

Curriculum vitae

Sébastien Ferenczi

July 4, 2012

1 Personal data

Born 4 may 1958 in Neuilly sur Seine, France.

Married, one child.

Home address: 21 rue des Bergers, 13006 Marseille, France.

Home telephone: (+33) 491478137.

Work address: Institut de Mathématiques de Luminy, CNRS - UPR 9016,
Case 907, 163 av. de Luminy, 13288 Marseille Cedex 9.

Work telephone: (+33) 491269675. Fax: (+33) 491269655.

e-mail: ferenczi@iml.univ-mrs.fr

Secondary studies: Institut Montaigne, Neuilly sur Seine.

Baccalauréat: 1973, Paris, série C, mention Bien.

First two years of university: Lycée Pasteur, Neuilly sur Seine.

Entered Ecole Normale Supérieure in 1975, entry rank: 6th.

Student at ENS from 1975 to 1980.

Licence and maîtrise in Mathematics, 1976, university Paris 7.

DEA (Master Thesis) in Probabilities and applications, 1977, university Paris 6.

Agrégation in Mathematics, 1978, Paris, rank: 37th.

Thèse de troisième cycle (Ph. D.) in Probabilities and applications, 1979, university Paris 6, under the direction of professor Brunel; title of the thesis: some properties of factors of Bernoulli shifts and more general dynamical systems.

Joined Centre National de la Recherche Scientifique (CNRS) in october 1980:

1980-1984 attaché de recherches (under the direction of J.P. Thouvenot),
1984 - 2008 chargé de recherches, first class,
since 2008 directeur de recherches (senior researcher).
1980-1988 working in Laboratory of Probabilities, university Paris 6,
1988-1992 Laboratory of Mathematics of Marseille,
1992-1998 Institute of Mathematics of Luminy (IML), Marseille.
1998-2000 Laboratoire de Mathématiques et Physique Théorique, Tours.
2000-2012 Institute of Mathematics of Luminy (IML), Marseille,
2012-2013 : IMPA (International CNRS Laboratory) Rio de Janeiro, Brazil.

Thèse de doctorat d'Etat (habilitation to lead researches) in june 1990, uni-
versity Aix-Marseille 2. Title of the thesis: systems of finite rank. Director
of thesis: G. Rauzy; referees: J.F. Mela, D. Rudolph, J.P. Thouvenot; other
members of the jury: F. Blanchard, P. Delorme, P. Liardet, C. Mauduit.

Main domains of activity: ergodic theory, word combinatorics, number the-
ory.

Participation in the Séminaire de théorie ergodique, Paris 6, 1980-1991; in
the Séminaire Ernest, IML, Marseille, 1992-1998 and since 2000;
in the Séminaire de probabilités et théorie ergodique, Tours, 1998-2000; in
the Séminaire Teichmüller, FRUMAM, Marseille, since 2005.
Erdős number: 2.

Nationality: french.

Passport number: 08CF08956

Issued by: préfet des Bouches du Rhône, Marseille, France.

On: 27 june 2008.

Valid until: 21 october 2013.

2 Invitations

2.1 Lectures in International conferences

- 1) Théorie ergodique, Marseille, july 1982.
- 2) Banach Semester, Warsaw, december 1986.

- 3) Encounters Torun-Wroclaw, Torun (Poland), december 1988.
- 4) Ergodic theory, Szklarska Poreba (Poland), june 1989.
- 5) Arithmetic days, Marseille, july 1989.
- 6) Journées mathématiques-informatique, Marseille, october 1989.
- 7) Colloque de théorie des nombres, Alger (Algeria), october 1989.
- 8) International congress of mathematics, Kyoto, august 1990 (short communication).
- 9) Congress of ergodic theory, Gstrow (Germany), octobre 1990.
- 10) Thémates, Marseille, april 1991.
- 11) Ergodic theory, Marseille, may 1991.
- 12) Symposium on dynamical systems, Kiev (Ukraine), june 1991.
- 13) Symposium in topological dynamics, Yale (USA), july 1991.
- 14) Journées mathématiques-informatique, Marseille, october 1991.
- 15) Ergodic theory and number theory, Tsuda College (Japan), november 1992.
- 16) New bases for engineering sciences: algorithms, dynamics and fractals, Okayama (Japan), november 1992.
- 17) Algorithms, dynamics, fractals, Kyoto (Japan), november 1992.
- 18) Ergodic theory and its connections with harmonic analysis, Alexandria (Egypt), may 1993.
- 19) 22nd Winter school on abstract analysis, Podebrady (Czech Republic), january 1994.
- 20) Workshop on ergodic theory and applications to number theory, Warwick (Great Britain), april 1994.
- 21) Workshop on ergodic theory, dynamical systems, invariant measures and applications to number theory, Delft (Netherlands), august 1994.
- 22) Workshop on dynamical systems, Stachy-Zatov (Czech Republic), march 1995.
- 23) Groupe de travail sur les systèmes dynamiques, Tours (France), may 1995.
- 24) Ergodic theory and dynamical systems, Banach Institute, Warsaw (Poland), june 1995.
- 25) Systèmes dynamiques et théorie des nombres, Marseille, july 1995.
- 26) 19th Journées arithmétiques, Barcelona (Spain), july 1995.
- 27) DIMANET Workshop on new trends in discrete mathematics, Matrahaza (Hungary), october 1995.
- 28) International conference on discrete mathematics and number theory, Tiruchirapalli (India), january 1996.

