read $\sqrt{x_1^2 + 1}$
- (9.2): for $-C_1$, $-C_2$ read C_1, C_2
- Proof of Theorem 5, line 8: for "From Proposition 3 and Proposition 5" read "From Lemma 3 and Proposition 5"
- Reference 14: the correct title is "A problem of Linnik for elliptic curves and mean-value estimates for automorphic representations"
- Reference 25: for Li, Xinnan read Li, Xiannan

On a certain senary cubic form, Proc. London Math. Soc. **108** (2014) 911-964

- (2.4): the second summation condition should be $|\mathrm{ver}(U)| = k$
- Lemma 8: for $r \in \mathcal{S}(d_1)$ read $r \in \mathcal{S}(u_1)$.

The second moment of twisted modular L-functions, GAFA **25** (2015), 453-516

- Theorem 4: it should be assumed that $f_1 \neq f_2$.
- (1.14) and the following display: the leading factor should be $M^3/(C^3N)$ instead of $M^3/(C^3N^{3/2})$.
- display below (5.5) should read

$$r_f(c) = \sum_{b|c} \frac{\mu(b)\lambda_f(b)^2}{b}\Big(\sum_{d|b}\frac{\chi_0(d)}{d}\Big)^{-2}, \quad \alpha(c) = \sum_{b|c}\frac{\mu(b)\chi_0^2(b)}{b^2}, \quad \beta(c) = \sum_{b|c}\frac{\mu^2(b)\chi_0(b)}{b}$$

- in (5.8) the first expression should read

$$A(p) = \frac{\lambda_{f^*}(p)}{\sqrt{p}(1+\chi_0(p)/p)}$$

- in the display above (5.9), the following adjustments should be made

$$\xi_p(1) = \frac{-\lambda_{f^*}(p)}{\sqrt{p}(1+\chi_0(p)/p)}\xi_p(p), \quad \xi_{p^\nu}(p^\nu) = \big(r_{f^*}(p)(1-\chi_0^2(p)p^{-2})\big)^{-1/2}$$

- (6.5) should read $\widehat{\mathcal{J}}_{2it}^{-}(1/2+i\tau) \ll ((1+|\tau+2it|)(1+|\tau-2it|))^{-1/4}e^{-\pi\max(0,\frac{|\tau|}{2}-|t|)}$.
- 3rd display on p. 481, second line: for $\frac{t^2}{x^j\sqrt{t+x}}$ read $\frac{t^2}{x^j(t+x)}$; two lines later: For $Y = t^2/\sqrt{t+X}$ read $Y = t^2/(t+X)$.
- (7.6) should read $\Lambda \gg C^2(\ell_1\ell_2)^{-1-\varepsilon}$.
- (7.20): the s-contour should be $[1/2 - iC^\varepsilon\mathcal{T}_-, 1/2 + iC^\varepsilon\mathcal{T}_-]$
- (8.13), second line: the last term should be $N^{1/2}/(dr_2)^{1/2}$ instead of $NM^{1/2}/(dr_2)$
- p.496, first display: the last factor should be raised to the power 1/2.
- p.496, line -2: the summation condition should be $\ell_1'n - \ell_2'm = d'r$.
- p.497, line 2: the first formula should be replaced with

$$\left|\lambda_2\left(\frac{\delta_2}{g}\right)\lambda_1\left(\frac{\delta_1}{h}\right)(\ell_1'g\cdot\ell_2h, d')^{1/2}\right| \ll \left(\frac{\delta_2}{g}\right)^{1/2}\left(\frac{\delta_1}{h}\right)^{1/2}(gh)^{1/2} = (\delta_1\delta_2)^{1/2}$$

- (12.4): replace the right hand side with $q^\varepsilon(AB)^{1/2}X$.
- p. 512, penultimate display: this expression is only used for $B > AX^2$, in which case the condition $a_1a_2 = b_1b_2$ is moot

Kloosterman sums in residue classes, J. EMS **17** (2015), 51-69

- p.54, second paragraph: for $\mathrm{SL}_2(\mathbb{Q})\backslash\mathrm{SL}_2(\mathbb{A}_\mathbb{Q})$ read $\mathrm{GL}_2(\mathbb{Q})\backslash\mathrm{GL}_2(\mathbb{A}_\mathbb{Q})$. The parenthesis at the end of paragraph should be deleted.
- p.65, line 13: for $C_2 = (C, Q)$ read $C_2 = (C, Q_w^\infty)$.

