

# Jerry A Sellwood – Curriculum Vitae

## Contact information

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## Education and qualifications

<i>Level</i>	<i>Dates</i>	<i>Institution</i>	<i>Qualification</i>
Postgraduate	1974 – 1977	Manchester University England	Ph.D. in Astronomy
Postgraduate	1971 – 1972	Makerere University Kampala, Uganda	Diploma in Education
Undergraduate	1968 – 1971	Bristol University England	B.Sc. Honours in Physics

## Professional career

Jul 2017 –	Affiliated Professor, Steward Observatory and Distinguished Campus Colleague, University of Arizona
Jul 2017 –	Distinguished Professor Emeritus, Department of Physics & Astronomy, Rutgers University, New Jersey
Jul 2013 – Jun 2017	Distinguished Professor, Department of Physics & Astronomy Rutgers University, New Jersey
Jul 1998 – Jun 2013	Professor, Department of Physics & Astronomy Rutgers University, New Jersey
Sep 1991 – Jun 1998	Associate Professor, Department of Physics & Astronomy Rutgers University, New Jersey
Oct 1990 – Oct 1991	Associate Astronomer Space Telescope Science Institute, Baltimore
Oct 1989 – Sep 1990:	Senior Research Associate Institute of Astronomy, Cambridge, England
Jan 1986 – Sep 1989:	SERC Advanced Fellow Department of Astronomy, Manchester University, England
Feb 1984 – Dec 1985:	Research Fellow Kapteyn Laboratory, University of Groningen, The Netherlands
Oct 1980 – Jan 1984:	Research Associate Institute of Astronomy, Cambridge, England
Nov 1979 – Sep 1980:	ESO Fellow European Southern Observatory, Geneva, Switzerland
Nov 1977 – Oct 1979:	NATO Research Fellow (administered by UK SERC) Stockholm Observatory, Sweden and ESO, Geneva, Switzerland

## Academic visits

Mar – Apr 2019:	Gaia19 program of KITP, UC Santa Barbara
Sep – Oct 2018:	Shanghai Observatory and Chinese NAS, Senior Visitor
Apr – May 2018:	Shanghai Observatory and Chinese NAS, Senior Visitor
Nov – Nov 2017:	Max Planck Institut für Extraterrestrische Physik, Garching, Germany
May – Jun 2016:	Max Planck Institut für Extraterrestrische Physik, Garching, Germany
Jan – Jun 2003:	Member, Institute for Advanced Study, Princeton, USA
Jan – Jun 1998:	Isaac Newton Institute for Mathematical Sciences, Cambridge, England
Jan – May 1995:	Canadian Institute for Theoretical Astrophysics, Toronto, Canada
Jun – Aug 1987:	Lick Observatory, Santa Cruz, USA
Oct – Nov 1983:	Visitor, Institute for Advanced Study, Princeton, USA

## Research interests

Galaxies, dark matter, galactic structure, galaxy formation, stellar dynamics, accretion discs, star formation,  $N$ -body simulations, computational astrophysics. For more information, see: <http://www.physics.rutgers.edu/~sellwood>

## Membership of learned societies

<i>Dates</i>	<i>Status</i>	<i>Society</i>
2000 - present	Member	AAS Division on Dynamical Astronomy
1984 - 2020	Full member	American Astronomical Society
2020 - present	Legacy Fellow	American Astronomical Society
1982 - present	Member	International Astronomical Union
1992 – 2006	Founder member	European Astronomical Society
1982 – 2006	Fellow	Royal Astronomical Society

## Academic honors

February 2020: Elected “Legacy Fellow” of American Astronomical Society

July 2019: 70th birthday celebration *Galaxy Dynamics in the Era of Large Surveys*, IAU Symposium **353** in Shanghai, China.

April 2013: Rutgers Board of Trustees Award for Excellence in Research

May 2012: Brouwer Prize of the American Astronomical Society, which is awarded for excellence in research and teaching of Dynamical Astronomy

April 1999: Graduate Teaching Award from Rutgers University Graduate School

October 1998: Elected Life Member of Clare Hall, Cambridge.

