

CURRICULUM VITAE

Stacy S. McGaugh

Department of Astronomy
Case Western Reserve University
Cleveland, OH 44106

phone: (216) 368-1808
email: ssm69@case.edu
astroweb.case.edu/ssm

Education

University of Michigan	Ph.D. 1992	Astronomy	1987 – 1992
Princeton University		Physics	1985 – 1986
Massachusetts Institute of Technology	S.B. 1985	Physics	1981 – 1985

Employment

Professor	Astronomy, Case Western Reserve University Chair 2015 – 2022; Director 2023 –	2012 –
Professor	Astronomy, University of Maryland Assistant 1998; Associate 2003; Full 2009	1998 – 2012
Research Fellow	Physics and Astronomy, Rutgers University	1997 – 1998
Carnegie Fellow	DTM, Carnegie Institution of Washington	1995 – 1997
Research Associate	Institute of Astronomy, University of Cambridge	1992 – 1995

Research Interests — galaxy formation and evolution, cosmology, dark matter & gravity

Professional Societies — International Astronomical Union, American Astronomical Society, Division on Dynamical Astronomy

Honors — Distinguished Alumnus, Flint Northern (2001); University of Michigan (2013)

Publications — Author of **155** refereed papers, which have been cited **16,725** times (NASA ADS 12/31/24); 49 papers have been cited over 100 times, 6 over 500. Rank in the **top 2%** of the **top 2%** of impactful authors across all sciences in the *Stanford-Elsevier Updated science-wide author databases of standardized citation indicators* and in the **top 100** of those working in astronomy & astrophysics (of over 49,000 listed). Thanked in the acknowledgements of **204** non-author papers.

Publications in Refereed Journals

The order of authorship reflects the importance of the contribution, first to last.
McGaugh is in bold; italicized authors are directly supervised students and postdocs.

155. “Accelerated Structure Formation: the Early Emergence of Massive Galaxies and Clusters of Galaxies”
McGaugh, S., Schombert, J., Lelli, F., & Franck, J. 2024, *ApJ*, in press
154. “Indefinitely Flat Circular Velocities and the Baryonic Tully-Fisher Relation from Weak Lensing”
Mistele, T., **McGaugh, S.**, Lelli, F., Schombert, J., & Li, P. 2024, *ApJ*, **969**, L3
153. “MHONGOOSE discovery of a gas-rich low-surface brightness galaxy in the Dorado Group”
Maccagni, F. M., de Blok, W. J. G., Mancera Piña, P. E., Ragusa, R., Iodice, E., Spavone, M., **McGaugh, S.**, Oman, K. A., Oosterloo, T. A., Koribalski, B. S., Kim, M., Adams, E. A. K., Amram, P., Bosma, A., Bigiel, F., Brinks, E., Chemin, L., Combes, F., Gibson, B., Healy, J., Holwerda, B. W., Józsa, G. I. G., Kamphuis, P., Kleiner, D., Kurapati, S., Marasco, A., Spekkens, K., Veronese, S., Walter, F., Zabel, N., & Zijlstra, A. 2024, *A&A*, **690**, A69
152. “Satellite group infall into the Milky Way: exploring the Crater-Leo case with new HST proper motions”
Julio, M.P., Pawlowski, M.S., Sohn, S.T., Taibi, S., van der Marel, R.P., & **McGaugh, S.S.** 2024, *A&A*, **687**, A212
151. “MHONGOOSE - A MeerKAT Nearby Galaxy HI Survey”
de Blok, W.J.G., & MHONGOOSE survey team 2024, *A&A*, **688**, A109
150. “The Baryonic Tully-Fisher Relation I: WISE/Spitzer Photometry”
Duey, F., Schombert, J.M., **McGaugh, S.S.**, & Lelli, F. 2024, *AJ*, **168**, 19
149. “A Distinct Radial Acceleration Relation across Brightest Cluster Galaxies and Galaxy Clusters”
Tian, Y., Ko, C.-M., Li, P. **McGaugh, S.S.**, Poblete, S.L. 2024, *A&A*, **684**, A180
148. “BST1047+1156: A (Failing) Ultradiffuse Tidal Dwarf in the Leo I Group”
Mihos, J.C., Durrell, P.R., Watkins, A.E., **McGaugh, S.S.**, & Feldmeier, J.J. 2024, *ApJ*, **964**, 67

147. “Radial acceleration relation of galaxies with joint kinematic and weak-lensing data”
Mistele, T., McGaugh, S., Lelli, F., Schombert, J., & Li, P. 2024, *JCAP*, **04**, 020
146. “Discord in Concordance Cosmology and Anomalously Massive Early Galaxies”
McGaugh, S.S. 2024, *Universe*, **10**, 48
145. “Molecular and Ionized Gas in Tidal Dwarf Galaxies: The Spatially Resolved Star-Formation Relation”
Kovakkuni, N., Lelli, F., Duc, P.-A., Boquien, M., Braine, J., Brinks, E., Charmandaris, V., Combes, F., Fensch, J., Lisenfeld, U., **McGaugh, S.S.**, Mihos, J.C., Pawlowski, M.S., Revaz, Y., & Weilbacher, P.M. 2023, *MNRAS*, **526**, 1940
144. “Measuring galaxy cluster mass profiles into low acceleration regions with galaxy kinematics”
Li, P., Tian, Y., Julio, M.P., Pawlowski, M.S., Lelli, F., **McGaugh, S.S.**, Schombert, J.M., Read, J.I., Yu, P.C., & Ko, C.-M. 2023, *A&A*, **677**, A24
143. “Superfluid dark matter in tension with weak gravitational lensing data”
Mistele, T., McGaugh, S., & Hossenfelder, S. 2023, *JCAP*, **09**, 004
142. “Aether Scalar Tensor theory confronted with weak lensing data at small accelerations”
Mistele, T., McGaugh, S.S., & Hossenfelder, S. 2023, *A&A*, **676**, A100
141. “Estimating the Oblateness Of Dark Matter Halos Using Neutral Hydrogen Velocity Dispersion”
Das, M., Ianjamasimanana, R., **McGaugh, S.S.**, Schombert, J., & Dwarakanath, K.S. 2023, *ApJ*, **946**, L8
140. “Cold gas disks in main-sequence galaxies at cosmic noon: Low turbulence, flat rotation curves, and disk-halo degeneracy”
Lelli, F., Zhang, Z.-Y., Bisbas, T.G., Lin, L., Papadopoulos, P., Schombert, J.M., Di Teodoro, E., Marasco, A., & **McGaugh, S.S.** 2023, *A&A*, **672**, A106
139. “Deep Narrowband Photometry of the M101 Group: Strong-Line Abundances of 720 HII Regions”
Garner III, R., Mihos, J.C., Harding, P., Watkins, A.E., & **McGaugh, S.S.** 2022, *ApJ*, **941**, 182
138. “Testing Modified Gravity Theories with Numerical Solutions of the External Field Effect in Rotationally Supported Galaxies”

