CURRICULUM VITAE

Jose Antonio SEADE KURI

29th April 2016

BORN: May 20, 1954, in Mexico City
MARRIED.
NATIONALITY: Mexican.

STUDIES:
B. A. in Mathematics, Faculty of Sciences, National University of Mexico (UNAM), 1972-1976.
Master of Sciences, University of Oxford, England, 1977.
Doctor of Philosophy, University of Oxford, England, 1980. Thesis Advisors: Brian Steer and Nigel Hitchin. ``The quotient of some classical groups by discrete subgroups and homotopy''.

ACADEMIC POSITIONS:
Associate Professor at the Instituto de Matematicas de la UNAM (Universidad Nacional Autónoma de México), November 1980 to July 1984.
Professor at the Instituto de Matemáticas de la UNAM, since July 1984.
Director of Instituto de Matemáticas de la UNAM, since april 2014.

FIELDS OF RESEARCH:
Real and complex singularities.
Complex geometry.
Conformal and holomorphic dynamical systems.
Representations of discrete groups.

PUBLICATIONS:
Research Articles:
1. ``The elements of $\pi\_3^\wedge s$ represented by invariant framings of quotients of Sl_2(R) by certain discrete subgroups''. Joint with B.F. Steer. Advances in Mathematics 46 (1981), 221-228.

2. ``Singular points of complex surfaces and homotopy''. Topology 21 (1982),1-8.

3.- ``On the η-function of the Dirac Operator on S^3/Γ''. Anales del Instituto de Matemáticas de la UNAM 21 (1981), 129-147.

4. ``A cobordism invariant for surface singularities''. AMS Proceedings of Symposio in Pure Mathematics 40 (1983),479-484.

5. "Invariant framings of quotients of Sl2(R) by discrete subgroups". AMS Contemporary Mathematics 12 (1983), 293-297.

6. "Vector fields on smoothings of complex singularities". Research Notes in Mathematics 112 (1985), 152-158.

7. ``Framings on algebraic knots''. Joint with Li Bang He. Quarterly Journal of Mathematics 38 (1987), 297-306.

8. "The index of a vector field on a complex surface with singularities". AMS Contemporary Mathematics 58, part III, (1987), 225-232.

9. ``A note on the η function for quotients of $PSl_2(R)$ by cocompact Fuchsian groups''. Topology 26 (1987), 79-91.

10. "Vector fields and framings on isolated complete intersection singularities". Proceedings Indian Academy of Sciences (Mathematics) 100 (1990), 53-56.

11. ``Complex singularities and the framed cobordism class of compact quotients of 3-dimensional Lie groups by discrete subgroups''. Joint with B.F. Steer. Commentarii Mathematici Helvetici 65 (1990), 349-374.

12. ``The index of a holomorphic flow with an isolated singularity''. Joint with X. Gomez-Mont and A. Verjovsky. Matematische Annalen 291 (1991), 737-751.

13. ``Characteristic divisors on complex manifolds''. Joint with H. Esnault and E. Viehweg. Crelle, Journal fur die Reine und Ange. der Mathematcs 424 (1992), 17-30.

14. "A generalization of Rochlin's signature theorem and an application to singularities". Aportaciones Matemáticas SMM , Serie Comunicaciones, No. 11 (1992), 25-39.

15. `The index of a vector field under blow ups''. Boletín Soc. Mat. Mex. 37 (1992), 446-461.

16. ``On the topology of a holomorphic flow near an isolated singularity''. Joint with X. Gomez-Mont and A. Verjovsky. Functional Anal. and Appl. 27 (1993), 97-103.

17. ``A note on the Adams e-invariant''. AMS Contemporary Mathematics 188 (1995), 231-237.

18. "Invariants of 3-manifolds and surface singularities". College on Singularities, World Scientific 1995, 646-672.

19. "The index of a vector field on a singular variety". College on Singularities, World Scientific 1995, 673-696.

20. `Complex singularities from the combinatorial point of view''. Joint with F. Larrión. Topology and Applications 66 (1995), 251-265.

21. ``A residue formula for the index of a holomorphic flow''. Joint with T. Suwa. Mathematische Annalen 304 (1996), 621-634.

22. `Fibred links and a construction of real singularities via complex geometry''. Bull. Braz. Math. Soc. 27, (1996), 199-215.

23. ``Open books decompositions associated to holomorphic vector fields''. Boletín Sociedad Matemática Mexicana 3 (1997), 323-335.

