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Web Site

http://math.berkeley.edu/~ribet/

Biosketch

http://math.berkeley.edu/~ribet/biosketch.html

Articles

http://math.berkeley.edu/~ribet/Articles/

Teaching

http://math.berkeley.edu/~ribet/courses.html (course web pages beginning Fall, 1997)

Education

1969	AB and AM, Brown University
1973	PhD, Harvard University

Long-term academic positions

1973–1978	Lecturer, then Assistant Professor, Princeton University
1977–1981	Associate Professor, University of California, Berkeley
1981–	Professor, University of California, Berkeley

Honors and awards

Sloan Fellow, 1975–1977
Japanese Society for the Promotion of Science Fellow, 1981
Invited address, International Congress of Mathematicians, 1983
Distinguished Teaching Award, UC Berkeley Mathematics Department, 1985
Prix Fermat, 1989
Miller Professor (UC Berkeley), Fall, 1990
Fellow of the American Academy of Arts and Sciences, 1997
PhD honoris causa, Brown University, 1998
Member, US National Academy of Sciences, 1990

Administrative Positions

1997–1999	Vice Chair for Undergraduate Affairs, UC Berkeley Mathematics Department
1999–2002	Vice Chair for Graduate Affairs, UC Berkeley Mathematics Department
2005–	Member, Board of Directors, The Faculty Club, UC Berkeley
2006–	Secretary, The Faculty Club, UC Berkeley

Publications[1]

[1] Amod Agashe, Kenneth Ribet, and William A. Stein. The Manin constant. *Pure Appl. Math. Q.*, 2(2):617–636, 2006.

[2] Kenneth A. Ribet. Abelian varieties over **Q** and modular forms. In *Modular curves and abelian varieties*, volume 224 of *Progr. Math.*, pages 241–261. Birkhäuser, Basel, 2004.

[3] Matthew H. Baker and Kenneth A. Ribet. Galois theory and torsion points on curves. *J. Théor. Nombres Bordeaux*, 15(1):11–32, 2003. Les XXIIèmes Journées Arithmetiques (Lille, 2001).

[4] Kenneth A. Ribet. Modular forms and Diophantine questions. In *Challenges for the 21st century (Singapore, 2000)*, pages 162–182. World Sci. Publ., River Edge, NJ, 2001.

[1] Generated from MathSciNet. See http://math.berkeley.edu/~ribet/Articles/ for links to many of the articles and MathSciNet for reviews.

[5] Kenneth A. Ribet and William A. Stein. Lectures on Serre's conjectures. In *Arithmetic algebraic geometry (Park City, UT, 1999)*, volume 9 of *IAS/Park City Math. Ser.*, pages 143–232. Amer. Math. Soc., Providence, RI, 2001.

[6] Kenneth A. Ribet. Torsion points on $J_0(N)$ and Galois representations. In *Arithmetic theory of elliptic curves (Cetraro, 1997)*, volume 1716 of *Lecture Notes in Math.*, pages 145–166. Springer, Berlin, 1999.

[7] J. Coates, R. Greenberg, K. A. Ribet, and K. Rubin. *Arithmetic theory of elliptic curves*, volume 1716 of *Lecture Notes in Mathematics*. Springer-Verlag, Berlin, 1999. Lectures from the 3rd C.I.M.E. Session held in Cetraro, July 12–19, 1997, Edited by C. Viola.

[8] Robert Coleman, Bruce Kaskel, and Kenneth A. Ribet. Torsion points on $X_0(N)$. In *Automorphic forms, automorphic representations, and arithmetic (Fort Worth, TX, 1996)*, volume 66 of *Proc. Sympos. Pure Math.*, pages 27–49. Amer. Math. Soc., Providence, RI, 1999.

[9] Fred Diamond and Kenneth A. Ribet. l-adic modular deformations and Wiles's "main conjecture". In *Modular forms and Fermat's last theorem (Boston, MA, 1995)*, pages 357–371. Springer, New York, 1997.