- Chae, K.-H., Lelli, F., Desmond, H., **McGaugh, S.S.**, & Schombert, J.M. 2022, *PRD*, **106**, 103025
137. “Incorporating baryon-driven contraction of dark matter halos in rotation curve fits”
Li, P., **McGaugh, S.S.**, Lelli, F., Schombert, J.M., & Pawlowski, M.S. 2022, *A&A*, **665**, A143
136. “Galactic Mass-to-Light Ratios With Superfluid Dark Matter”
Mistele, T., **McGaugh, S.**, & Hossenfelder, S. 2022, *A&A*, **664**, A40
135. “The Effect of Adiabatic Compression on Dark Matter Halos and the Radial Acceleration Relation”
Li, P., **McGaugh, S.S.**, Lelli, F., Tian, Y., Schombert, J.M., & Ko, C.-M. 2022, *ApJ*, **927**, 198
134. “Stellar Mass-to-Light Ratios: Composite Bulge+Disk Models and the Baryonic Tully-Fisher Relation”
Schombert, J.M., **McGaugh, S.S.**, & Lelli, F. 2022, *AJ*, **163**, 154
133. “Testing the Strong Equivalence Principle. II. Relating the External Field Effect in Galaxy Rotation Curves to the Large-Scale Structure of the Universe”
Chae, K.-H., Desmond, H., Lelli, F., **McGaugh, S.S.**, & Schombert, J.M. 2021, *ApJ*, **921**, 104
132. “The Baryonic Tully-Fisher Relation in the Local Group and the Equivalent Circular Velocity of Pressure Supported Dwarfs”
McGaugh, S.S., Lelli, F., Schombert, J.M., *Li, P., Visgaitis, T., Parker, K.S.*, & Pawlowski, M.S. 2021, *AJ*, **162**, 202
131. “Mass-Velocity Dispersion Relation in MaNGA Brightest Cluster Galaxies”
Tian, Y., Cheng, H., **McGaugh, S.S.**, Ko, C.-M., & Hsu, Y.-H. 2021, *ApJ*, **917**, L24
130. “A comparison of the UV and HI properties of the extended UV (XUV) disk galaxies NGC 2541, NGC 5832 and ESO406-042”
Das, M., Yadav, J., Patra, N.N., Dwarakanath, K.S., **McGaugh, S.S.**, Schombert, J., Rahna, P.T., & Murthy, J. 2021, *JApA*, **42**, 85
129. “Testing Galaxy Formation and Dark Matter with Low Surface Brightness Galaxies”
McGaugh, S.S. 2021, *Studies in History and Philosophy of Science*, **88**, 220-236 [invited review]

128. “Comparing the Inner and Outer Star Forming Complexes in the Nearby Spiral Galaxies NGC 628, NGC 5457 and NGC 6946 using UVIT Observations”
Yadav, J., Das, M., Patra, N.N., Dwarakanath, K.S., Rahna, P.T., **McGaugh, S.S.**, Schombert, J., & Murthy, J. 2021, *ApJ*, **914**, 54
127. “Mass-Velocity Dispersion Relation in HIFLUGCS Galaxy Clusters”
Tian, Y., Yu, P.-C., Li, P., **McGaugh, S.S.**, & Ko, C.-M. 2021, *ApJ*, **910**, 56
126. “Anomalous Stellar Populations in LSB Galaxies”
Schombert, J.M. & **McGaugh, S.S.** 2021, *AJ*, **161**, 91
125. “A cautionary tale in fitting galaxy rotation curves with Bayesian techniques: does Newton’s constant vary from galaxy to galaxy?”
Li, P., Lelli, F., **McGaugh, S.S.**, Schombert, J.M., & Chae, K.-H. 2021, *A&A*, **646**, 13
124. “Testing the Strong Equivalence Principle: Detection of the External Field Effect in Rotationally Supported Galaxies”
Chae, K.-H., Lelli, F., Desmond, H., **McGaugh, S.S.**, Li, P., & Schombert, J.M. 2020, *ApJ*, **904**, 51
123. “Self-consistent Color-Mass-to-Light-Ratio relations for Low Surface Brightness Galaxies”
Du, W., & **McGaugh, S.S.** 2020, *AJ*, **160**, 122
122. “Using the Baryonic Tully-Fisher Relation to Measure H_0 ”
Schombert, J.M., **McGaugh, S.S.**, & Lelli, F. 2020, *AJ*, **160**, 71
121. “Predictions and Outcomes for the Dynamics of Rotating Galaxies” (invited review)
McGaugh, S.S. 2020, *Galaxies*, **8**, 35
120. “A comprehensive catalog of dark matter halo models for SPARC galaxies”
Li, P., Lelli, F., **McGaugh, S.S.**, & Schombert, J.M. 2020, *ApJS*, **247**, 31
119. “Tracing the Dynamical Mass in Galaxy Disks Using HI Velocity Dispersion and its Implications for the Dark Matter Distribution in Galaxies”
Das, M., **McGaugh, S.S.**, Ianjamasimanana, R., Schombert, J.M., & Dwarakanath, K.S. 2020, *ApJ*, **889**, 10
118. “The Halo Mass Function of Late-Type Galaxies from HI Kinematics”
Li, P., Lelli, F., **McGaugh, S.S.**, Pawlowski, M.S., Zwaan, M.A., & Schombert, J.M. 2019, *ApJ*, **886**, L11

117. “The Imprint of Spiral Arms on the Galactic Rotation Curve”
McGaugh, S.S. 2019, *ApJ*, **885**, 87
116. “The baryonic Tully-Fisher relation for different velocity definitions and implications for galaxy angular momentum”
Lelli, F., **McGaugh, S.S.**, Schombert, J.M., Desmond, H., & Katz, H. 2019, *MNRAS*, **484**, 3267–3278
115. “Uncorrelated velocity and size residuals across galaxy rotation curves”
Desmond, H., Katz, H., Lelli, F., & **McGaugh, S.S.** 2019, *MNRAS*, **484**, 239–244
114. “The Mass-to-light Ratios and the Star Formation Histories of Disk Galaxies”
Schombert, J.M., **McGaugh, S.S.**, & Lelli, F. 2019, *MNRAS*, **483**, 1496–1512
113. “The Tight Empirical Relation between Dark Matter Halo Mass and Flat Rotation Velocity for Late-Type Galaxies”
Katz, H., Desmond, H., **McGaugh, S.S.**, & Lelli, F. 2019, *MNRAS*, **483**, L98–L103
112. “A constant characteristic volume density of dark matter haloes from SPARC rotation curve fits”
Li, P., Lelli, F., **McGaugh, S.S.**, *Starkman, N.* & Schombert, J.M. 2019, *MNRAS*, **482**, 5106–5124
111. “Presence of a fundamental acceleration scale in galaxies”
McGaugh, S.S., *Li, P.*, Lelli, F., & Schombert, J.M. 2018, *Nature Astronomy*, **2**, 924
110. “Predictions for the sky-averaged depth of the 21cm absorption signal at high redshift in cosmologies with and without non-baryonic cold dark matter”
McGaugh, S.S. 2018, *PRL*, **121**, 081305
109. “Stellar Feedback and the Energy Budget of Late-Type Galaxies: Missing Baryons and Core Creation”
Katz, H., Desmond, H., Lelli, F., **McGaugh, S.S.**, Di Cintio, A., Brook, C.B., & Schombert, J.M. 2018, *MNRAS*, **480**, 4287–4301
108. “A New Algorithm to Quantify Maximum Discs in Galaxies”
Starkman, N., **McGaugh, S.S.**, Lelli, F., & Schombert, J.M. 2018, *MNRAS*, **480**, 2292–2301
107. “MOND and the dynamics of NGC1052-DF2”
Famaey, B., **McGaugh, S.S.**, & Milgrom, M. 2018, *MNRAS*, **480**, 473–476