## Committees and other service

van Biesbroeck Prize Award Committee (Mar 2012 - Feb 2015)

Division of Dynamical Astronomy (of the AAS) Committee (July 2011 - June 2014)

Brouwer Award Selection Committee (Sept 2006 - Sept 2009, Chair 08/09 and March 2014)

Convener of the Association of Astronomy Department Chairs (October 2004 – June 2017).

University Member Representative in the Association of Universities for Research in Astronomy (July 1999 – March 2006). Subcommittees:

Membership Committee (July 2000 – June 2007)

Working Group on International Affiliates (July 2000 – June 2001)

### Conference Organization

SOC member: *Secular Evolution; the Cosmic Origin of the Hubble Sequence*, Spine Secular Meeting IHP, IAP Paris, May 24 – 26, 2016.

SOC member: *Dynamics of Disk Galaxies*, 7th Korean Astrophysics Workshop, Seoul National University, South Korea, October 21 – 24, 2013.

SOC member: *Galaxy Evolution Through Secular Processes*, Special Session #3 at IUA General Assembly, Beijing, China, August 20-24, 2012

SOC member: *Stars Without Borders: Radial Migration in Spiral Galaxies* Medana, Slovenia, May 21-24, 2012

Deputy-chair of SOC: *Galaxy Dynamics*, 90th Birthday of Kuzmin. St Petersburg, Russia, Jul 2007

SOC member: *Island Universes: Structure and Evolution of Disk Galaxies* Terschelling, The Netherlands, Jul 4-8, 2005

Co-chair of SOC (with Prof. A. Klypin, NMSU) of *Dynamics of Galaxies: Baryons and Dark Matter* held at the University of Nevada, Las Vegas, March 10 – 12, 2005

SOC member *Kinematics and Dynamics of Discs of Galaxies* Puebla, Mexico (November 5-9, 2001)

Co-organizer (with Prof. D. Spergel, Prof. A. Kosowsky and Prof. J. Bahcall) of the Rutgers-Princeton W. M. Keck workshop *Galaxies and the Dark Matter Problem* held at the Institute for Advanced Study, Princeton (May 31 – June 2, 2001)

SOC member *Dynamics of Star Clusters and the Milky Way* Astronomisches Rechen-Institut Heidelberg, Germany (March 20-24, 2000)

Co-organizer (member of both SOC & LOC) of *Galaxy Dynamics* held at Rutgers University (August 8 – 12, 1998)

Principal organizer of *Astrophysical Discs* an EC Summer School held at the Isaac Newton Institute for Mathematical Sciences, Cambridge University, England

Co-organizer, with Prof. John Papaloizou (QMW College London), Dr. James Pringle (Cambridge) and Prof. Jeremy Goodman (Princeton): *Dynamics of Astrophysical Discs*, a six month Programme held at the Isaac Newton Institute in Cambridge, England from January – July 1998.

Principal organizer of *Dynamics of Astrophysical Discs* held at Manchester University, England (Dec 1988)

Co-organizer of ESO mini-workshop *Galaxy Dynamics* held at CERN, Geneva, Switzerland (Jun 1979)