[10] Kenneth A. Ribet. Images of semistable Galois representations. *Pacific J. Math.*, (Special Issue):277–297, 1997. Olga Taussky-Todd: in memoriam.

[11] Kenneth A. Ribet and Shuzo Takahashi. Parametrizations of elliptic curves by Shimura curves and by classical modular curves. *Proc. Nat. Acad. Sci. U.S.A.*, 94(21):11110–11114, 1997. Elliptic curves and modular forms (Washington, DC, 1996).

[12] Kenneth A. Ribet. On the equation $a^p + 2^\alpha b^p + c^p = 0$. *Acta Arith.*, 79(1):7–16, 1997.

[13] Kenneth A. Ribet. Erratum to: "Galois representations and modular forms" [Bull. Amer. Math. Soc. (N.S.) **32** (1995), no. 4, 375–402; MR1322785 (96b:11073)]. *Bull. Amer. Math. Soc. (N.S.)*, 33(1):43, 1996.

[14] Kenneth A. Ribet. Irreducible Galois representations arising from component groups of Jacobians. In *Elliptic curves, modular forms, & Fermat's last theorem (Hong Kong, 1993)*, Ser. Number Theory, I, pages 131–147. Int. Press, Cambridge, MA, 1995.

[15] Kenneth A. Ribet. Galois representations and modular forms. *Bull. Amer. Math. Soc. (N.S.)*, 32(4):375–402, 1995.

[16] Kenneth A. Ribet. Wiles proves Taniyama's conjecture; Fermat's last theorem follows [MR1228162 (94e:11065)]. *Math. Bohem.*, 119(1):75–78, 1994. Translated from the English by Jan Nekovář.

[17] Kenneth A. Ribet. Fields of definition of abelian varieties with real multiplication. In *Arithmetic geometry (Tempe, AZ, 1993)*, volume 174 of *Contemp. Math.*, pages 107–118. Amer. Math. Soc., Providence, RI, 1994.

[18] Kenneth A. Ribet. Report on mod l representations of $\mathrm{Gal}(\overline{\mathbf{Q}}/\mathbf{Q})$. In *Motives (Seattle, WA, 1991)*, volume 55 of *Proc. Sympos. Pure Math.*, pages 639–676. Amer. Math. Soc., Providence, RI, 1994.

[19] Kenneth A. Ribet. *Modular elliptic curves and Fermat's last theorem.* Selected Lectures in Mathematics. American Mathematical Society, Providence, RI, 1993. A lecture presented at George Washington University, Washington, DC, August 1993.

[20] Kenneth A. Ribet. Wiles proves Taniyama's conjecture; Fermat's last theorem follows. *Notices Amer. Math. Soc.*, 40(6):575–576, 1993.

[21] Kenneth A. Ribet. Abelian varieties over $\mathbf{Q}$ and modular forms. In *Algebra and topology 1992 (Taejŏn)*, pages 53–79. Korea Adv. Inst. Sci. Tech., Taejŏn, 1992.

[22] B. Mazur and K. A. Ribet. Two-dimensional representations in the arithmetic of modular curves. *Astérisque*, (196-197):6, 215–255 (1992), 1991. Courbes modulaires et courbes de Shimura (Orsay, 1987/1988).

[23] Kenneth A. Ribet. Multiplicities of p-finite mod p Galois representations in $J_0(Np)$. *Bol. Soc. Brasil. Mat. (N.S.)*, 21(2):177–188, 1991.

[24] Kenneth A. Ribet. Lowering the levels of modular representations without multiplicity one. *Internat. Math. Res. Notices*, (2):15–19, 1991.

[25] Nigel Boston, Hendrik W. Lenstra, Jr., and Kenneth A. Ribet. Quotients of group rings arising from two-dimensional representations. *C. R. Acad. Sci. Paris Sér. I Math.*, 312(4):323–328, 1991.

[26] Kenneth A. Ribet. The old subvariety of $J_0(pq)$. In *Arithmetic algebraic geometry (Texel, 1989)*, volume 89 of *Progr. Math.*, pages 293–307. Birkhäuser Boston, Boston, MA, 1991.