106. “Fitting the Radial Acceleration Relation to Individual SPARC Galaxies”
Li, P., Lelli, F., McGaugh, S.S., & Schombert, J.M. 2018, *A&A*, **615**, A3
105. “The Star Forming Main Sequence of Dwarf Low Surface Brightness Galaxies”
McGaugh, S.S., Schombert, J.M., & Lelli, F. 2017, *ApJ*, **851**, 22
104. “Considerations on how to investigate planes of satellite galaxies”
Pawlowski, M.S., Dabringhausen, J., Famaey, B., Flores, H., Hammer, F., Ibata, R.A., Kroupa, P., Lewis, G.F., Libeskind, N.I., **McGaugh, S.S.**, Merritt, D., Puech, M., & Yang, Y. 2017, *Astronomische Nachrichten*, **338**, 854
103. “Testing Verlinde’s Emergent Gravity with the Radial Acceleration Relation”
Lelli, F., McGaugh, S.S., & Schombert, J.M. 2017, *MNRAS*, **468**, L68–L71
102. “One Law To Rule Them All: The Radial Acceleration Relation of Galaxies”
Lelli, F., McGaugh, S.S., Schombert, J.M., & Pawlowski, M.S. 2017, *ApJ*, **836**, 152
101. “Spitzer’s View of the Candidate Cluster and Protocluster Catalog (CCPC)”
Franck, J.R., & McGaugh, S.S. 2017, *ApJ*, **836**, 136
100. “Testing Feedback-Modified Dark Matter Haloes with Galaxy Rotation Curves: Estimation of Halo Parameters and Consistency with Λ CDM”
Katz, H., *Lelli, F., McGaugh, S.S., Di Cintio, A., Brook, C.B., & Schombert, J.M.* 2017, *MNRAS*, **466**, 1648–1668
99. “The candidate Cluster and Protocluster Catalog (CCPC) II: Spectroscopically identified structures spanning $2 < z < 6.6$ ”
Franck, J.R., & McGaugh, S.S. 2016, *ApJ*, **833**, 15
98. “MOND Prediction for the Velocity Dispersion of the ‘Feeble Giant’ Crater II”
McGaugh, S.S. 2016, *ApJ*, **832**, L8
97. “Radial Acceleration Relation in Rotationally Supported Galaxies”
McGaugh, S.S., Lelli, F., & Schombert, J.M. 2016, *Phys. Rev. Lett.*, **117**, 201101
96. “SPARC: Mass Models for 175 Disk Galaxies with Spitzer Photometry and Accurate Rotation Curves”
Lelli, F., McGaugh, S.S., & Schombert, J.M. 2016, *AJ*, **152**, 157
95. “The Relation between Stellar and Dynamical Surface Densities in the Central Regions of Disk Galaxies”
Lelli, F., McGaugh, S.S., Schombert, J.M. & Pawlowski, M.S. 2016, *ApJ*, **827**, L19

94. “The Candidate Cluster and Protocluster Catalog (CCPC) of Spectroscopically Identified Structures Spanning $2.74 < z < 3.71$ ”
Franck, J.R., & McGaugh, S.S. 2016, *ApJ*, **817**, 158
93. “The Small Scatter of the Baryonic Tully-Fisher Relation”
Lelli, F., McGaugh, S.S., & Schombert, J.M. 2016, *ApJ*, **816**, L14
92. “The Surface Density Profile of the Galactic Disk from the Terminal Velocity Curve”
McGaugh, S.S. 2016, *ApJ*, **816**, 42
91. “Gas dynamics in tidal dwarf galaxies: disc formation at $z=0$ ”
Lelli, F., Duc, P.-A., Brinks, E., Bournaud, F., McGaugh, S.S., Lisenfeld, U., Weibacher, P.M., Boquien, M., Revaz, Y., Braine, J., Koribalski, B.S., Belles, P.-E. 2015, *A&A*, **584**, A113
90. “Stellar Populations and the Star Formation Histories of LSB Galaxies: V. WFC3 Color-Magnitude Diagrams”
Schombert, J.M., & McGaugh, S.S. 2015, *AJ*, **150**, 72
89. “The new Milky Way satellites: alignment with the VPOS and predictions for proper motions and velocity dispersions”
Pawlowski, M.S., McGaugh, S.S., & Jerjen, H. 2015, *MNRAS*, **453**, 1047
88. “Three candidate clusters around high redshift radio-loud sources: MG1 J04426+0202, 3C 068.2, MS 1426.9+1052”
Franck, J.R., McGaugh, S.S., & Schombert, J.M. 2015, *AJ*, **150**, 46
87. “Mass models of disk galaxies from the DiskMass Survey in MOND”
Angus, G.W., Gentile, G., Swaters, R.A., Famaey, B., Diaferio, A., McGaugh, S.S., & van der Heyden, K.J., 2015, *MNRAS*, **451**, 3551–3580
86. “The link between mass distribution and starbursts in dwarf galaxies”
McQuinn, K.B.W., Lelli, F., Skillman, E.D., Dolphin, A.E., McGaugh, S.S., & Williams, B.F. 2015, *MNRAS*, **450**, 3886–3892
85. “Weighing Galaxy Disks with the Baryonic Tully-Fisher Relation”
McGaugh, S.S., & Schombert, J.M. 2015, *ApJ*, **802**, 18
84. “The Third Law of Galactic Rotation”
McGaugh, S.S. 2014, *Galaxies*, **2**, 601–622 [invited review]

83. “Stellar Populations and the Star Formation Histories of LSB Galaxies: III. Stellar Population Models”
Schombert, J.M., & **McGaugh, S.S.** 2014, *PASA*, **31**, e036
82. “Color–Mass-to-Light Ratio Relations for Disk Galaxies”
McGaugh, S.S., & Schombert, J.M. 2014, *AJ*, **148**, 77
81. “Co-orbiting Planes of Sub-halos are Similarly Unlikely around Paired and Isolated Hosts”
Pawlowski, M.S., & **McGaugh, S.S.** 2014, *ApJ*, **789**, L24
80. “A Tale of Two Paradigms: the Mutual Incommensurability of Λ CDM and MOND”
McGaugh, S.S. 2014, *Canadian Journal of Physics*, 2014–0203 [invited review]
79. “Perseus I and the NGC 3109 association in the context of the Local Group dwarf galaxy structures”
Pawlowski, M.S., & **McGaugh, S.S.** 2014, *MNRAS*, **440**, 908
78. “The Inner Dynamical Mass Across Galaxy Morphology: A Weak Scaling with Total Stellar Mass”
Kuzio de Naray, R., & **McGaugh, S.S.** 2014 *ApJ*, **782**, L12
77. “The Formation of Spiral Galaxies: Adiabatic Compression with Young’s Algorithm and the Relation of Dark Matter Haloes to Their Primordial Antecedents”
Katz, H., **McGaugh, S.S.**, Sellwood, J.A., & de Blok, W.J.G. 2014, *MNRAS*, **439**, 1897
76. “Stellar Populations and the Star Formation Histories of LSB Galaxies: IV Spitzer Surface Photometry of LSB Galaxies”
Schombert, J.M., & **McGaugh, S.S.** 2014, *PASA*, **31**, e011
75. “Andromeda Dwarfs in Light of MOND. II. Testing Prior Predictions”
McGaugh, S.S., & Milgrom, M. 2013, *ApJ*, **775**, 139
74. “Stellar Populations and the Star Formation Histories of LSB Galaxies: II. HII Regions”
Schombert, J.M., **McGaugh, S.S.**, & Maciel, T. 2013, *AJ*, **146**, 41
73. “Galaxy Cluster Bulk Flows and Collision Velocities in QUMOND”
Katz, H., **McGaugh, S.S.**, Teuben, P., & Angus, G.W. 2013, *ApJ*, **772**, 10