The sup-norm problem for PGL(4), IMRN 2015 (vol. 14), 5311-5332

- (3.4): for $\asymp$ read $\ll$
- (3.9), (6.2), (6.4), (6.6): for $|\mathbf{c}(\mu)|^{-2}$ read $\prod_{1\leq j<k\leq n}(1+|\mu_j-\mu_k|)$.

Number fields without n-ary universal quadratic forms, Math. Proc. Cambr. Phil. Soc. **159** (2015), 239-252

- penultimate paragraph of introduction: for $\mathbb{Q}(\sqrt{n^2+1})$ read $\mathbb{Q}(\sqrt{n^2-1})$

On the size of Ikeda lifts, manuscr. math. **148** (2015), 341-349

- equation (2.3): π^k in the numerator should be π^{k-1}.

Bounds for eigenforms on arithmetic hyperbolic 3-manifolds, Duke Math. J. **165** (2016), 625-659

- Lemma 1: in line 6 of the proof, kB' should be k^2B' and in line 9, $(k+1)B'$ should be $(k^2+1)B'$

Subconvexity for sup-norms of cusp forms on PGL(n), Selecta Math. **22** (2016), 1269-1287

- Lemma 1: replace $\Re h|_{\{|\Im z|\leq c\}} \geq 0$ with $|\arg(h)|_{\{|\Im z|\leq c\}}| \leq \pi/(4n)$. (This ensures the corresponding claims for the function f just after Lemma 1.)
- two lines after (4.3): for “feature” read “features”

The sup-norm problem on the Siegel modular space of rank two, Amer. J. Math. 138 (2016), 999-1027

- p.1006, line -1: for $a = a_\delta = \exp(\delta X) \in \mathfrak{a}$ read for $a = a_\delta = \exp(\delta X) \in A$

On moments of twisted L-functions, Amer. J. Math. **139** (2017), 707-768

- Theorem 1.2: If f is Maaß, the main term needs to be multiplied by $1+\epsilon(f)$
- Section 2.3, third display: the value of $\mathfrak{a}$ equals that of (2.1) if f is even and equals $(1+\chi(-1))/2$ if f is odd.
- p.755, third display: if f is cuspidal and $g = E$, we have

$$\mathrm{MT}^0_{f,g,\sigma}(q) = \begin{cases} L(f,1)^2/\zeta(2), & f \text{ holomorphic}, \\ (1+\epsilon(f))L(f,1)^2/\zeta(2), & f \text{ Maaß} \end{cases}$$

Applications of the Kuznetsov formula on GL(3): the level aspect, Math. Ann. **369** (2017), 723-759

- Lemma 4 should be replaced with the following variation:
Lemma 4. *Let $W : (0,\infty)^6 \to \mathbb{C}$ be a fixed smooth compactly supported function. Let $A_1, A_2 > 0$ and define $A := \exp(\max(|\log A_1|, |\log A_2|))$. Let $P \geq 1$, and let $\alpha_1, \alpha_2, \beta_1, \beta_2, \gamma_1, \gamma_2 \in \mathbb{R}$ be such that $\min(|\alpha_1|, |\alpha_2|, |\beta_1|, |\beta_2|, |\gamma_1|, |\gamma_2|) \leq P$. Then the six-fold Fourier transform*

$$\widehat{\mathcal{J}} := \int_{\mathbb{R}^6} \mathcal{J}_{\epsilon;F}(A_1\sqrt{t_1u_1v_1}, A_2\sqrt{t_2u_2v_2}) W(t_1,t_2,u_1,u_2,v_1,v_2) \times e(-t_1\alpha_1 - t_2\alpha_2 - u_1\beta_1 - u_2\beta_2 - v_1\gamma_1 - v_2\gamma_2) dt_1\, dt_2\, du_1\, du_2\, dv_1\, dv_2$$