24. ``Residues and topological invariants of singular foliations''. Joint with T. Suwa. International Journal of Mathematics 8 (1997), 825-847.

25. ``Invariance topologique de la classe d'Euler pour des feuilletages singuliers''. Joint with A. Verjovsky. Compte Rendus Academie des Sciences, Paris, 325 (1997), Série I, 645-648.

26. ``An adjunction formula for local complete intersections''. Joint with T. Suwa. International J. of Maths. 9, 1998, 759-768.

27. ``Indices of vector fields and topological invariants of real analytic singularities''. Joint with Marcelo Aguilar and A. Verjovsky. Crelle's, J. f. d. Reine u.Angew. Math. 504, 1998, 1-28.

28. "Milnor numbers and classes of local complete intersections". (With J. P. Brasselet, D. Lehmann and T. Suwa). Proceedings of the Japan Academy of Sciences, vol. 75, Ser. A, No. 10, 1999.

29. ``Euler obstruction and indices of vector fields''. Joint with J.-P. Brasselet and Lê Dung Tráng. Topology 39, 2000, 1193-1208.

30. ``Actions of discrete groups on Complex Projective Spaces''. . Joint with A. Verjovsky. Contemporary Maths. 269, 2001, 155-178.

31. ``Milnor classes for local complete intersections''. Joint with J. -P. Brasselet, D. Lehmann and T. Suwa. Transactions of the AMS. 354, 2001, p. 1351-1371.

32. ``Higher dimensional complex Kleinian groups'', Joint with A. Verjovsky. Mathematische Annalen 322, 2002, 279-300.

33. ``On real singularities with a Milnor fibration'', Joint with M.A. Ruas and A.

Verjovsky. Trends in Mathematics ``Trends in singularities'', Birkhauser 2002, p. 191-213, edited by A. Libgober and M. Tibar.

34. "Indices of vector fields and Chern classes for singular varieties". En "Invitations to geometry and topology". Ed. M. R. Bridson and S. M. Salamon. Oxford Graduate Texts in Mathematics, 7. Oxford University Press, Oxford, 2002, p. 292-320.

35. "On the topology of hypersurface singularities". En "Real and Complex Singularities", ed. D. Mond and M. Saia, Lecture Notes in Pure and Applied Mathematics vol. 232, 2003, Marcell Decker Inc.

36. ``Quadrics, orthogonal actions and involutions in Complex Projective Spaces''. Joint with A. Verjovsky and Lê Dung Tráng. L'Enseignement Matematique 49 (2003), p. 173-203.

37. ``Complex Schottky groups'', Joint with A. Verjovsky. In ``Geometric Methods in Dynamics (II) - Volume in honor of Jacob Palis''. Ed. W. de Melo, M. Viana and J.-Ch. Yoccoz, Astérisque 287 (2003), 251-272.

38. ``Real singularities and Open book decompositions of the 3-sphere''. Joint with A. Pichon. Ann. Fac. des Sciences de Toulouse 12, No. 2, (2003), 245-265.

39. ``Euler obstruction and Defects of functions on singular varieties''. Joint with J. P. Brasselet, D. Massey and A. J. Parameswaran. Journal London Math Soc. 70, No. 2, (2004), 59-76.

40. ``Homological index for 1-forms and a Milnor number for isolated singularities''. Joint with W. Ebeling and G. Gusein-Zade. Internat. J. Math. 15 (2004), no. 9, 895--905.

41. "An explicit cycle representing the Fulton-Johnson class I", in colaboration with J. P. Brasselet y T. Suwa. Proceedings 3th Franco-Japanese singularities meeting. In "Franco- Japanese Proceedings Luminy 2002", edit. J. P. Brasselet y T. Suwa. Serie Séminaires et Congrés de la Soc. Mat. de France, 2005.

42. "Milnor numbers and Euler obstruction", with M. Tibar and A. Ver- jovsky. Bull. Braz. Math. Soc. (N.S.) 36 (2005), no. 2, 275–283.

43. ``Global Euler obstruction and polar invariants''. Joint with M. Tibar and A. Verjovsky. Math. Annalen 333 (2005), 393-403.

44. ``Proportionality of Indices of 1-Forms on Singular Varieties'', joint with J. P. Brasselet and T. Suwa. In ``Singularities in geometry and topology 2004'', p. 49-65, Adv. Stud. Pure Math., 46, Math. Soc. Japan, Tokyo, 2007.