72. “Discrete clouds of neutral gas between the galaxies M31 and M33”
Wolfe, S.A., Pisano, D.J., Lockman, F.J., **McGaugh, S.S.**, & Shaya, E.J. 2013, *Nature*, **497**, 224–226
71. “Andromeda Dwarfs in Light of Modified Newtonian Dynamics”
McGaugh, S.S. & Milgrom, M. 2013, *ApJ*, **766**, 22
70. “Modified Newtonian Dynamics (MOND): Observational Phenomenology and Relativistic Extensions”
Famaey, B., & **McGaugh, S.S.** 2012, *Living Reviews in Relativity*, **15**, 10 [invited review]
69. “A QUMOND galactic N-body code I: Poisson solver and rotation curve fitting”
Angus, G.W., van der Heyden, K., Famaey, B., Gentile, G., **McGaugh, S.S.**, & de Blok, W.J.G. 2012, *MNRAS*, **421**, 2598–2609
68. “The Baryonic Tully-Fisher Relation of Gas Rich Galaxies as a Test of LCDM and MOND”
McGaugh, S.S. 2012, *AJ*, **143**, 40
67. “Stellar Populations and the Star Formation Histories of LSB Galaxies: I. Optical and H-alpha Imaging”
Schombert, J.M., Maciel, T., & **McGaugh, S.S.** 2011, *Advances in Astronomy*, **2011**, 143698
66. “A Novel Test of the Modified Newtonian Dynamics with Gas Rich Galaxies”
McGaugh, S.S. 2011, *Phys. Rev. Lett.*, **106**, 121303
65. “Local Group Dwarf Spheroidals: Correlated Deviations from the Baryonic Tully-Fisher Relation”
McGaugh, S.S., & Wolf, J. 2010, *ApJ*, **722**, 248–261
64. “Contradiction between strong lensing statistics and a feedback solution to the cusp/core problem”
Chen, D.-M., & **McGaugh, S.S.** 2010, *RAA*, **10**, 1215–1222
63. “Testing Modified Newtonian Dynamics with Rotation Curves of Dwarf and Low Surface Brightness Galaxies”
Swaters, R.A., Sanders, R.H., & **McGaugh, S.S.** 2010, *ApJ*, **718**, 380–391

62. “Comparing the Dark Matter Halos of Spiral, Low Surface Brightness and Dwarf Spheroidal Galaxies”
Walker, M.G., **McGaugh, S.S.**, Mateo, M., Olszewski, E., & Kuzio de Naray, R. 2010, *ApJ*, **717**, L87–L91
61. “The Baryon Content of Cosmic Structures”
McGaugh, S.S., Schombert, J.M., de Blok, W.J.G., & *Zagursky, M.J.* 2010, *ApJ*, **708**, L14–L17
60. “The Baryonic Tully-Fisher Relation and its Implication for Dark Matter Halos”
Trachternach, C., de Blok, W.J.G, **McGaugh, S.S.**, van der Hulst, J.M., & Dettmar, R.-J. 2009, *A&A*, **505**, 577–587
59. “Kinematic and Photometric Evidence for a Bar in NGC 2683”
Kuzio de Naray, R.K., *Zagursky, M.J.*, & **McGaugh, S.S.** 2009, *AJ*, **138**, 1082–1089
58. “A First Attempt to Calibrate the Baryonic Tully-Fisher Relation with Gas-Dominated Galaxies”
Stark, D.V., **McGaugh, S.S.**, & Swaters, R.A., *AJ*, **138**, 392–411
57. “Chandra Observations of Nuclear X-ray Emission from Low Surface Brightness Galaxies”
Das., M., Reynolds, C.S., Vogel, S.N., **McGaugh, S.S.**, & Kantharia, N.G. 2009 *ApJ*, **693**, 1300–1305
56. “Constraining the NFW Potential with Observations and Modeling of LSB Galaxy Velocity Fields”
Kuzio de Naray, R., **McGaugh, S.S.**, & Mihos, J.C. 2009 *ApJ*, **692**, 1321–1332
55. “VIMOS-VLT Integral field kinematics of the Giant LSB galaxy ESO 0323-G064”
Coccatto, L., Swaters, R.A., Rubin, V.C., D’Odorico, S., & **McGaugh, S.S.** 2008, *A&A*, **490**, 589–600
54. “Milky Way Mass Models and MOND”
McGaugh, S.S. 2008, *ApJ*, **683**, 137–148
53. “Mass Models of Low Surface Brightness Galaxies with High Resolution Optical Velocity Fields”
Kuzio de Naray, R., **McGaugh, S.S.**, & de Blok, W.J.G. 2008, *ApJ*, **676**, 920–943

52. “The Collision Velocity of the Bullet Cluster in Conventional and Modified Dynamics”
Angus, G.W., & **McGaugh, S.S.** 2008, *MNRAS*, **383**, 417–423
51. “The AGN and Gas Disk in the Low Surface Brightness Galaxy PGC045080”
Das, M., Kantharia, N., Ramya, S., Prabhu, T.P., **McGaugh, S.S.**, & Vogel, S.N.
2007, *MNRAS*, **379**, 11–20
50. “The Rotation Velocity Attributable to Dark Matter at Intermediate Radii in Disk Galaxies”
McGaugh, S.S., de Blok, W.J.G., Schombert, J.M., *Kuzio de Naray, R.*, & *Kim, J.H.* 2007, *ApJ*, **659**, 149–161
49. “CO Detection and Millimeter Continuum Emission from Low Surface Brightness Galaxies”
Das, M., O’Neil, K., Vogel, S.N., & **McGaugh, S.S.** 2006, *ApJ*, **651**, 853–860
48. “High Resolution Optical Velocity Fields of 11 Low Surface Brightness Galaxies”
Kuzio de Naray, R., **McGaugh, S.S.**, de Blok, W.J.G., & Bosma, A. 2006, *ApJS*, **165**, 461–479
47. “The Compression of Dark Matter Halos by Baryonic Infall”
Sellwood, J.A., & **McGaugh, S.S.** 2005, *ApJ*, **634**, 70–76
46. “The Balance of Dark and Luminous Mass in Rotating Galaxies”
McGaugh, S.S. 2005, *Phys. Rev. Lett.*, **95**, 171302
45. “The Baryonic Tully-Fisher Relation of Galaxies with Extended Rotation Curves and the Stellar Mass of Rotating Galaxies”
McGaugh, S.S. 2005, *ApJ*, **632**, 859–871
44. “The Baryonic Tully Fisher Relation”
Gurovich, S., **McGaugh, S.S.**, Freeman, K.C., Jerjen, H. Staveley-Smith, L., de Blok, W.J.G. 2004, *PASA*, **21**, 412–414
43. “Oxygen Abundances and Chemical Evolution in Low Surface Brightness Galaxies”
Kuzio de Naray, R., **McGaugh, S.S.**, & de Blok, W.J.G. 2004, *MNRAS*, **355**, 887–898
42. “Confrontation of MOND Predictions with WMAP First Year Data”
McGaugh, S.S. 2004, *ApJ*, **611**, 26–39