is bounded by

$$O_C\left((PA)^\varepsilon(P^2 \max\left(A_2^{-2/3}A_1^{-4/3}, A_1^{-2/3}A_2^{-4/3}\right) + P^{-C})\right)$$

for any constant $C > 0$. In addition, it is bounded by

$$A^\varepsilon \max(|\alpha_1|, |\beta_1|, |\gamma_1|)^{-1/2} \max(|\alpha_2|, |\beta_2|, |\gamma_2|)^{-1/2},$$

as long as both maxima are non-zero.

Proof. Suppose that $|\alpha_1|$ is the smallest of the variables. Choose a sufficiently large constant c_2 and a sufficiently large constant $c_1 > c_2$. We split the x_1, x_2, x_3-integration in four pieces

$$(i)\ |x_1|, A_1^2|\eta_1|/\xi_1 \leq c_1 P, \quad (ii)\ |x_1| \leq c_2 P, A_1^2|\eta_1|/\xi_1 \geq c_1 P, \quad (iii)\ |x_1| \geq c_1 P, A_1^2|\eta_1|/\xi_1 \leq c_2 P$$

and the remaining portion (iv), which is contained in $|x_1|, A_1^2|\eta_1|/\xi_1 \geq c_2 P$. The conditions (i) imply $|x_1| \ll P$, $x_2x_4 \ll PA_2^{4/3}A_1^{2/3}$ (note that this is $\gg P$ by Lemma 3), and the area of this region is $\ll P^2(A_2^{4/3}A_1^{2/3})(AP)^\varepsilon$. Integrating by parts in the y_1-integral we can save arbitrarily many factors of P in regions (ii) and (iii). Integrating by parts in t_1, the same holds for region (iv). We conclude the bound $O_C((PA)^\varepsilon(P^2A_2^{-2/3}A_1^{-4/3}) + P^{-C})$. If, say, $|\alpha_2|$ is the smallest of the variables, we interchange indices and run the same argument.

The second bound follows by not restricting x_1, x_2, x_3 at all and applying in the penultimate display of the proof the simple stationary phase bound

$$\int e(at + b\sqrt{t})W(t)dt \ll |a|^{-1/2}, \quad a \neq 0$$

for a fixed smooth function W with compact support in $(0, \infty)$.

- display before (4.1): the right hand side should read $\tilde{S}(m_1, n_1, n_2; D_1, D_2)$.
- (4.1): the right hand side should read

$$(D_1D_2)^{1/2+\varepsilon}(D_1, D_2)\big((m_1n_2, [D_1, D_2])(m_2n_1, [D_1, D_2])\big)^{1/2}.$$

The final bound of (4.2) remains true.

- third display after (5.3): the right hand side should be $\left(\frac{M^3d_2}{N(d_1d_2d_3)^2D_2}\right)^i$
- penultimate display of Section 5: we apply the second bound of Lemma 4, unless $x_1x_2y_1y_2z_1z_2 = 0$, in which case we apply the first bound with $P = N^{\varepsilon}$. This replaces the last fraction in the first line

$$\frac{(d_1d_2d_3)^2N(D_1D_2)^{1/2}}{M^3d_2} \longrightarrow \frac{\min(d_1d_2, d_1d_3, d_2d_3)(D_1D_2)^{1/2}}{M} + \frac{(d_1d_2d_3)^2N(D_1 + D_2)}{M^3d_2}$$

which still suffices to conclude $\Sigma_6 \ll N^{2+\varepsilon}$.