[27] Kenneth A. Ribet. From the Taniyama-Shimura conjecture to Fermat's last theorem. *Ann. Fac. Sci. Toulouse Math. (5)*, 11(1):116–139, 1990.

[28] Kenneth A. Ribet. Multiplicities of Galois representations in Jacobians of Shimura curves. In *Festschrift in honor of I. I. Piatetski-Shapiro on the occasion of his sixtieth birthday, Part II (Ramat Aviv, 1989)*, volume 3 of *Israel Math. Conf. Proc.*, pages 221–236. Weizmann, Jerusalem, 1990.

[29] K. A. Ribet. On modular representations of $\mathrm{Gal}(\overline{\mathbf{Q}}/\mathbf{Q})$ arising from modular forms. *Invent. Math.*, 100(2):431–476, 1990.

[30] Kenneth A. Ribet. Raising the levels of modular representations. In *Séminaire de Théorie des Nombres, Paris 1987–88*, volume 81 of *Progr. Math.*, pages 259–271. Birkhäuser Boston, Boston, MA, 1990.

[31] Kenneth A. Ribet. Bimodules and abelian surfaces. In *Algebraic number theory*, volume 17 of *Adv. Stud. Pure Math.*, pages 359–407. Academic Press, Boston, MA, 1989.

[32] Kenneth A. Ribet. Cohomological realization of a family of 1-motives. *J. Number Theory*, 25(2):152–161, 1987.

[33] Olivier Jacquinot and Kenneth A. Ribet. Deficient points on extensions of abelian varieties by $\mathbf{G}_m$. *J. Number Theory*, 25(2):133–151, 1987.

[34] Kenneth A. Ribet. On l-adic representations attached to modular forms. II. *Glasgow Math. J.*, 27:185–194, 1985.

[35] Kenneth A. Ribet. Congruence relations between modular forms. In *Proceedings of the International Congress of Mathematicians, Vol. 1, 2 (Warsaw, 1983)*, pages 503–514, Warsaw, 1984. PWN.

[36] Kenneth A. Ribet. Mod p Hecke operators and congruences between modular forms. *Invent. Math.*, 71(1):193–205, 1983.

[37] Kenneth A. Ribet. Hodge classes on certain types of abelian varieties. *Amer. J. Math.*, 105(2):523–538, 1983.

[38] K. A. Ribet. Generalization of a theorem of Tankeev. In *Seminar on Number Theory, 1981/1982*, pages Exp. No. 17, 4. Univ. Bordeaux I, Talence, 1982.

[39] Elisabeth Papier and Kenneth A. Ribet. Eisenstein ideals and λ-adic representations. *J. Fac. Sci. Univ. Tokyo Sect. IA Math.*, 28(3):651–665 (1982), 1981.

[40] K. A. Ribet. Endomorphism algebras of abelian varieties attached to newforms of weight 2. In *Seminar on Number Theory, Paris 1979–80*, volume 12 of *Progr. Math.*, pages 263–276. Birkhäuser Boston, Mass., 1981.

[41] K. A. Ribet. Division fields of abelian varieties with complex multiplication. *Mém. Soc. Math. France (N.S.)*, (2):75–94, 1980/81. Abelian functions and transcendental numbers (Colloq., Étole Polytech., Palaiseau, 1979).

[42] Kenneth Ribet. Sur les variétés abéliennes à multiplications réelles. *C. R. Acad. Sci. Paris Sér. A-B*, 291(2):A121–A123, 1980.

[43] Kenneth A. Ribet. Twists of modular forms and endomorphisms of abelian varieties. *Math. Ann.*, 253(1):43–62, 1980.

[44] Pierre Deligne and Kenneth A. Ribet. Values of abelian L-functions at negative integers over totally real fields. *Invent. Math.*, 59(3):227–286, 1980.

[45] Kenneth A. Ribet. Kummer theory on extensions of abelian varieties by tori. *Duke Math. J.*, 46(4):745–761, 1979.