## Major Presentations at International Conferences

- 1 IAU Symposium **353**: *Galaxy Dynamics in the Era of Large Surveys*, Shanghai, China, 1–5 July 2019. Invited talk: “Spirals in Galaxies”
- 2 *International Conference on Astrophysical Dynamics*, TD Lee Institute, Shanghai Jiao-Tong University, China, 7–9 July 2019. Invited talk: “Spirals in Galaxies”
- 3 *Planets, Stars and Discs: A Golden Age for Particle and Gas Dynamics*, Astrophysics Dept, Oxford, England, 9–13 July, 2018. Invited talk: “Transient spiral modes in galaxies”
- 4 *Secular Evolution*, Paris, France, 24–27 May 2016. Contributed talk: “Bar instability of disk-halo systems”
- 5 *Exponential Disks*, Lowell Observatory, Flagstaff, October 6 – 9, 2014. Invited talk “Smoothing disk rotation curves by spiral instabilities”
- 6 *Dynamics of Disk Galaxies*, 7th Korean Astrophysics Workshop, Seoul National University, South Korea, Oct 21 – 24, 2013. Keynote talk “Aspects of Spiral Structure Theory”
- 7 *Structure and Dynamics of Disk Galaxies*, Petit Jean Mountain, Arkansas, August 12 – 16, 2013. Invited review “Theories of Spiral Structure”
- 8 222nd Meeting of the American Astronomical Society, Indianapolis, June 2 – 6, 2013. Invited talk “The Dynamics of Spirals and Warps”
- 9 44th Annual meeting of the Division of Dynamical Astronomy, Paraty, Brazil, May 5–9, 2013. Brouwer Award Presentation “Spiral Structure as a Recurrent Instability”
- 10 Beijing, China, August 20–24, 2012 *Galaxy Evolution Through Secular Processes, IAU Special Session 3*. Invited review “Lifetimes of Bars and Spirals”
- 11 *Dynamics from the Galactic Center to the Milky Way Halo*, 6th Sackler Conference at Harvard, May 10-13, 2010. Invited lecture “Spiral Structure and Secular Evolution.”
- 12 *Unveiling the Mass: Extracting and Interpreting Galaxy Masses*, Kingston, Ontario, June 15 – 19, 2009. Invited paper: “Dealing with Non-Circular Motions in Galaxies”
- 13 *The Galaxy Disk in Cosmological Context* IAU Symposium 254, Copenhagen, Denmark, June 9 – 13, 2008. Invited review “Secular Evolution of Galaxy Disks”
- 14 *Formation and Evolution of Galaxies*, Rome, Italy, October 1 – 5, 2007. Invited review “Dynamical Evolution of Disks”
- 15 *Dynamics of Galaxies*, St. Petersburg, Russia, August 6 – 10, 2007. Invited Review “Transient Spiral Waves”
- 16 *Astrophysical Probes of the Nature of Dark Matter*, UC Irvine, March 22 – 24, 2007. Invited paper “Dynamical Friction, Dark Halo Profiles, and Galactic Bars”
- 17 *Island Universes: Structure and Evolution of Disk Galaxies*, Terschelling, The Netherlands, July 4 – 8, 2005. Invited talk “Disks, bars and halos”
- 18 *Dynamics of Galaxies: Baryons and Dark Matter*, U Nevada Las Vegas, March 10 – 12, 2005. Invited talk “Bar Friction, Halo Concentration and Numerical Issues”