- 29) Symmetry and antisymmetry in mathematics, formal languages and computer science (Satellite conference of ECM 96), Brasov (Romania), july 1996.
- 30) 2nd International conference on analytic and probabilistic number theory, Palanga (Lituanie), september 1996.
- 31) International conference on some topics in mathematics (ICSTM96), Samarkand (Uzbekistan), october 1996.
- 32) Ergodic theory, Churanov (Czech Republic), january 1997.
- 33) Modern ergodic theorems, Haifa (Israël), march 1997.
- 34) Colloque franco-libanais de Géométrie, Tripoli (Lebanon), april 1997.
- 35) New York Journal of Mathematics Conference, Albany (USA), june 1997.
- 36) WORDS, Rouen, september 1997.
- 37) Number theory, RIMS Kyoto (Japan), november 1997.
- 38) Ergodic theory and harmonic analysis, Mumbai (India), january 1999.
- 39) Ergodic theory, Rouen, september 1999.
- 40) Mathematic foundations of informatics, Hanoi (Vietnam), october 1999.
- 41) Journées Montoises, Marne la Vallée, march 2000.
- 42) AMS Regional Session, Notre Dame (USA), april 2000.
- 43) Torun 2000, Ergodic thory and dynamical systems, Toruń (Poland), september 2000.
- 44) International conference on number theory, Allahabad (India), november 2000.
- 45) Complex dynamics and ergodic theory, Warwick (Great-Britain), january 2001.
- 46) 2001: l'Odyssée dynamique, Marseille, february 2001.
- 47) ICALP 2001, Heraklion (Greece), july 2001.
- 48) Théorie ergodique, Amiens, may 2002.
- 49) Workshop on quasiperiodicity, Budapest (Hungary), june 2002.
- 50) ICM, Beijing, august 2002 (short communication).
- 51) Fractal Geometry, Nanjing (China), august 2002.
- 52) Ergodic theory and number theory, Tsuda College, Tokyo (Japan), september 2002.
- 53) Conference in honor of Hillel Furstenberg, Jerusalem and Beersheva (Israel), june 2003.
- 54) Symbolic dynamics, Warwick (Great-Britain), july 2003.
- 55) Conference of the South East Asian Mathematical Society, Kunming (China), december 2003.
- 56) Workshop in Combinatorics, IMPA, Rio de Janeiro (Brazil), february

- 2004.
- 57) National Conference on General Algebra and Discrete Mathematics, Bangkok (Thailand), march 2004.
 - 58) Workshop on Dynamical Systems, Daejeon (South Korea), august 2004.
 - 59) Conference of the South East Asian Mathematical Society, Chongqing (China), october 2004.
 - 60) Small workshop: Propriétés spectrales des systèmes adiques, Marseille, january 2005.
 - 61) Numération, Pavages, Substitutions, Grenoble, march 2005.
 - 62) Journées Marseille - Rouen de combinatoire des mots, Rouen, june 2005.
 - 63) 2005 International Conference on Dynamical Systems, Huangshan (China), june 2005.
 - 64) WORDS, Montréal (Canda), september 2005.
 - 65) Workshop on Geometric Dynamics with Singularities, Exeter (Great Britain) december 2005.
 - 66) International seminar, Rovaniemi (Finland), september 2006.
 - 67) Workshop on Fibonacci Words, Turku (Finland), september 2006.
 - 68) International Symposium of Dynamical Systems. Celebrating the 60th Anniversary of Welington de Melo, Salvador (Brasil) october 2006.
 - 69) Numeration Days, Graz (Austria), april 2007.
 - 70) International Conference on Discrete Mathematics, Bangkok (Thailand), may 2007.
 - 71) Second International Congress in Algebra and Combinatorics, Xi'an (China), july 2007.
 - 72) Low complexity dynamics, BIRS, Banff, Canada, may 2008.
 - 73) Substitutive tilings and fractal geometry, Guangzhou, (China), july 2010.
 - 74) Ergodic theory and dynamical systems, Warwick (Great-Britain), july 2011.
 - 75) WORDS, Praha Czech (Republic), september 2011.
 - 76) Outstanding challenges in combinatorics on words, Banff (Canada), february 2012.
 - 77) Laminations and symbolic dynamics, Marseille, april 2012.
 - 78) Numeration and substitution, Kyoto (Japan), june 2012.