45.- "Remarks on contact structures and vector fields on isolated complete intersection singularities. In "Real and Complex Singularities", Proceedings of the IXth Sao Carlos Workshop on Real and Complex Singularities", edit. M. Saia and J. Seade. Contemporary Mathematics, AMS. 459, 2008, 195-205.

46.- ``Fibered multilinks and singularities $f \bar g$''joint with A. Pichon. Math. Ann. 342, No. 3, 487-514 (2008).

47.- "A finitness theorem for dual graphs of surface singularities", joint with Patrick Popescu-Pampu.   Int. J. Maths. 20, No. 8 (2009), 1057-1068.

48.- "Milnor fibrations for meromorphic germs", joint with Arnaud Bodin and Anne Pichon. Journal London Math. Soc. 80, No. 2 (2009), 311-325.

49.- ``Refinements of Milnor's fibration theorem'', ", joint with J.L. Cisneros-Molina and J. Snoussi. Advances in Mathematics 222, No. 3 (2009), 937-970.

50.- "Codimension 1 foliations with Bott-Morse Singularities-I'', joint with Bruno Scardua.   Journal of Differential Geometry 83, No. 1 (2009), 189-212.

51.- "On the Equicontinuity Region of Discrete Subgroups of $PU(1,n)$", joint with A. Cano, J. Geom. Anal. 20, No. 2, 291-305 (2010).

52.- "Milnor fibrations and d-regularity for real analytic singularities", joint with J.L. Cisneros-Molina and J. Snoussi. International J. Mathematics 21 (2010), p. 419-434.

53. "Milnor Fibrations for Real and Complex Singularities", wioth Jos é Luis Cisneros-Molina and Jawad Snoussi. In "Topology of algebraic varieties and singularities". Invited papers of the conference in honor of Anatoly Libgober's 60th birthday, Jaca, Spain, June 22–26, 2009. Cogolludo-Agust´ın, José Ignacio (ed.) et al. Providence, RI: American Mathematical Society (AMS); Madrid: Real Sociedad Matemtica Espaola. Contemporary Mathematics 538, 345-362 (2011).

54.- Compact foliations with Bott-Morse singularities, joint work with Bruno Scrdua, Bruno. In Foliations, geometry, and topology. N.Saldanha et al (ed.). AMS, Contemporary Mathematics 498, 83-97 (2011).

55.- "Codimension 1 foliations with Bott-Morse Singularities-II'', joint work with Bruno
Scardua. Journal of Topology. 4, No. 2, 343-382 (2011).

56. "Morse theory and the topology of holomorphic foliations near an isolated singularity". Joint work with Beatriz Limón. Journal of Topology. 4, No. 3, 667-686 (2011).

57.- ``Milnor Fibrations and the Thom Property for maps $f \bar g$''.
Joint work with Anne Pichon. Journal of Singularities vol. 3 (2011), 144-150.

58.- ``Lê cycles and Milnor classes of compact hypersurfaces''. En colaboración con
R. Callejas-Bedregal y M. F. Z. Morgado.
C. R. Math. Acad. Sci., Soc. R. Can. 34, No. 2, 33-38 (2012).

59.- "Milnor fibrations and the concept of d-regularity for analytic map germs". With
J. Cisneros-Molina, J. Snoussi. Contemporary Mathematics, A. M. S., v. 569, p. 01-28,
2012.

60 "On Discrete groups of automorphisms of P2_C". With Angel Cano. Geometria
Dedicata 168 (2014), 9-60.

61.- "Lˆe cycles and Milnor classes", en colaboracio´n con R. Callejas-Bedregal y M. F.
Z. Morgado. Inventiones Mathematicae volume 197 (2014), p. 453-482. {\it
Erratum} p 483-489.

62. "On smooth deformations of foliations with singularities". With A. Mafra and B.
Scardua. Journal of Singularities 9 (2014), p. 101-110.

63.- "On the topology of real analytic maps". Joint with
José Luis Cisneros-Molina, Nivaldo G. Grulha Jr. International Journal of
Mathematics, vol. 25, num. 7, 2014.

64.- "The Lê-Greuel formula for functions on Analytic spaces". Joint with R. Callejas-
Bedregal, M. Morgado and M. Saia. To appear in Tohoku Math. Journal.