- 19 *From first light to the Milky Way* ETH, Zurich, Switzerland, 18 – 22 August, 2003. Invited review: “Disk-halo Interactions in Galaxies”
- 20 *Dark Matter in Galaxies* IAU Symposium 220, Sydney, Australia, 21 – 25 July, 2003. Invited review: “Does Dark Matter Exist?”
- 21 *Coevolution of Black Holes and Galaxies* Carnegie Observatories, Pasadena, 21 – 26 Oct, 2002. Invited review: “The AGN–Disk Dynamics Connection”
- 22 *Disks of Galaxies: Kinematics, Dynamics and Perturbations*, Puebla, Mexico, November 5 – 9, 2001. Invited review: “Scattering of Stars by Transient Spiral Waves”
- 23 *Yale Cosmology Workshop: The Shapes of Galaxies and Their Halos*, Yale University, 28–30 May, 2001. Invited review: “Ellipticals and Bars, Central Masses and Friction”
- 24 *Gas and Galaxy Evolution*, Socorro, New Mexico, 21–24 May 2000. Invited talk: “Does Dark Matter Make Sense?”
- 25 *Dynamics of Galaxies: from the Early Universe to the Present*, Paris, France, 9–13 July 1999. Invited paper: “Most Real Bars Are Not Made by the Bar Instability”
- 26 *Galaxy Dynamics*, Rutgers University, August 8-12, 1998. Invited review “Dynamical Constraints on Disk Masses.”
- 27 *Astrophysical Discs*, Isaac Newton Institute, Cambridge, England, 22-26 June 1998. Invited review “Stability and Evolution of Disc Galaxies.”
- 28 IAU General Assembly, Kyoto, Japan, Aug 17-30 1997. Invited review “Dynamical Constraints on Disk Masses.”
- 29 *Barred Galaxies and Circumnuclear Activity*, Nobel Symposium 98, Stockholm, 30 November – 3 December 1995. Invited review “Secular Evolution in Barred Galaxies.”
- 30 *Spiral Galaxies in the Near IR*, ESO workshop, Munich, 7-9 June 1995. Invited paper: “Dynamical Evolution of Disk Galaxies.”
- 31 *Barred Galaxies*, IAU colloquium 157, Tuscaloosa, Alabama, 30 May–3 June 1995. Invited review “Bar Formation, Evolution and Destruction.”
- 32 184th Meeting of *American Astronomical Society* at University of Minnesota, Minneapolis, 29 May–2 June 1994. Invited review: “Bending Instabilities of Stellar Systems.”
- 33 *Numerical Simulations in Astrophysics*, Mexico City, 26–30 July 1993. Invited review: “Instabilities of Stellar Discs.”
- 34 *Dynamics of Disc Galaxies*, Varberg, Sweden, 25–30 May 1991. Invited review: “Spiral instabilities and bars in  $N$ -body simulations.”
- 35 *Interstellar Matter in Galaxies*, Prague, Czechoslovakia, 21–25 May 1991. Invited review: “Gas flows in spirals and bars.”
- 36 *Dynamics of Astrophysical Discs* held in Manchester, England, 13–16 December 1988. Review: “Spiral instabilities in  $N$ -body simulations.”
- 37 *Non-linear Phenomena in Vlasov Plasmas* held in Cargèse, Corsica, 11–16 July 1988. Invited review: “Instabilities of stellar discs.”

- 38 *Giornate Lincee on Internal Dynamics of Galaxies* held in Rome 12-13 May 1988. Invited paper: “Dynamics of disk galaxies.”
- 39 *10th European Regional Astronomy Meeting of the IAU* held at Prague, 24–29 August 1987. Invited paper: “Internal evolution of spiral galaxies.”
- 40 *Workshop on Star Formation* held at University of California, Santa Cruz, 3–7 August 1987. Invited paper: “Self-gravitating instabilities in disks.”
- 41 Workshop on *The Use of Supercomputers in Stellar Dynamics*, Princeton, New Jersey, 2–4 June 1986. Invited review: “Disc galaxy dynamics on the computer.”
- 42 *Internal Kinematics and Dynamics of Galaxies*, IAU Symposium 100, Bescancon, France, August 1982. Invited review: “Disc stability.”
- 43 *The Origin and Evolution of Galaxies*, Erice, Sicily, May 1981. Invited review: “Disc stability and halo mass.”

# J. A Sellwood – Publications

## Major invited and refereed reviews

*In preparation*

- 5 Sellwood, J. A. & Masters, K. L. “Spirals in Galaxies” *Annual Review of Astronomy and Astrophysics*, for 2022 volume

*Appeared or accepted for publication*

- 4 Sellwood, J. A. 2014, “Secular Evolution in Disk Galaxies” *Reviews of Modern Physics*, **86**, 1–46 (arXiv:1310.0403)
- 3 Sellwood, J. A. 2013, “Dynamics of Disks and Warps” in *Planets, Stars & Stellar Systems* **5**, “Galactic Structure and Stellar populations” eds. T. D. Oswalt & G. Gilmore (Dordrecht: Springer) pp 923–983 (arXiv:1006.4855)
- 2 Sellwood, J. A. & Wilkinson, A. 1993, “Dynamics of Barred Galaxies” *Reports on Progress in Physics*, **56**, pp 173–255 (astro-ph/0608665)
- 1 Sellwood, J. A. 1987, “The Art of  $N$ -body Building” *Annual Review of Astronomy and Astrophysics*, **25**, pp 151–186