2.2 Other invitations:

In France:

several lectures at the Séminaire d'analyse harmonique of Paris 13 , 1987, 1989, 2010;

several lectures at the Séminaire de probabilités of Dijon , 1986, 1989, 1997, 2000;

one lecture at the Séminaire de théorie des nombres of Bordeaux, 1989;

two lectures at the Séminaire de théorie des nombres of Lyon 1, 1990, 2000;

one lecture at the Séminaire de géométrie ergodique, Ecole Polytechnique, Paris, 1992;

one lecture at the Bielefeld -Marseille encounters in discrete mathematics, Marseille, 1994;

two lectures at the Séminaire de mathématiques de Brest, 1994, 1999;

one lecture at the Séminaire de probabilités, IRMA, Strasbourg, 1995;

two lectures at the Séminaire de mathématiques, Tours, 1997, 2007;

two lectures at the Séminaire de Mathématiques, Amiens, 1998, 1999;

one lecture at the Séminaire de Mathématiques, Paris 11 (Orsay), 2003;

one lecture at the Séminaire d'Arithmétique, Lille 1, 2005.

Abroad:

1) Nicolas Copernic University, Torun, Poland, december 1986.

2) Nicolas Copernic University, Torun, Poland, december 1988.

3) Osaka City University, Japan, august 1990.

4) Keio University, Japan, august 1990.

5) Federal university of Rio de Janeiro, Brasil, march 1991.

6) Mathematics institute of the Academy of sciences of Hungary, Budapest, may 1991.

7) Visit to Poland within the Programme de coopération CNRS-PAN, "dynamique symbolique" , Torun and Wroclaw, september 1991.

8) Mathematics institute of the Academy of sciences of Ukraine, Kiev, november 1991.

9) Visit to Poland within the Programme de coopération CNRS-PAN,"dynamique symbolique", Torun, july 1992.

10) Visit to Japan within the Programme de coopération CNRS-JSPS, Yokohama and Osaka, november 1992.

11) Visit to Poland within the Programme de coopération CNRS-PAN,, "dy-

- namique symbolique”, Torun, july 1993.
- 12) Visit to Italy within the Programme de coopération CNRS-CNR, Palermo, december 1993.
 - 13) Federal university of Rio de Janeiro, Brasil, august 1994.
 - 14) Visit to China within the Programme de coopération CNRS-NSFC, Hefei, Nanjing and Wuhan, december 1994.
 - 15) Visit to Russia within the Programme de Coopération CNRS-Russian Academy of Sciences, St-Petersburg, may 1995.
 - 16) Visit to Chile within the Programme de Coopération ECOS, Santiago, september 1995.
 - 17) Center of advanced study in mathematics, Bombay, India, january 1996.
 - 18) Visit to Japan within the JSPS Fellowship program, Yokohama, Tokyo, Osaka and Fukuoka, march 1996.
 - 19) Zhejiang University, Hangzhou, China, may 1996.
 - 20) Normal University of Southern China, Guangzhou (Canton), China, may 1996.
 - 21) Université du Québec à Montréal, Canada, july 1996.
 - 22) Schrdinger Institute, Wien (Austria), january 1997.
 - 23) Babes-Bolyai University, Cluj (Romania) within the cooperation program CNRS-Academia Romana.
 - 24) Visit to Japan within the Programme de coopération CNRS-JSPS, Yokohama and Osaka, november 1997.
 - 25) Visit to Poland within the Programme de coopération CNRS-PAN ”Théorie des nombres”, Warszawa and Toruń, december 1997 - january 1998.
 - 26) La Sapienza, Roma (Italy), january 1998.
 - 27) Visit to Hungary within the Programme de coopération BALATON ”Théorie des nombres”, Budapest, july 1998.
 - 28) Visit to Chile within the Programme de coopération ECOS, Santiago and Temuco, august - september 1998.
 - 29) Visit to Finland within the Programme de coopération CNRS-Académie des Sciences ”Dynamique symbolique”, Turku and Oulu, september - october 1998.
 - 30) Visit to South Korea within the Programme de coopération CNRS-KOSEF ”Théorie ergodique”, Ajou University, november 1998.
 - 31) Visit to United States within the Programme de coopération CNRS-NSF ”Systèmes dynamiques géométriques et symboliques”, University of North Texas and Rice University, december 1998.