41. “The Acceleration Scale in Disk Galaxy Dynamics: Disk Mass and the Dark Matter Distribution”
McGaugh, S.S. 2004, *ApJ*, **609**, 652–666
40. “Simulating Observations of Dark Matter Dominated Galaxies: Towards the Optimal Halo Profile”
de Blok, W.J.G., Bosma, A., & **McGaugh, S.S.** 2003, *MNRAS*, **340**, 657–678
39. “A Limit on the Cosmological Mass Density and Power Spectrum from the Rotation Curves of Low Surface Brightness Galaxies”
McGaugh, S.S., *Barker, M.K.*, & de Blok, W.J.G. 2003, *ApJ*, **584**, 566–576
38. “Modified Newtonian Dynamics as an Alternative to Dark Matter”
Sanders, R.H., & **McGaugh, S.S.** 2002, *ARA&A*, **40**, 263–317 [invited review]
37. “High-Resolution Rotation Curves of Low Surface Brightness Galaxies: Mass Models”
de Blok, W.J.G., **McGaugh, S.S.**, & Rubin, V.C. 2001, *AJ*, **122**, 2396–2428
36. “High-Resolution Rotation Curves of Low Surface Brightness Galaxies: Data”
McGaugh, S.S., Rubin, V.C., & de Blok, W.J.G. 2001, *AJ*, **122**, 2381–2395
35. “Mass Density Profiles of LSB Galaxies”
de Blok, W.J.G., **McGaugh, S.S.**, Bosma, A., & Rubin, V.C. 2001, *ApJ*, **552**, L23–L26
34. “Gas Mass Fractions and the Evolution of LSB Dwarf Galaxies”
Schombert, J.M., **McGaugh, S.S.**, & Eder, J.A. 2001, *AJ*, **121**, 2420–2430
33. “BOOMERanG Data Suggest a Purely Baryonic Universe”
McGaugh, S.S. 2000, *ApJ*, **541**, L33–36
32. “The Baryonic Tully-Fisher Relation”
McGaugh, S.S., Schombert, J.M., Bothun, G.D., & de Blok, W.J.G. 2000, *ApJ*, **533**, L99–L102
31. “Star Formation and Tidal Encounters with the Low Surface Brightness Galaxy UGC 12695 and Companions”
O’Neil, K., Verheijen, M.A.W., & **McGaugh, S.S.** 2000, *AJ*, **119**, 2154–2165
30. “Distinguishing Between CDM and MOND: Predictions for the Microwave Background”
McGaugh, S.S. 1999, *ApJ*, **523**, L99–L102

29. “The Molecular ISM in Low Surface Brightness Disk Galaxies”
Mihos, J.C., Spaans, M., & **McGaugh, S.S.** 1999, *ApJ*, **515**, 89–96
28. “HST WFPC-2 Imaging of UGC 12695: A Remarkably Unevolved Galaxy at Low Redshift”
O’Neil, K., Bothun, G. D., Impey, C. D., & **McGaugh, S.S.** 1998, *AJ*, **116**, 657–672
27. “Testing Modified Newtonian Dynamics with Low Surface Brightness Galaxies — Rotation Curve Fits”
de Blok, W.J.G., & **McGaugh, S.S.** 1998, *ApJ*, **508**, 132–140
26. “Testing the Hypothesis of Modified Dynamics with Low Surface Brightness Galaxies and Other Evidence”
McGaugh, S.S., & de Blok, W.J.G. 1998, *ApJ*, **499**, 66–81
25. “Testing the Dark Matter Hypothesis with Low Surface Brightness Galaxies and Other Evidence”
McGaugh, S.S., & de Blok, W.J.G. 1998, *ApJ*, **499**, 41–65
24. “The Dark and Baryonic Matter Content of Low Surface Brightness Galaxies”
de Blok, W.J.G., & **McGaugh, S.S.** 1997, *MNRAS*, **290**, 533–552
23. “Low-Surface-Brightness Galaxies: Hidden Galaxies Revealed”
Bothun, G., Impey, C., & **McGaugh, S.S.** 1997, *PASP*, **109**, 745–758 [invited review]
22. “Gas Mass Fractions and the Evolution of Spiral Galaxies”
McGaugh, S.S., & de Blok, W.J.G.. 1997, *ApJ*, **481**, 689–702
21. “Dynamical Stability and Environmental Influences in Low Surface Brightness Disk Galaxies”
Mihos, J. C., **McGaugh, S.S.**, & de Blok, W.J.G.. 1997, *ApJ*, **477**, L79–L83
20. “HI Observations of Low Surface Brightness Galaxies: Probing Low Density Galaxies”
de Blok, W.J.G., **McGaugh, S.S.**, & van der Hulst, J.M. 1996, *MNRAS*, **283**, 18–54
19. “Could a Local Group X-ray Halo Affect the X-ray and Microwave Backgrounds?”
Pildis, R.A., & **McGaugh, S.S.** 1996, *ApJ*, **470**, L77–L79
18. “Does Low Surface Brightness Mean Low Density?”
de Blok, W.J.G., & **McGaugh, S.S.** 1996, *ApJ*, **469**, L89–L92

17. “Cosmological Constant”
McGaugh, S.S. 1996, *Nature*, **381**, 483
16. “The Number, Luminosity, and Mass Density of Spiral Galaxies as a Function of Surface Brightness”
McGaugh, S.S. 1996, *MNRAS*, **280**, 337–354
15. “Galaxy Selection and the Surface Brightness Distribution”
McGaugh, S.S., Bothun, G.D., & Schombert, J.M. 1995, *AJ*, **110**, 573–580
14. “The Morphology of Low Surface Brightness Disk Galaxies”
McGaugh, S.S., Schombert, J.M., & Bothun, G.D. 1995, *AJ*, **109**, 2019–2033
13. “The Tully-Fisher Relation for Low Surface Brightness Galaxies — Implications for Galaxy Evolution”
Zwaan, M.A., van der Hulst, J.M., de Blok, W.J.G., & **McGaugh, S.S.** 1995, *MNRAS*, **273**, L35–L38
12. “The Contribution of Low Surface Brightness Galaxies to Faint Galaxy Number Counts”
Ferguson, H.C., & **McGaugh, S.S.** 1995, *ApJ*, **440**, 470–484
11. “Oxygen Abundances in Low Surface Brightness Disk Galaxies”
McGaugh, S.S. 1994, *ApJ*, **426**, 135–149
10. “Spatial Distribution of Low Surface Brightness Galaxies”
Mo, H.J., **McGaugh, S.S.**, & Bothun, G.D. 1994, *MNRAS*, **267**, 129–140
9. “A Possible Local Counterpart to the Excess Population of Faint Blue Galaxies”
McGaugh, S.S. 1994, *Nature*, **367**, 538–541
8. “Structural Characteristics and Stellar Composition of Low Surface Brightness Disk Galaxies”
McGaugh, S.S., & Bothun, G.D. 1994, *AJ*, **107**, 530–542
7. “Star Formation Thresholds in Low Surface Brightness Galaxies”
van der Hulst, J.M., Skillman, E.D., Smith, T.R., Bothun, G.D., **McGaugh, S.S.**, & de Blok, W.J.G.. 1993, *AJ*, **106**, 548–559
6. “The Small Scale Environment of Low Surface Brightness Disk Galaxies”
Bothun, G.D., Schombert, J.M., Impey, C.D., Sprayberry, D., & **McGaugh, S.S.** 1993, *AJ*, **106**, 530–547

5. “A Catalog of Low Surface Brightness Galaxies: List II”
Schombert, J.M., Bothun, G.D., Schneider, S.E., & **McGaugh, S.S.** 1992, *AJ*, **103**, 1107–1133
4. “HII Region Abundances: Model Oxygen Line Ratios”
McGaugh, S.S. 1991, *ApJ*, **380**, 140–150
3. “Stellar Populations in Shell Galaxies”
McGaugh, S.S., & Bothun, G.D. 1990, *AJ*, **100**, 1073–1085
2. “The Geometry, Composition, and Mass of the Crab Nebula”
MacAlpine, G.M., **McGaugh, S.S.**, Mazzarella, J.M., & Uomoto, A. 1989, *ApJ*, **342**, 364–378
1. “An Investigation of the Efficiencies of Various Buffer Gases in Na-Xe Spin Exchange”
McGaugh, S.S., Musolf, M., Wu, Z., & Happer, W. 1987, *Physics Letters A*, **120**, 124–128

Book Reviews, Other Articles, and Notes

Book Reviews

- “Galaxies in the Universe” (textbook)
by Sparke & Gallagher (3rd edition, Feb. 2018, Cambridge University Press)
- “The Dark Matter Problem”
by Sanders (2010, Cambridge University Press)
- “The Cosmic Perspective” (ASTR 100 text)
by Bennett, Donahue, Schneider, Voit (3rd edition, Sept. 2002)

Conference Summaries:

- “Gravitational Dynamics: Universal Twists”
McGaugh, S.S. 1995, *Nature*, **377**, 386

Scientific Perspectives:

- “Seeing Through Dark Matter”
McGaugh, S.S. 2007, *Science*, **317**, 607-608

Articles for the Popular Press:

“Is Dark Matter Real?”