## Papers in refereed journals

*Articles in preparation*

- 84 Kuzio de Naray, R., Urbancic, N., Mitchell, C. J., Spekkens, K., Sellwood, J. A. & Williams, T. B. “The RINGS Survey. II. Optical Photometry”

*Articles appeared or accepted for publication*

- 83 Sellwood, J. A. “Spiral instabilities: Little interaction with a live halo” *Monthly Notices of the Royal Astronomical Society*, accepted, July 1, 2021 (arXiv:2107.00599)
- 82 Sellwood, J. A., Spekkens, K. & Eckel, C. S. 2021, “Uncertainties in Galaxy Rotation Curves” *Monthly Notices of the Royal Astronomical Society*, **502**, pp3843–3854 (arXiv:2101.02525)
- 81 Sellwood, J. A. & Carlberg, R. G. 2021, “Spiral instabilities: Linear and non-linear effects” *Monthly Notices of the Royal Astronomical Society*, **500**, pp5043–5055 (arXiv:2011.03041)
- 80 Sellwood, J. A. & Gerhard, O. E. 2020, “Three Mechanisms for Bar Thickening” *Monthly Notices of the Royal Astronomical Society*, **495**, pp3175–3191 (arXiv:2005.05184)

- 79 Sellwood, J. A. 2020, “Spiral instabilities in  $N$ -body Simulations: Emergence from noise II” *Monthly Notices of the Royal Astronomical Society*, **492**, pp3103–3106 (arXiv:2001.00855)
- 78 Sellwood, J. A. & Carlberg, R. 2019, “Spiral instabilities: Mechanism for recurrence” *Monthly Notices of the Royal Astronomical Society*, **489**, pp116–131 (arXiv:1906.04191)
- 77 Sellwood, J. A., Shen, J. & Li, Z. 2019, “The global stability of M33: still a puzzle” *Monthly Notices of the Royal Astronomical Society*, **486**, pp4710–4723 (arXiv:1902.07222)
- 76 Sellwood, J. A., Trick, W., Carlberg, R., Coronado, J. & Rix, H-W. 2019, “Discriminating among theories of spiral structure using Gaia DR2”, *Monthly Notices of the Royal Astronomical Society*, **484**, pp3154–3167 (arXiv:1810.03325)
- 75 Mitchell, C. J., Sellwood, J. A., Williams, T. B., Spekkens, K., Kuzio de Naray, R., & Bixel, A. 2018, “The RINGS Survey III: Medium-resolution  $H\alpha$  Fabry-Pérot Kinematic Data Set”, *The Astronomical Journal*, **155**, 123 (28 pages) (arXiv:1801.07750)
- 74 Li, Z., Sellwood, J. A. & Shen, J. 2017, “Rapid Formation of Black Holes in Galaxies: a Self-limiting Growth Mechanism” *The Astrophysical Journal*, **850**, 67 (11 pages) (arXiv:1710.04683)
- 73 Berrier, J. & Sellwood, J. A. 2016, “Mass Distribution and Bar Formation in Growing Disk Galaxy Models” *The Astrophysical Journal*, **831**, 65 (12 pages) (arXiv:1608.04765)
- 72 Sellwood, J. A. 2016, “Bar Instability in Disk-Halo Systems” *The Astrophysical Journal*, **819**, 92 (7 pages) (arXiv:1601.03406)
- 71 Sellwood, J. A. 2015, “Relaxation in  $N$ -body simulations of spherical systems”, *Monthly Notices of the Royal Astronomical Society*, **453**, pp2919–2926 (arXiv:1504.06500)
- 70 Malvido, J. C. & Sellwood, J. A. 2015, “Made-To-Measure Models of Self-Similar Triaxial Haloes with Steep Inner Density Gradients”, *Monthly Notices of the Royal Astronomical Society*, **449**, pp2553-2565 (arXiv:1501.00574)
- 69 Mitchell, C. J., Williams, T. B., Spekkens, K., Lee-Waddell, K., Kuzio de Naray, R. & Sellwood, J. A. 2015, “The RINGS Survey:  $H\alpha$  and HI Velocity Maps of Galaxy NGC 2280”, *The Astronomical Journal*, **149**, 116 (12pp) (arXiv:1412.5444)
- 68 Berrier, J. & Sellwood, J. A. 2015, “Smoothing Rotation Curves and Mass Profiles”, *The Astrophysical Journal*, **799**, 213 (15 pages) (arXiv:1412.0979)
- 67 Sellwood, J. A. & Carlberg, R. G. 2014, “Transient Spirals as Superposed Instabilities,” *The Astrophysical Journal*, **785**, 137 (12 pages) (arXiv:1403.1135)
- 66 Katz, H., McGaugh, S. S., Sellwood, J. A. & de Blok, W. J. G. 2014 “Adiabatic Compression with Young’s Algorithm and the Relation of Dark Matter Haloes to their Primordial Antecedents,” *Monthly Notices of the Royal Astronomical Society*, **439**, 1897–1908 (arXiv:1401.2622)
- 65 Sellwood, J. A. 2013, “Relaxation in  $N$ -body simulations of disk galaxies” *The Astrophysical Journal Letters*, **769**, L24 (4 pages) (arXiv:1303.4919)