- 32) Visit to Finland within the Programme de coopération CNRS-Académie des Sciences "Dynamique symbolique", Turku, may 1999.
- 33) Visit to Romania within the cooperation program CNRS-Academia Romana, Cluj and Bucuresti, july 1999.
- 34) Visit to South Korea within the Programme de coopération CNRS-KOSEF "Théorie ergodique", Ajou University, november 1999.
- 35) Visit to Romania within the Programme de coopération CNRS-Academia Romana, Cluj and Bucuresti, january 2000.
- 36) University of North Texas, april 2000.
- 37) Visit to Japan within the Programme de coopération CNRS-JSPS "Théorie ergodique", Tokyo, Yokohama and Osaka, october 2000.
- 38) Visit to Finland within the Programme de coopération CNRS-Académie des Sciences "Dynamique symbolique", Turku, Kevo and Rovaniemi, december 2000.
- 39) Visit to Japan within the Programme de coopération CNRS-JSPS "Théorie ergodique", Tokyo, Yokohama, Niigata, Fukuoka and Osaka, march 2001.
- 40) Visit to South Africa within the Programme de coopération CNRS-NRF "Combinatoire des mots", Witwatersrand University, Johannesburg, april 2001.
- 41) Visit to Greece within the Programme de coopération CNRS-NHRF "Arithmétique", Thessaloniki, july 2001.
- 42) Visit to Italy within the Programme de coopération CNRS-CNR, Palermo and Roma, september 2001.
- 43) Visit to China within the Programme de coopération CNRS-NSFC, Beijing and Shanghai, october 2001.
- 44) Chinese University of Hong Kong, november 2001.
- 45) University of North Texas, february - may 2002.
- 46) San Luis Potosi (Mexico), february 2002.
- 47) Berkeley, march 2002.
- 48) Rice University, march 2002.
- 49) University of Maryland, april 2002.
- 50) University of Memphis, april 2002.
- 51) Ohio State University, may 2002.
- 52) Visit to Hungary within the Programme de coopération BALATON "Théorie des nombres", Budapest, july 2002.
- 53) Visit to Japan within the Programme de coopération CNRS-JSPS "Théorie ergodique", Tokyo and Osaka, september 2002.
- 54) Visit to Sweden within the Programme de coopération CNRS-Conseil

Suédois de la Recherche "Systèmes dynamiques géométriques", Lund, october 2002.

55) Visit to Greece within the Programme de coopération CNRS-NHRF "Arithmétique", Thessaloniki, november 2002.

56) Institut de Technologie du Cambodge, Phnom Penh, december 2002.

57) Visit to Brazil within the Coopération Franco-Brésilienne, Sao Paulo and Ilha Solteira, february 2003.

58) University of New South Wales, Sydney, Australie, april 2003.

59) Visit to Greece within the Programme Socrates, Thessaloniki, september 2003.

60) Visit to China within the Programme de coopération CNRS-NSFC, Beijing, Wuhan and Guangzhou, december 2003.

61) University of North Texas, may 2004.

62) Ohio State University, may 2004.

63) Université du Québec à Montréal, may 2004.

64) Max Planck Institute fuer Mathematics, Bonn, july 2004.

65) Visit to Romnia within the Programme de coopération CNRS-Academia Romana, Cluj, Brasov and Constanta, september 2004.

66) Visit to China within the Programme de coopération CNRS-NSFC, Wuhan and Shanghai, october 2004. 67) Visit to Hungary within the Programme de coopération BALATON "Théorie des nombres", Budapest, december 2004.

68) Ajou University, Suwon, South Korea, february 2005.

69) Korean Institute for Advanced Studies, Seoul, South Korea, february 2005.

70) University of Sciences and Techniques of China, Hefei (China), juine 2005.

71) Visit to Finland within the Socrates program, Rovaniemi, juine 2005.

72) Visit to Romania within the Socrates program, Brasov, august 2005.

73) Université du Québec à Montréal (Canada), september 2005.