The Manin-Peyre formula for a certain biprojective threefold, Math. Ann. **370** (2018), 491-553

- (3.4): for $N_{\mathbf{r}}(\mathbf{X}, \mathbf{Y})$ read $N_{\mathbf{r}}^{(1)}(\mathbf{X}, \mathbf{Y})$
- Lemma 4.3: The quantity $\mathcal{V}_{\mathbf{r},(\boldsymbol{\alpha},\boldsymbol{\delta},\boldsymbol{\zeta})}(\mathbf{X}, \mathbf{Y}, H)$ should be slight re-defined. Condition (4.5) and the display before (4.3) should be replaced with $\alpha_j\zeta_j|a_jz_j| \leq X_j$, $\delta_i\delta_k\zeta_k|d_id_jz_k| \leq Y_k$. Statement and proof of Lemma 4.5 remain the same except that the first 4 lines of the proof can be deleted.
- Lemma 4.4/4.5: the quantity $\mathcal{V}_{\mathbf{r},(\boldsymbol{\alpha},\boldsymbol{\delta},\boldsymbol{\zeta})}(B, H)$ should be redefined: (4.14) should be replaced with $\max_j \alpha_j\zeta_j|a_jz_j| \max_{\{i,j,k\}=\{1,2,3\}} \delta_i\delta_k\zeta_k|d_id_jz_k| \leq B$. Lemma 4.4 and its proof remain unaffected, but $\mathcal{S}(B, H)$ is re-defined, and the bound in Lemma 4.5 should be $B(\log B)^3(\log H)((\alpha_1\alpha_2\alpha_3\delta_1\delta_2\delta_3)^{2/3}\zeta_1\zeta_2\zeta_3)^{-1}$. This is needed in the proof of Lemma 5.2: in the last double display the integral over $\mathcal{S}_\delta$ should be the same in both lines, and an application of the modified Lemma 4.5 completes the proof.
- (5.8): for $[1, \infty)$ read $[1, \infty)^9$ and for x_n read x_9
- Lemma 5.1/5.2: for δ read $(\delta + 1/\log B)$.
- (5.13) should be replaced with

$$\mathcal{D}\left(\prod_{\ell} \frac{v_\ell\widehat{f}_\Delta(s_\ell)}{1 - 2^{-v_\ell}}\right) \ll_{\mathcal{D}} \frac{\Delta^{-18}}{|s_{11}s_{12}\cdots s_{33}|^2}.$$

- two lines before (5.16): for $N_{\Delta,T}^{(1)}(B)$ read $N_{\Delta,T}^{(2)}(B)$
- display after (5.16): the factor $\prod_\ell (w_\ell - 1)^{-1}$ is missing.

Higher order divisor problems, Math. Z. **290** (2018), 937-952

- line after display after Theorem 1: for "norm form" read "incomplete norm form"

- last display of the paper: the exponent in the first error term should $k - 1 - \frac{1}{k-1} + \varepsilon$ instead of $k - 2 + \frac{1}{k-1} + \varepsilon$.

On the rank of universal quadratic formula over real quadratic fields, Doc. Math. **23** (2018), 15-34

- p.31, line 3: for $L(1, \chi_{-D})/h$ read $L(1, \chi_{\Delta})/h$
- line -4 of the paper: the $\mathfrak{a}$-sum should be extended over principal ideals having a generator of negative norm.

Twisted moments of L-functions and spectral reciprocity, Duke Math. J. **168** (2019), 1109-1177

- Lemma 15: polar divisors can (a priori) occur at $s, w = 1/2 + (2\pi i k)/\log p$ for $k \in \mathbb{Z}$ and $p \mid q$ (with multiplicity if $k = 0$). Correspondingly, the bound (9.13) holds only outside these lines.
- Lemma 16, line 4: remove the words "with at most finitely many polar divisors"

Uniform subconvexity and symmetry breaking reciprocity, J. Funct. Anal. **276** (2019), 2315-2358

- (3.8): a factor $-i$ is missing on the right hand side. In the subsequent formula, the factor ± 1 should be $\mp i$.
- Lemma 7: there can also be (simple) poles at $s = 1/2 + (2\pi i k)/\log p$ for $k \in \mathbb{Z}$ and $p \mid \ell$. Correspondingly, the bound (5.8) holds only outside these lines. The same applies to (6.12) and the preceding display

Spectral summation formula for GSp(4) and moments of spinor L-functions, J. Eur. Math. Soc. **21** (2019), 1751-1774

- p.1754, before last display: the reference in the published version is [Theorem 3.1, DPSS].