- 64 Kuzio de Naray, R., Arsenault, C. A., Spekkens, K., Sellwood, J. A., McDonald, M., Simon, J. & Teuben, P. 2012, “Searching for Non-axisymmetries in NGC 6503: A Weak End-on Bar” *Monthly Notices of the Royal Astronomical Society*, **427**, 2523–2536 (arXiv:1209.4653)
- 63 Deng, L., and 26 other authors including JAS, 2012 “LAMOST Experiment for Galactic Understanding and Exploration (LEGUE): The survey science plan”, *Research in Astronomy and Astrophysics*, **12**, 735–754 (arXiv:1206.3578)
- 62 Carlin, J. L., and 24 other authors including JAS, 2012, “An Algorithm for Preferential Selection of Spectroscopic Targets in LEGUE”, *Research in Astronomy and Astrophysics*, **12**, 755–771 (arXiv:1206.3577)
- 61 Yu, J-C., Sellwood, J. A., Pryor, C., Li, C. & Hou, J-L. 2012, “A Test for Radial Mixing in Galaxy Disks Using Local Star Samples” *The Astrophysical Journal*, **754**, 124–131 (arXiv:1205.7001)
- 60 Sellwood, J. A. 2012, “Spiral Instabilities in  $N$ -body Simulations I: Emergence from Noise” *The Astrophysical Journal*, **751**, 44–54 (arXiv:1203.0444)
- 59 Solway, M., Sellwood, J. A. & Schönrich, R. 2012, “Radial Migration in Galactic Thick Disks” *Monthly Notices of the Royal Astronomical Society*, **422**, 1363–1383 (arXiv:1202.1418)
- 58 Hahn, C. H., Sellwood, J. A. & Pryor, C. 2011, “Velocity-space Substructure from Nearby RAVE and SDSS Stars” *Monthly Notices of the Royal Astronomical Society*, **418**, 2459–2466 (arXiv:1102.4626)
- 57 Sellwood, J. A. 2011, “The Lifetimes of Spiral Patterns in Disc Galaxies” *Monthly Notices of the Royal Astronomical Society*, **410**, 1637–1646 (arXiv:1008.2737)
- 56 Sellwood, J. A. 2010, “A Recent Lindblad Resonance in the Solar Neighborhood” *Monthly Notices of the Royal Astronomical Society*, **409**, 145–155 (arXiv:1001.5197)
- 55 Sellwood, J. A. & Zánmar Sánchez, R. 2010, “Quantifying Non-circular Streaming Motions in Disc Galaxies” *Monthly Notices of the Royal Astronomical Society*, **404**, 1733–1744 (arXiv:0912.5493)
- 54 Sellwood, J. A. & Debattista, V. P. 2009, “Stochasticity in  $N$ -body Simulations of Disc Galaxies” *Monthly Notices of the Royal Astronomical Society*, **398**, 1279–1297 (arXiv:0903.3554)
- 53 Freese, K., Gondolo, P., Sellwood, J. A. & Spolyar, D. 2009, “Dark Matter Densities during the Formation of the First Stars and in Dark Stars” *The Astrophysical Journal*, **693**, 1563–1569 (arXiv:0805.3540)
- 52 Jardel, J. & Sellwood, J. A. 2009, “Halo Density Reduction by Baryonic Settling?” *The Astrophysical Journal*, **691**, 1300–1306 (arXiv:0808.3449)
- 51 Sellwood, J. A. 2008, “Bar-Halo Friction in Galaxies III: Halo Density Changes” *The Astrophysical Journal*, **679**, 379–396 (astro-ph/0610468)
- 50 Zánmar Sánchez, R., Sellwood, J. A., Weiner B. J. & Williams, T. B. 2008, “Modeling the Gas Flow in the Bar of NGC 1365” *The Astrophysical Journal*, **674**, 797–813 (astro-ph/0710.5286)