[46] Kenneth A. Ribet. Report on p-adic L-functions over totally real fields. In *Journées Arithmétiques de Luminy (Colloq. Internat. CNRS, Centre Univ. Luminy, Luminy, 1978)*, volume 61 of *Astérisque*, pages 177–192. Soc. Math. France, Paris, 1979.

[47] Kenneth Ribet. *Fonctions L p-adiques et théorie d'Iwasawa*, volume 1 of *Publications Mathématiques d'Orsay 79 [Mathematical Publications of Orsay 79]*. Université de Paris-Sud Département de Mathématique, Orsay, 1979. Course notes by Philippe Satgé.

[48] Kenneth A. Ribet. Sur la recherche des p-extensions non ramifiées de $\mathbf{Q}(\mu_p)$. In *Groupe d'Étude d'Algèbre (Marie-Paule Malliavin), 1re année (1975/76)*, pages Exp. No. 2, 3. Secrétariat Math., Paris, 1978.

[49] Kenneth A. Ribet. p-adic L-functions attached to characters of p-power order. In *Séminaire Delange-Pisot-Poitou, 19e année: 1977/78, Théorie des nombres, Fasc. 1*, pages Exp. No. 9, 8. Secrétariat Math., Paris, 1978.

[50] Kenneth A. Ribet. Galois representations attached to eigenforms with Nebentypus. In *Modular functions of one variable, V (Proc. Second Internat. Conf., Univ. Bonn, Bonn, 1976)*, pages 17–51. Lecture Notes in Math., Vol. 601. Springer, Berlin, 1977.

[51] Kenneth A. Ribet. Galois action on division points of Abelian varieties with real multiplications. *Amer. J. Math.*, 98(3):751–804, 1976.

[52] Kenneth A. Ribet. Dividing rational points on Abelian varieties of CM-type. *Compositio Math.*, 33(1):69–74, 1976.

[53] Kenneth A. Ribet. A modular construction of unramified p-extensions of $\mathbf{Q}(\mu_p)$. *Invent. Math.*, 34(3):151–162, 1976.

[54] R. N. Gupta, Joe Flowers, and K. A. Ribet. Problems and Solutions: Solutions of Elementary Problems: E2463. *Amer. Math. Monthly*, 82(3):305–307, 1975.

[55] Kenneth A. Ribet. p-adic interpolation via Hilbert modular forms. In *Algebraic geometry (Proc. Sympos. Pure Math., Vol. 29, Humboldt State Univ., Arcata, Calif., 1974)*, pages 581–592. Amer. Math. Soc., Providence, R. I., 1975.

[56] Kenneth A. Ribet. On l-adic representations attached to modular forms. *Invent. Math.*, 28:245–275, 1975.

[57] Kenneth A. Ribet. Endomorphisms of semi-stable abelian varieties over number fields. *Ann. Math. (2)*, 101:555–562, 1975.

[58] Kenneth A. Ribet. On the component groups and the Shimura subgroup of $J_0(N)$. In *Séminaire de Théorie des Nombres, 1987–1988 (Talence, 1987–1988)*, pages Exp. No. 6, 10. Univ. Bordeaux I, Talence, 19??

Doctoral students

[The Mathematics Genealogy Project maintains a list of students supervised by K. Ribet from 1986 to 2006.]

Wenchen Chi	"Twists of central simple algebras and endomorphism algebras of some abelian varieties over $\mathbf{Q}$," 1986
San Ling	"On the arithmetic of modular curves," 1990
Gene Smith	"Generic cyclic polynomials and some applications," 1990
Bjorn Poonen	"The Mordell–Weil theorem, rigidity, and pairings for Drinfeld modules," 1994
Elisabeth Pyle	"Abelian varieties over $\mathbf{Q}$ with large endomorphism algebras and their simple components over $\overline{\mathbf{Q}}$," 1995
Leanne Robertson	"Power bases in cyclotomic integer rings," 1995
David Jones	"Results on modular representations of $\mathrm{Gal}(\overline{\mathbf{Q}}/\mathbf{Q})$ in characteristic 3," 1998
Shuzo Takahashi	"Degrees of parametrizations of elliptic curves by modular curves and Shimura curves," 1998
Jessica Polito	"The p-adic image of the Galois representation at an Eisenstein prime," 1998
János Csirik	The kernel of the Eisenstein ideal, 1999
Amod Agashe	"The Birch and Swinnerton-Dyer formula for modular abelian varieties of analytic rank zero," 2000
Frank Calegari	"Ramification and semistable Abelian varieties," 2002
David Helm	"Jacobians of Shimura curves and Jacquet–Langlands correspondences," 2003
Samit Dasgupta	"Gross–Stark units, Stark–Heegner points, and class fields of real quadratic fields," 2004
Chu-Wee Lim	"Decomposition of $S_k(\Gamma_0(N))$ over $\mathbf{Q}$ and variants of partial nim," 2005