65.- "Action of R-Fuchsian groups on CP2 ". With Angel Cano and John Parker. Asian
Journal of Mathematics vol. 20 (2016), p. 449-474.

66.- ``On the Lê -Milnor fibration for real analytic maps''. En colaboración con
Aurelio Menegon Neto. To appear in Mathematische Nachrichten.

67.- ``Remarks on Laufer's formula for the Milnor number, Rochlin's signature
theorem and the analytic Euler characteristic of compact complex manifolds''. To
appear in Proceedings of the International Conference Singularities and Computer
Algebra, Lambrecht, Germany, June 2015.

68.- ``Remarks on the topology of real and complex analytic map-germs''. To appear
in "Methods and Applications of Analysis".

Monographs:

1. ``On the topology of isolated singularities in analytic spaces''.  Series ``Progress in Mathematics'' vol. 241, 2005, Birkhauser, 255 pages. Ferran Sunyer I Balaguer Prize 2005.

2.- "Vector fields on singular varieties", joint with J.-P. Brasselet and T. Suwa, Lecture Notes in Mathematics # 1987, Springer Verlag (2009), 249 pages.

3.- "Complex Kleinian groups", with A. Cano and J. P. Navarrete. To appear in Birkhauser. Ferran Sunyer I Balaguer Prize 2012. 295 pages.

PROCEEDINGS OF CONFERENCES PUBLISHED AS AN EDITOR:

1.- Holomorphic Dynamics. Co-edited with X. Gómez-Mont and A. Verjovsky. Springer Verlag, Lecture Notes in Maths. No. 1345, 1988.

2.- ``Geometry and Dynamics'', co-edited con J. Eells, E. Ghys, M. Lyubich y J. Palis. Contemporary Maths. vol. 389, 2005, American Math. Soc. Proceedings of the Cuernavaca meeting in cellebration of the 60th Birthday Anniversary of Alberto Verjovsky.

3.- "Real and Complex Singularities", Co-edited with M. Saia. Proceedings of the IXth Sao Carlos Workshop on Real and Complex Singularities in 2006. Contemporary Mathematics 459. Providence, RI: American Mathematical Society (2008).

4.- "Singularities I: Algebraic and analytic aspects". Co-edited with J.-P. Brasselet, J.L. Cisneros-Molina, D. Massey and B. Teissier. Proceedings of the Cuernavaca meeting in
honour of the 60th Birthday Anniversary of Lê Dung Tráng. Contemporary Mathematics 474. American Mathematical Society AMS (2009).

5.- "Singularities II: Geometric and topological aspects". Co-edited with J.-P. Brasselet, J.L. Cisneros-Molina, D. Massey and B. Teissier. Proceedings of the Cuernavaca meeting in honour of the 60th Birthday Anniversary of Lê Dung Tráng. Contemporary Mathematics 475. American Mathematical Society AMS (2009).

  6.- ``Algebraic Methods in Geometry: Commutative and Homological Algebra in Foliations and Singularities". Co-editado con Pedro Luis del Angel, Laura Ortiz-

Bobadilla y Alberto Verjovsky. Publicado como el vol\'umen 9 del Journal of Singularities (2014).

PH. D. STUDENTS

1.- Federico Sánchez-Bringas. ``La Topología de los flujos holomorfos en superficies singulares''. Facultad de Ciencias, UNAM, Mexico, 1988. Thesis co-directed with X. Gomez-Mont.

2.- Juan Pablo Navarrete. Grupos kleinianos complejos en CP^2. Facultad de Ciencias, UNAM; Mexico, 2006.

3. Angel Cano. "Discrete groups of automorphisms of complex projective spaces". Facultad de Ciencias, UNAM, Mexico, 2008.

4.- Michelle Ferreira Zanchetta . "Lê numbers and Milnor classes"- Universidad de Sao Paulo in Sao Carlos, Brazil, 2010. Thesis co-directed with Marcelo Saia (Sao Paulo, Brazil).

5.- Haydee Aguilar Cabrera. "Variedades de Waldhausen y singularidades reales".
Facultad de Ciencias, UNAM, Mexico, 2011. Thesis co-directed with Anne Pichon (Marseille, France).

6.- Beatriz Limón. "Teoria de Morse y la topologia de foliaciones holomorfas cerca de una singularidad aislada". Facultad de Ciencias, UNAM, Mexico, 2011.