- 49 Spekkens, K. & Sellwood, J. A. 2007, “Modeling Bisymmetric Distortions in Disk Galaxies: Application to NGC 2976” *The Astrophysical Journal*, **664**, 204–214 (astro-ph/0703688)
- 48 Reese, A., Williams, T. B., Sellwood, J. A., Barnes, E. I. & Powell, B. A. 2007, “Photometric Decomposition of Barred Galaxies” *The Astronomical Journal*, **133**, 2846–2858 (astro-ph/0702720)
- 47 Barnes, E. I., Kosowsky, A. & Sellwood, J. A. 2007, “Milgrom Relation Mass Models for Spiral Galaxies from Two-Dimensional Velocity Maps” *The Astronomical Journal*, **133**, 1698–1709 (astro-ph/0701535)
- 46 Shen, J. & Sellwood, J. A. 2006, “Galactic Warps Induced by Cosmic Infall” *Monthly Notices of the Royal Astronomical Society*, **370**, 2–14 (astro-ph/0604529)
- 45 Sellwood, J. A. & Debattista, V. P. 2006, “Bar-Halo Friction in Galaxies II: Metastability” *The Astrophysical Journal*, **639**, 868–878 (astro-ph/0511155)
- 44 Sellwood, J. A. 2006, “Bar-Halo Friction in Galaxies I: Scaling Laws” *The Astrophysical Journal*, **637**, pp 567–581 (astro-ph/0407533)
- 43 Sellwood, J. A. & McGaugh, S. S. 2005, “The Compression of Dark Matter Halos by Baryonic Infall” *The Astrophysical Journal*, **634**, pp 70–76 (astro-ph/0507589)
- 42 Barnes, E. I., Sellwood, J. A. & Kosowsky, A. 2004, “Mass Models for Spiral Galaxies from 2-D Velocity Maps” *The Astronomical Journal*, **128**, pp 2724–2742 (astro-ph/0409259)
- 41 Shen, J. & Sellwood, J. A. 2004, “The Destruction of Bars by Central Mass Concentrations” *The Astrophysical Journal*, **604**, pp 614–631 (astro-ph/0310194)
- 40 Sellwood, J. A. 2003, “Bars and Dark Matter Halo Cores” *The Astrophysical Journal*, **587**, pp 638–648 (astro-ph/0210079)
- 39 Barnes, E. I. & Sellwood, J. A. 2003, “Uncertainties in Spiral Galaxy Projection Parameters” *The Astronomical Journal*, **125**, pp 1164–1176 (astro-ph/0211225)
- 38 Sellwood, J. A. & Binney, J. J. 2002, “Radial Mixing in Galactic Disks” *Monthly Notices of the Royal Astronomical Society*, **336**, pp 785–796 (astro-ph/0203510)
- 37 Jacobs, V. & Sellwood, J. A. 2001, “Long-lived Lop-sided Modes of Annular Disks Orbiting a Central Mass” *The Astrophysical Journal Letters*, **555**, L25–L28 (astro-ph/0105286)
- 36 Weiner, B., Williams, T. B., van Gorkom, J. & Sellwood, J. A. 2001, “The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. I. Observations,” *The Astrophysical Journal*, **546**, pp 916–930 (astro-ph/0008204)
- 35 Weiner, B., Sellwood, J. A. & Williams, T. B. 2001, “The Disk and Dark Halo Mass of the Barred Galaxy NGC 4123. II. Fluid Dynamical Models,” *The Astrophysical Journal*, **546**, pp 931–951 (astro-ph/0008205)