Hossenfelder, S., & McGaugh, S.S., *Scientific American*, August 2018, p33

“Modified Newtonian Dynamics”

McGaugh, S.S. & Schulman, E. 2000, *Mercury*, **29**(2), 8

“A Few Steps Back On The Decision Tree”

McGaugh, S.S. *Futureframe*, December 2000 (translated by Phillip Helbig)

“Mond Over Matter”

McGaugh, S.S. *Astronomy Now*, January 2002, pp. 63-65

“Through a Universe Darkly”

McGaugh, S.S. 2006 Inagural *Letter from a Contrarian* for it Cosmic Controversy
<http://cosmiccontroversy.com/letterfromcontrarian/>

Invited Talks

Invited Conference Talks & Reviews

65. “Quantitative Morphology and Hubble Types in Today’s Universe”

6/12/24: Madison: *AAS special session: Secular Evolution in Disk Galaxies: Internal Processes and Their Impact on Galactic Dynamics*

64. “Predictions and outcomes: tests of Λ CDM and MOND”

6/5/23: St. Andrews, Scotland: *MOND at 40*

63. “The Masses of Local Group Galaxies and the Baryonic Tully-Fisher Relation”

3/20/23: Potsdam: *IAU Symposium 379: Dynamical Masses of Local Group Galaxies*

62. “Eight Minutes of Arc”

11/18/21: Cleveland: *Kepler at 450: An Interdisciplinary Celebration*

61. “Scaling Relations in Galaxies”

9/13/20: Institut Teknologi Bandung, Indonesia: *Deciphering Dark Matter: From Galaxies to the Universe* (remote)

60. “Regularities in the dynamics of rotating galaxies”

5/27/20: Zanjan, Iran: *23rd Meeting on Research in Astronomy* (remote)

59. “Signatures of MOND in Cosmology”
9/24/19, Bonn, University of Bonn: *The Functioning of Galaxies*
58. “Outstanding Challenges to LCDM”
8/20/19, Venice: *CosmoCruise 2019*
57. “Dynamical Regularities in Galaxies”
7/1/19, Shanghai: *IAU Symposium 353: Galactic Dynamics in the Era of Large Surveys*
56. “Incommensurate Realities: Predictive Successes of Dark Matter and Modified Gravity”
2/8/19, Aachen: *Dark Matter & Modified Gravity*
55. “The Radial Acceleration Relation”
1/15/19, Princeton, Princeton University: *Novel Ideas for Dark Matter 2019*
54. “Cosmic Signatures of Scale-Invariant Dynamics”
9/28/18, Prague, Czech Academy of Sciences: *Cosmology on Small Scales*
53. “Debate 2”
5/1/18, Santa Barbara, KITP: *Dark matter detection and detectability: paradigm confirmation or shift?*
52. “Extended Theories of Gravity”
8/25/17, Palo Alto: *SLAC Summer School*
51. “Dwarf Galaxies”
6/5/17, Cleveland: *Dwarf Galaxies on the Shoulders of Giants* [**Lead Organizer**]
50. “Dark Matter”
5/15/17, Cleveland: *From the Cosmos to the LHC*
49. “Critical Examination of the Existence of Dark Matter”
3/27/17, Stony Brook: *Beyond WIMPs: from Theory to Detection*
48. “Radial Acceleration Relation in Rotationally Supported Galaxies”
1/31/17, Naples: *Bright & Dark Universe*
47. “As they say on TV...”
4/22/16, Cambridge, Radcliffe: *Rethinking the Dark Matter Paradigm*

46. "Laws of Galactic Rotation"
06/11/14, U. Connecticut: *International Association for Relativistic Dynamics*
45. "MOND with emphasis on predictive power"
05/19/14, Harvard CfA: *Debates on the Nature of Dark Matter*
44. "MOND with emphasis on the philosophy of science"
03/29/14, Pasadena, OCIW: *Carnegie Cognitive Astrophysics Workshop*
43. "Connections between Stellar Populations and Disk Dynamics"
10/21/13, Seoul: *Dynamics of Disk Galaxies*
42. "Galactic Rotation and Natural Law"
06/13/12, Anchorage: *AAS Modified Gravity MIM*
41. "The Baryonic Tully-Fisher Relation"
04/01/12, Greenbank: *Global Properties of HI in Galaxies*
40. "The Trials and Tribulations of Modern Cosmology: The Good, the Bad, and the Just Plain Ugly"
05/06/11, London, Ontario: *Evidential Reasoning in Cosmology*
39. "The Baryon Content of Cosmic Structures"
07/23/10, Paris: *The Standard Model of the Universe: Theory and Observations*
38. "Empirical Tests of MOND in Galaxies"
06/28/10, Strasbourg: *Modified Gravity Approaches to the Dark Sector*
37. "Baryons and Their Halos"
10/19/09, Malta: *Hunting for the Dark: The Hidden Side of Galaxy Formation*
36. "Star Formation in Gas Rich Low Surface Brightness Galaxies"
09/21/09, Charlottesville, NRAO: *Assembly, Gas Content and Star Formation History of Galaxies*
35. "The core-cusp dilemma"
07/28/09, Ann Arbor, University of Michigan: *Extreme Star Formation in Dwarf Galaxies*
34. "Baryonic Tully-Fisher relation"
07/27/09, Ann Arbor, University of Michigan: *Extreme Star Formation in Dwarf Galaxies*

33. “Baryonic Masses from Rotation Curves”
06/19/09, Kingston, Queens University: *Unveiling the Mass — Extracting and Interpreting Galaxy Masses*
32. “Astronomical and Experimental tests of MOND”
05/20/09, Cleveland, Case Western Reserve University, Cleveland: *Workshop on Tests of Gravity and Gravitational Physics*
31. “Systematic Properties of Galaxy Dynamics”
04/02/09, College Park, University of Maryland: *Shedding Light on Dark Matter*
30. “The Baryonic and Dark Matter Distribution of the Milky Way”
and “The Cusp-Core Problem”
03/12/09, Cleveland, Case Western Reserve University: *Detecting Dark Matter in the Milky Way*
29. “Scaling Relations in Dim Galaxies: from the Big and Bright to the Faintest of the Tiny”
08/27/07, Ann Arbor, University of Michigan: *The Globular Clusters — Dwarf Galaxies Connection*
28. “The Halo by Halo Missing Baryon Problem”
06/27/07, Cardiff: IAU Symposium 244: *Dark Galaxies & Lost Baryons*
27. “The Connection Between Dark and Luminous Matter”
03/22/07, Irvine, UC Irvine: *Astrophysical Probes of the Nature of Dark Matter*
26. “Balance of Dark and Luminous Mass in Rotating Galaxies”
10/05/06, Santa Barbara, Kavli Institute of Theoretical Physics, University of California: *Applications Of Gravitational Lensing: Unique Insights Into Galaxy Formation And Evolution*
25. “Empirical Constraints on Halo Profiles from Rotation Curves”
05/19/06, Las Cruces, New Mexico: *Galaxies in the Cosmic Web*
24. “Observational Constraints on the Acceleration Discrepancy Problem”
04/20/06, Edinburgh, Royal Observatory: *Alternative Gravities & Dark Matter Workshop*
23. “Mass discrepancies in the Universe: missing mass or new physics?”
10/01/05, Ann Arbor, University of Michigan: *Dark Matter in the Universe*