Ron Fertig	"Almost rational torsion points on abelian varieties," 2006
Grace Lyo	"Semilinear actions of Galois groups and the algebraic K-theory of fields," 2007
Soroosh Yazdani	"Modular abelian variety of odd degree," 2007
Jared Weinstein	"Automorphic representations with local constraints," 2007

Professional service

Editorial boards

Graduate Texts in Mathematics
Undergraduate Texts in Mathematics
Universitext
Mathematische Annalen
The Journal of Number Theory
Mathematics Research Letters Annales de l'Institut Fourier

Advisory committees

Scientific advisory board, Institute for Pure & Applied Mathematics
U.S. National Committee for Mathematics
Board on International Scientific Organizations
FOCUS oversight group, Center for Communications Research
Cole Prize committee, American Mathematical Society (chair)

National Academy of Sciences

Class Membership Committee (February, 2003)
Nominating Committee (Fall, 2005)
Class Membership Committee (February, 2006)
Nominating Committee (Fall, 2006)

Conference organization

Special session on computational arithmetic geometry, American Mathematical Society western section meeting, San Francisco, CA, April 29–30, 2006

CMI/MSRI Hot Topics Workshop: Modularity for **GL**(2) and Beyond, Mathematical Sciences Research Institute, November, 2006

"Modular forms: arithmetic and computation," Banff International Research Station, June, 2007

Berkeley

Recreational Sports Advisory Committee, UC Berkeley
Faculty mentor, UC Berkeley intercollegiate athletics
Serge Lang undergraduate lecture series, Department of Mathematics (founder)
Chair, Development Committee, Department of Mathematics
Faculty Advancement Committee, Department of Mathematics
Head Major Advisor, Department of Mathematics (Fall, 2006)

Invited lectures, July 1, 2005–June 30, 2007

September, 2005	"A new kind of induction," Center for Pure and Applied Mathematics, UC Berkeley
September, 2005	"Pure mathematics," inauguration of a Mathematical Sciences exhibit, UC Berkeley library
November, 2005	"Fermat's Last Theorem and beyond," Arnold Ross Lecture, New York Hall of Science
November, 2005	"Recent work on Serre's conjecture," San Francisco State University colloquium
February, 2006	"Serge Lang," Serge Lang Memorial, Yale University
March, 2006	"Modularity and congruence counting," Bay Area Mathematics Adventures lecture, San Jose State University
April, 2006	"Galois groups arising from ℓ-division points of elliptic curves over number fields" and "Mod p Galois representations attached to modular forms," Red Lodge conference on Profinite Geometry and Related Moduli spaces
May, 2006	"Stability conjectures in K-theory and modules over semisimple skew group rings," San Jose State University colloquium
November, 2006	Lectures in the MSRI hot topics workshop on modularity and to the MSRI Museion Society
November, 2006	"Current Developments in Mathematics 2006" lectures, Harvard University
March, 2007	Brigham Young University, undergraduate colloquium
March, 2007	Plenary lecture, Gemeinsame Jahrestagung der Deutschen Mathematiker-Vereinigung und der Gesellschaft für Didaktik der Mathematik

May, 2007	Chelluri Lecture and number theory seminar, Cornell University
June, 2007	"Modular degrees," "Modular forms: arithmetic and computation," Banff International Research Station