- 34 Sellwood, J. A. & Evans, N. W. 2001, “The Stability of Disks in Cusped Potentials” *The Astrophysical Journal*, **546**, 176–188 (astro-ph/0006198)
- 33 Debattista, V. P. & Sellwood, J. A. 2000, “Constraints from Dynamical Friction on the Dark Matter Content of Barred Galaxies” *The Astrophysical Journal*, **543**, pp 704–721 (astro-ph/0006275)
- 32 Sellwood, J. A. 2000, “Is a Simple Collisionless Relic Dark Matter Particle Ruled Out?” *The Astrophysical Journal Letters*, **540**, L1–L4 (astro-ph/0004352)
- 31 Weiner, B. & Sellwood, J. A. 1999, “Properties of the Galactic Bar Implied by Gas Kinematics in the Inner Milky Way” *The Astrophysical Journal*, **524**, 112–128 (astro-ph/9904130)
- 30 Debattista, V. P. & Sellwood, J. A. 1999, “Warped Disks from Misaligned Angular Momenta” *The Astrophysical Journal Letters*, **513**, L107–L110 (astro-ph/9901153)
- 29 Sellwood, J. A. & Balbus, S. A. 1999, “Differential Rotation and Turbulence in Extended HI Disks” *The Astrophysical Journal*, **511**, pp 660–665 (astro-ph/9806307)
- 28 Sellwood, J. A. & Moore, E. 1999, “On the Formation of Maximum Disk Galaxies and Massive Compact Objects” *The Astrophysical Journal*, **510**, pp 125–135 (astro-ph/9807010)
- 27 Sellwood, J. A., Nelson, R. D. & Tremaine, S. 1998, “Resonant Heating of Disks by Infalling Satellites” *The Astrophysical Journal*, **506**, pp 590–599 (astro-ph/9805145)
- 26 Debattista, V. P. & Sellwood, J. A. 1998, “Dynamical Friction and the Distribution of Dark Matter in Barred Galaxies” *The Astrophysical Journal Letters*, **493**, L5–L9 (astro-ph/9710039)
- 25 Sellwood, J. A. & Valluri, M. 1997, “Instabilities of a Family of Oblate Stellar Spheroids” *Monthly Notices of the Royal Astronomical Society*, **287**, pp 124–136 (astro-ph/9612069)
- 24 Sellwood, J. A. 1996, “Axisymmetric Bending Oscillations of Stellar Disks” *The Astrophysical Journal*, **473**, pp 733–745 (astro-ph/9604123)
- 23 Norman, C. A., Sellwood, J. A. & Hasan, H. 1996, “Bar Dissolution and Bulge Formation: an Example of Secular Dynamical Evolution in Galaxies” *The Astrophysical Journal*, **462**, pp 114–124
- 22 Earn, D. J. D. & Sellwood, J. A. 1995, “The Optimal  $N$ -body Method for Stability Studies of Galaxies” *The Astrophysical Journal*, **451**, pp 533–541 (astro-ph/9504047)
- 21 Merritt, D. & Sellwood, J. A. 1994, “Bending Instabilities in Stellar Systems” *The Astrophysical Journal*, **425**, pp 551–567
- 20 Sellwood, J. A. & Merritt, D. 1994, “Instabilities of Counter-rotating Stellar Disks” *The Astrophysical Journal*, **425**, pp 530–550
- 19 Sellwood, J. A. 1993, “Multiple Patterns in Spiral and Barred Galaxies” *Publications of the Astronomical Society of the Pacific*, **105**, pp 648–650

- 18 Raha, N., Sellwood, J. A., James, R. A. & Kahn, F. D. 1991, “A Dynamical Instability of Galactic Bars” *Nature*, **352**, pp 411–412
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