22. “Constraints on the mass profiles of spiral galaxies”
07/05/05, Paris, Institut d’Astrophysique de Paris: *Mass Profiles and Shapes of Cosmological Structures*
21. “Luminous and Dark Mass in Spiral Galaxies”
06/28/05, Ascona, Switzerland: *The Formation of Disk Galaxies*
20. “Mass Distributions from Rotation Curves”
06/10/04, Jerusalem, Hebrew University: *Galaxy Formation Workshop*
19. “Dark Matter Halo Concentrations”
06/08/04, Jerusalem, Hebrew University: *Galaxy Formation Workshop*
18. “Are Cuspy Halos Viable?”
2002, Chicago, U. Chicago: *Predictions of Cold Dark Matter Models on Small Scales: Current and Future Tests*
17. “The Dynamics of Low Surface Brightness Galaxies”
2002, Washington, DC, Carnegie Institution of Washington: *Galaxies: Mind Over Matter*
16. “Galaxy Masses: Disks and Their Halos”
2001, Venice, ESO: *The Mass of Galaxies at Low and High Redshift*
15. “LSB Galaxy Rotation Curves as Tests of CDM & MOND”
2001, Princeton, Institute for Advanced Studies: *Galaxies and the Dark Matter Problem*
14. “Constraints on the Radial Mass Distribution of Dark Matter Halos from Rotation Curves.”
2001, New Haven, Yale: *The Shapes of Galaxies and Their Halos*
13. “Galaxy Dynamics and the Second Peak: Cold Dark Matter?”
2000, Columbus: American Physical Society, Division of Particles & Fields
12. “Baryonic Tully-Fisher Relations”
2000, Rome, Vatican Observatory: *Galaxy Disks and Disk Galaxies*
11. “Dynamical Constraints on Disk Galaxy Formation”
1999, Paris, IAP XV: *Galaxy Dynamics: from the Early Universe to the Present*

10. “How Galaxies Don’t Form”
1998, Rutgers: *Galaxy Dynamics*
9. “Is There a Universal Baryon Fraction?”
1998, Cardiff: IAU Colloquium 171: *The Low Surface Brightness Universe*
8. “Optical Galaxy Selection”
1998, Cardiff: IAU Colloquium 171: *The Low Surface Brightness Universe*
7. “Testing the Modified Dynamics with Low Surface Brightness Galaxies”
1997, Groningen, Kapteyn Astronomical Institute: *Low Surface Brightness Galaxy Workshop*
6. “Kinematics of Low Surface Brightness Galaxies”
1997, Baltimore, STScI: *Galaxy Journal Club series on Low Surface Brightness Galaxies*
5. “Dwarf and Low Surface Brightness Galaxies”
1996, Heidelberg: IAU Symposium 171: *New Light on Galaxy Evolution*
4. “Low Surface Brightness Galaxies”
1996, Baltimore, STScI: *The Evolution of Low Luminosity Galaxies & Faint Blue Galaxies*
3. “The Number Density of Low Surface Brightness Galaxies”
1994, Baltimore, STScI: *Quantifying Galaxy Morphology at High Redshift*
<http://www.stsci.edu/meetings/galaxy-morphology/proceedings/proceedings.html>
2. “Local Low Surface Brightness Galaxies and the Excess Faint Galaxy Population”
1994, Cambridge, IoA: *Faint Blue Galaxies Workshop*
1. “The Formation and Evolution of Low Surface Brightness Galaxies”
1993, Copenhagen, NORDITA: *Dim Galaxies, Dark Matter, and Extragalactic Background Radiation*

Conference Panel Discussions

15. Discussion
Combes & McGaugh
MOND at 40

14. Plenary Discussion 5
Rejkuba & McGaugh
Dynamical Masses of Local Group Galaxies
13. Concluding Discussion
McGaugh
The Functioning of Galaxies, Bonn, September 2019
12. Panel Discussion, Day Two
Panel Members: Kaplinghat, Khoury, McGaugh, Pospelov, H. Verlinde, Yu
Novel Ideas for Dark Matter, Princeton, January 2019
11. Panel Discussion, Day One
Panel Members: McGaugh, Boylan-Kolchin, Hernandez, Brooks, Combes, Besla, Lazutkina, Kroupa
Dwarf Galaxies on the Shoulders of Giants, CWRU, Cleveland, June 2017
10. Self-Interacting Dark Matter Panel
Panel Members: van den Bosch, Kaplinghat, McGaugh, Brooks
Beyond WIMPs: from Theory to Detection, Stony Brook, March 2017
9. Panel Discussion
Panel Members: Feng, McGaugh, Zurek, Graham
Debates on the Nature of Dark Matter, Harvard, May 2014
8. Panel Discussion: The meaning of the Tully-Fisher relationship and the problem of galaxy distances
Panel Members: Tully, McGaugh, Verheijen, S. Miller, Reies
Global Properties of HI in Galaxies, NRAO Greenbank, April 2012
7. Conference Summary & Discussion
McGaugh & Dodelson
Modified Gravity Approaches to the Dark Sector, Observatoire d'Strasbourg, July 2010
6. Conference Panel Discussion
Panel Members: White, McGaugh, Courteau, de Jong, Emsellem
Unveiling the Mass - Extracting and Interpreting Galaxy Masses, Queen's University, June 2009
5. Confernece Panel Discussion
S.D.M. White, chair

Mass Profiles and Shapes of Cosmological Structures
Institut d'Astrophisique de Paris, July 2005

4. "Dark Matter Halos and Galactic Rotation Curves – Is There a Problem?"
Panel Members: Steinmetz, van den Bosch, Swaters, Dekel, McGaugh, Primack
Galaxy Formation and Evolution, Institute for Theoretical Physics, (UCSB), March 1999
3. "Dark Matter"
Panel Members: Primack, Gallagher, Binney, Sancisi, McGaugh
Galaxy Dynamics, Rutgers, August 1998
2. Conference Summary
The Low Surface Brightness Universe, Cardiff, July 1998
1. "Gravitational Dynamics: Universal Twists"
1995, *Nature*, 377, 386

Colloquia

106. "Galaxies from Here to Eternity: Too Big Too Soon?"
9/24/24, University of Texas, A&M
105. "Big Galaxies at High Redshift"
3/14/24, Earth & Planets Laboratory, Carnegie Institution of Washington
104. "Discordant Notes in Concordance Cosmology"
2/15/24, University of California, Davis (remote)
103. "Why MOND?"
4/24/23, University of South Carolina (remote)
102. "Dynamical Regularities in Galaxies"
3/31/22, University College London (remote)
101. "Patterns on the Sky: Galaxy Dynamics Edition"
2/24/22, CWRU Physics
100. "Missing Mass and Modified Dynamics"
11/24/21, Universidad de Santiago de Chile (remote)

99. “Dynamical Regularities in Galaxies”
8/16/21, Universidade Cruzeiro do Sul / Universidade Cidade de São Paulo (remote)
98. “Observational Indications of the External Field Effect”
3/11/21, George Washington University (remote)
97. “Dynamical Regularities in Galaxies”
11/23/20, Oxford (remote)
96. “The Acceleration Scale in Galaxy Dynamics”
8/19/20, Notre Dame (remote)
95. “Dynamical Regularities in Galaxies and the Missing Mass Problem”
12/11/19, U. Mass, Lowell
94. “Connections between baryons and [dark] dynamics in galaxies”
2/11/19, Centre for Cosmology and Particle Physics Phenomenology, Odense
93. “Dynamical Regularities in Galaxies and their Implications for Dark Matter”
12/6/18, University of Minnesota
92. “The Milky Way in the Context of the Laws of Galactic Dynamics”
5/15/18, Princeton University ‘Pheno & Vino’ series
91. “One Law to Rule Them All: the Radial Acceleration Relation of Galaxies”
10/4/17, University of Maryland, Baltimore College
90. “Radial Acceleration Relation in Rotationally Supported Galaxies”
5/4/17, John Carroll University
89. “Radial Acceleration Relation in Rotationally Supported Galaxies”
4/13/17, Wayne State University
88. “Radial Acceleration Relation in Rotationally Supported Galaxies”
3/16/17, Lawrence Berkeley Laboratory
87. “Radial Acceleration Relation in Rotationally Supported Galaxies”
2/24/17, CCPP, New York University
86. “The Acceleration Scale in Galaxy Dynamics”
2/10/17, Observatoire d’Strasbourg, University of Strasbourg