7.- Aurelio Menegon Neto. "The topology of non-isolated singularities". Facultad de Ciencias, UNAM, Mexico, 2011.

POSDOCTORAL STUDENTS:

Araceli Medina Bonifant, from University of Michigan, Ann Arbor, EUA, 31/08/1999 to 31/08/2001, Posdoctoral UNAM.

Patricia Domínguez Soto, from Imperial College, London, U.K., 21/09/1999 31/12/2001. Posdoctoral UNAM.

Meral Tosún, from Fuza Gursey Institut, Tubitak, Turkey, 19/09/2001 to 31/08/2004. Posdoctoral UNAM.

Lucía López de Medrano, from Universidad de París 7, France, 20/11/2009 to19/11/2011. Grant DGAPA-UNAM.

Khurram Shabbir, from GC University of Lahore, Pakistan, 01/04/2011 to

29/022012. Grant TWAS-CONACyT.

Fuensanta Aroca , from Universidad de Lisboa, Portugal, 01/09/2001 to 31/08/2003, Posdoctoral UNAM.

Jawad Snoussi, Universidad de Lisboa, Portugal, 01/09/2001 to 31/08/2003, Posdoctoral UNAM.

Carlos Alfonso Cabrera Ocañas, from Warwick University, U. K., 01/09/2008 to 31/08/2010, Grant DGAPA-UNAM.

OTHER INFORMATION:

- Past President of the Mexican Mathematical Society (1986-1987).

- Founder of the "Olimpiada Mexicana de Matemáticas" in 1987.

- My Birkhauser monograph ``On the topology of isolated singularities in analytic spaces'' won the international award Ferran Sunyer i Balaguer Prize 2005, given by the eponymous foundation from Barcelona, Spain (http://ffsb.iec.cat/EN/premi.htm).

- My Birkhauser monograph "Complex Kleinian groups", joint work with my former students A. Cano and J. P. Navarrete, won the international award Ferran Sunyer i Balaguer Prize 2012, given by the eponymous foundation from Barcelona, Spain (http://ffsb.iec.cat/EN/premi.htm).

- Associate Editor of the Journal of Singularities (http://www.journalofsing.org/).

- Member of the Academia Mexicana de Ciencias since 1985.

- Member of the Sistema Nacional de Investigadores (SNI), Mexico, since 1984. Level III since 2000.

- Member of the Academy of Sciences for the Developing World (TWAS) since 2005.

- Founder and current Academic Director of the Solomon Lefschetz International Laboratory (LAISLA) which is a "Laboratoire International Associé" of the CNRS (France) in Mexico (http://www.laisla.unam.mx/).

- Steering Committee Member of the Pacific Rim Mathematical Association (PRIMA; http://www.primath.org/about_prima.html).

- Member of the Scientific Committee for the 2nd PRIMA Congress, Shanghai 2013 (http://www.primath.org/prima2013/).

- Member of the Scientific Advisory Board of BIRS, the Canadian Banff International Research Station for Mathematical Innovation and Discovery (http://www.birs.ca/about/governance/scientific-management/scientific-advisory-board/current-members).

- Past Member of the Scientific Committee for the Dynamical Systems session of the International Congress of Mathematicians held at India, 2010.

- Coordinator of the Scientific Committee of the Second Latin American Congress of Mathematicians, held in Cancún, Mexico, in 2004.

- Member of the Scientific Committee of the First Mathematical Congress of the Americas, jointly sponsored by the American Mathematical Society, the Canadian Mathematical Society and the Mathematical Societies of all Latin American countries, held in august, 2013, at Guanajuato, Mexico. (http://www.mca2013.org/index.php/en/committees/programme-committee)

- Visitor for one semester (sabbatical, 2005) as Professeur Classe Exceptionnelle at the École Normale Supérieure de Lyon, France, and visitor for one term at Oxford University on an SRC grant during same year.

- Holder for a 5-year term (2005-2010) of the highest-level Staff Associate position at the International Center for Theoretical Physics (ICTP, in Trieste, Italy) has. These very distinguished associateships run for periods of 5 years.

- Member of the Scientific Committee of UMALCA, the Mathematical Association for Latin America and the Caribbean, for the period 2001-2009.

- Member of the Executive Committee UMALCA, the Mathematical Association for Latin America and the Caribbean, since 2009.

- ``Alan David Richards Fellowship'' at University of Durham, U. K., 2012.