74) Visit to Brazil within the Coopération Franco-Brésilienne, Porto Alegre, Sao Jose do Rio Preto and Rio de Janeiro, october-november 2005.

75) Visit to Greece within the Socrates program, Thessaloniki, april 2006.

76) Visit to Finland within the Socrates program, Rovaniemi, june 2006.

77) Visit to Romania within the Socrates program, Brasov, july 2005.

78) Chiang Mai University, Chiang Mai, Thailand, august 2006.

79) Kasetsart University, Bangkok, Thailand, august 2006.

- 80) Visit to Brazil within the Coopération Franco-Brésilienne, Porto Alegre, Sao Jose do Rio Preto and Rio de Janeiro, october-november 2006.
- 81) Visit to Romania within the Socrates program, Brasov, april 2007.
- 82) Visit to Greece within the Socrates program, Thessaloniki, october 2007.
- 83) Visit to Brazil within the Coopération Franco-Brésilienne, Porto Alegre, Sao Jose do Rio Preto and Rio de Janeiro, november 2007.
- 84) University of British Columbia, Vancouver, Canada, may 2008.
- 85) Research Member, MSRI, Berkeley, USA, septembre-octobre-novembre 2008.
- 86) Oregon State University, Corvallis, USA, octobre 2008.
- 87) Visit to Finland within the Socrates program, Rovaniemi, may 2010.
- 88) Visit to Brazil within the program COFECUB, Sao Jose do Rio Preto, Campinas, Sao Paulo, Rio de Janeiro, august-september 2011.

3 Membership in juries

Habilitation thesis of P. Arnoux (1991), V. Berthé (1999), F. Durand (2004).
 Ph. D. theses of M.L. Santini (1993), P. Hubert (1994), I. Lucien (1995),
 P. Alessandri (1996), B. Saussol (1998), T. Monteil (2005), M. Le Gonidec
 (2006), F. Havard (2008), S. Widmer (2010).

4 Other activities

Organization of conferences:

Co-organizer of the international conference "Dynamical systems: from crystal to chaos" celebrating the sixtieth birthday of Gérard Rauzy, Marseille-Luminy, june 1998.

Co-organizer of the international conference "Dynamical systems and ergodic theory", Katsiveli (Ukraine) august 2000.

Co-organizer of the international conference "2001 : l'Odyssée dynamique", Marseille-Luminy, february 2001.

Co-organizer of the international conference "WORDS 2007", Marseille-Luminy, september 2007.

Co-organizer of the international conference Franco-Thai Seminar in Pure and Applied Mathematics, Bangkok, Thailand, october 2009.

Editor of the South-East Asian Bulletin of Mathematics since 2003.
Editor of the Punjab University Journal of Mathematics since 2008.
Editor of Acta Universitatis Sapientiae (Cluj-Napoca, Roumanie) since 2009.
Member of the Comité National Français des Mathématiciens (french section of the International Mathematical Union) from 2000 to 2008, secretary from 2000 to 2006.

Teaching for doctoral students:

"Théorie ergodique et théorie des nombres", Marseille, february 1989.
"Propriétés ergodiques des flots géodésique et horocyclique", university Paris 7, 1991, in collaboration with Pierre Arnoux.
"Systèmes dynamiques", Dijon, february 1992.
"Propriétés ergodiques des flots horocyclique et de Teichmüller", university Paris 7, 1992, in collaboration with Pierre Arnoux.
"Théorie des nombres", university Lyon 1, june 1992.
"Propriétés élémentaires des substitutions", university Aix-Marseille 2, 1993-1994 and 1994-1995.
Co-organizer of the Summer school "Automates, systèmes dynamiques discrets et applications", Wuhan (China) may 1996: one course "Substitutions and symbolic dynamical systems".
Co-organizer of the Thematic School "Systèmes dynamiques : du cristal au chaos", Marseille-Luminy, june 1998.
Co-organizer of the Thematic School "Systèmes dynamiques 2001", Marseille, february 2001: one mini-course (in collaboration with Luca Zamboni).

Doctoral students: N. Chekhova (Ph. D. dissertation on 28 november 1997, title "Nombres de recouvrement"), T. Monteil (Ph. D. dissertation on 14 december 2005, title "Illumination dans les billards polygonaux et dynamique symbolique"), E. Vaslet (Ph. D. dissertation on 23 june 2011, title "Répétitions dans les mots et seuils d'évitabilité).

Guest lecturer at the 4th International Arda Symposium, Stockholm, Sweden, may 1990.