Epstein zeta-functions, subconvexity, and the purity conjecture, J. Inst. Math. Jussieu **19** (2020), 581-596

- three lines before Corollary 4: for $(t, \ldots, t-(k-1)t)$ read $(t+i(k/2-1), t+i(k/2-2), \ldots, t+i(1-k/2), -(k-1)t)$ and the following display should be

$$\lambda = \lambda(t) = \frac{k^3 - k}{24} + \frac{1}{2}((t+i(k/2-1))^2 + \ldots + (t+i(1-k/2))^2 + (k-1)^2 t^2) = \frac{k(k-1)}{8}(4t^2+1) \asymp t^2$$

Motohashi's fourth moment identity with non-archimedean test functions and applications, Compositio Math. **156** (2020), 1004-1038

- (2.7): on the right side, s should be $1 - s$.
- display after (3.1), middle line: dt should be dz

A symplectic restriction problem, Math. Ann. **382** (2022), 1323-1424

- (10.5) for $K^{\frac{1}{2}j_2}$ read $K^{\frac{1}{2}(j_2+j_3+j_4)}$

Density theorems for GL(n), Invent. Math. **232** (2023), 683-711

- two lines before (4.1) for $c \in \mathbb{Z}^{n-1}$ read $c \in \mathbb{N}^{n-1}$
- three lines before (4.3): for "by deleting at least the first row and the last column" read "by keeping the last row and deleting at least the last column"

The unipotent mixing conjecture, J. Anal. Math. **151** (2023), 25-57

- Theorem 1.3: for $(x+i)/T$ read $x+i/T$ and for $(xy+i)/T$ read $xy+i/T$.
- Paragraph before Proposition 5.1: Instead of [EL19, Thm. 1.4] one has to apply [EL19, Cor. 3.4] with the factorization

$$t_1 = \left(\begin{pmatrix} q_1^{-1} & \\ & q_1 \end{pmatrix}, \begin{pmatrix} q_1^{-1} & \\ & q_1 \end{pmatrix}, \mathrm{Id}_2\right)\left(\mathrm{Id}_2, \mathrm{Id}_2, \begin{pmatrix} q_1^{-1} & \\ & q_1 \end{pmatrix}\right) = t_1' k_1,$$
$$t_2 = \left(\begin{pmatrix} q_2^{-1} & \\ & q_2 \end{pmatrix}, \mathrm{Id}_2, \begin{pmatrix} q_2^{-1} & \\ & q_2 \end{pmatrix}\right)\left(\mathrm{Id}_2, \begin{pmatrix} q_2^{-1} & \\ & q_2 \end{pmatrix}, \mathrm{Id}_2\right) = t_2' k_2,$$

say.

Correlations of values of random diagonal forms, IMRN **2023**, 20296-20336

- (4.3): for "at most" read "at least"

Simultaneous equidistribution of toric periods and fractional moments of L-functions, J. Eur. Math. Soc. **26** (2024), 2745-2796

- Lemma 10, third display: for $\frac{1+\eta_E(p)}{2\nu(p^\alpha)}$ read $\frac{1+\eta_E(p)}{2^\alpha\nu(p^\alpha)}$.

Bounds for Kloosterman sums on GL(n), Math. Ann. **390** (2024), 1171-1200

- (8.2): the third fraction should be $\frac{c_{33}\overline{c_{23}}}{p^{-m_{11}+m_{12}+m_{23}}}$
- next display: c_{23} should run modulo p^{m_23}.

Der Satz von Green-Tao, Mitteilungen DMV **15** (2007), 160-164

- p.162, line 40/41: for "unendlich" read "beliebig"

L-functions, automorphic forms and arithmetic, in: Symmetries in Algebra and Number Theory, Göttingen 2009

- p.16, example 2: for "for all primes p" read "for almost all primes p"