85. "Radial Acceleration Relation in Rotationally Supported Galaxies"
10/24/16, Physics colloquium, Virginia Tech
84. "Radial Acceleration Relation in Rotationally Supported Galaxies"
10/11/16, Astroparticle physics seminar, CWRU
83. "Radial Acceleration Relation in Rotationally Supported Galaxies"
10/7/16, PittPacc, University of Pittsburg
82. "Dark Matter & MOND: Up the Proverbial Creek"
5/12/16, Department of Terrestrial Magnetism, Carnegie Institution of Washington
81. "Laws of Galactic Rotation"
4/15/15, Virtual Institute of Astroparticle Physics
80. "Stellar Mass & the Baryonic Tully-Fisher Relation"
2/26/15, Yale University
79. "The Predictive Power of the Baryon Distribution in Galaxy Kinematics"
10/04/13, Perimeter Institute
78. "Insights from the Kinematics of Rotationally Supported Galaxies"
10/02/13, Physics Colloquium, McMaster University
77. "Light or Dark? Mass and Gravity in the Universe"
09/19/13, Physics Colloquium, John Carroll University
76. "Light or Dark? Mass and Gravity in the Universe"
09/05/13, Physics Colloquium, Case Western Reserve University
75. "Low Surface Brightness Galaxies in the Local Universe: Dim and Dark; Stars and Gas"
05/24/13, Observatoire d'Strasbourg
74. "Modified Gravity as a Possible Solution to the Missing Mass Problem"
04/26/13, Argonne National Laboratory
73. "The Dim and the Dark: Constraints on Stellar Populations from Galaxies Lacking Many Stars"
04/16/13, Astronomy Colloquium, Indiana University

72. “Empirical Laws of Galactic Rotation”
10/09/12, Observatories of the Carnegie Institution of Washington
71. “Empirical relations between baryons and dynamics in galaxies”
10/07/11, Astro Lunch, University of Pittsburgh
70. “Existential Challenges to Modern Cosmology”
10/22/10, Physics Colloquium, University of Connecticut
69. “Gravity and Dark Matter in the Universe”
09/18/09, Physics Colloquium, West Virginia University
68. “Gravity and Dark Matter in the Universe”
09/15/09, Physics Colloquium, University of Maryland
67. “Cosmic Flights of Fancy: Mass and the Gravity that Moves It”
04/09/08, DTM, Carnegie Institution of Washington
66. “Seeing Through Dark Matter”
02/14/08, TRIUMF, Vancouver, Canada
65. “The Legend of Happy Valley — Tale of the Headless Halo”
10/31/07, Astronomy Department, Penn State University
64. “Does MOND remain viable?”
10/02/07, CAS, Johns Hopkins University
63. “The Pros and Cons of Invisible Mass and Modified Gravity”
04/13/07, Physics Department, George Mason University
62. “The Mass Discrepancy Problem: New physics in matter or gravity?”
04/06/06, Physics Department, University of Rochester
61. “The Mass of Spiral Galaxies, Luminous and Dark”
03/10/05, Astronomy Department, University of Michigan
60. “Astronomical Evidence for and against Dark Matter and Modified Gravity”
29/03/05, Physics Department, University of Florida
59. “Mass Distributions in Spiral Galaxies”
25/03/05 Astrophysics Seminar, Department of Physics and Astronomy, Rutgers University

58. "Mass Discrepancies in the Universe: Dark Matter or Different Dynamics?"
28/04/04, Perimeter Institute, Canada
57. "Dark Matter & Dark Energy: Gravity as We Know It?"
11/06/03, Physics Department, George Mason University
56. "The Era of Precision Cosmology: Whither Now?"
10/03/03, College of Arts and Sciences, John Carroll University
55. "Cosmology and Dark Matter Halos"
04/22/03: Kapteyn Astronomical Institute, University of Groningen
54. "Puzzles in Disk Dynamics"
04/16/03: Institute of Astronomy, University of Cambridge
53. "Gravity or Dark Matter?"
02/12/03: HEP Division Seminar, Argonne National Laboratory
52. "Dark Matter or Gravity?"
12/11/02: Physics Department, UMBC
51. "Gravity or Dark Matter?"
11/14/02: Astrophysics group, Naval Research Laboratory
50. "Gravity or Dark Matter?"
10/30/02: Particle physics group, Johns Hopkins
49. "Gravity or Dark Matter?"
10/14/02: Astronomy Department, University of North Carolina
48. "Gravity or Dark Matter?"
10/04/02: College of Arts and Sciences, John Carroll University
47. "Gravity and Dark Matter"
09/18/02: Astronomy Department, University of Maryland
46. "Dynamical Constraints on Galaxy Formation"
03/11/02: Fermilab Theoretical Astrophysics Seminar, FNAL
45. "The Rotation Curves of Low Surface Brightness Galaxies"
02/12/02: NRAO Greenbank

44. "Monkey Wrenches in Gravity and Cosmology" [honarium]
01/18/02: Mathematics Seminar, University of Michigan-Flint
43. "The Mass Content of the Universe: Dark or Virtual?"
11/28/01: Laboratory for Physical Sciences, NSA/UMd
42. "Galaxy Dynamics and the Cosmic Microwave Background: Small Bumps and Shallow Cusps"
10/03/01: Department of Terrestrial Magnetism, Carnegie Institution of Washington
41. "Small Bumps and Shallow Cusps: CDM, MOND, and Speculations on Cosmology"
02/13/01: NASA/GSFC LHEA colloquium
40. "Small Bumps and Shallow Cusps: CDM, MOND, and Speculations on Cosmology"
12/07/00: Rutgers, Astrophysics group colloquium
39. "Gravity or Dark Matter?"
10/19/00: Astronomy Colloquium, U. Massachusetts (Amherst)
38. "Gravity or Dark Matter?"
09/07/00: Gravity group, Maryland Physics
37. "Cosmological Constraints from Dark Matter Dominated Galaxies"
04/20/00: Goddard Laboratory for Astronomy and Solar Physics
36. "Cosmological Constraints from Dark Matter Dominated Galaxies"
11/10/99: Maryland High Energy Physics group
35. "Phenomenological Constraints on Galaxy Formation Theories"
03/99: Harvard CfA theory group
34. "Galaxy Rotation Curves: Is Dark Matter the Answer?" [honarium]
03/99: Max Planck/ESO Joint Astronomy Colloquium [Invited International Lecture]
33. "Low Surface Brightness Galaxies as Dark Matter Laboratories"
03/99: NASA/GSFC LHEA colloquium
32. "Modified Dynamics"
1998: Rutgers High Energy Physics group
31. "Low Surface Brightness Galaxies and their Number Density"
1998: New Mexico State, Astronomy department colloquium

30. "How Galaxies Don't Form"
1998: Maryland, Astronomy department colloquium
29. "Gravity or Dark Matter?"
1998: Columbia, Astronomy department colloquium
28. "Gravity or Dark Matter?"
1998: Case Western Reserve, Astronomy department colloquium
27. "Gravity and Dark Matter"
1997: Wesleyan, Astronomy department colloquium
26. "How Galaxies Don't Form"
1997: Rutgers, Astrophysics group colloquium
25. "Gravity or Dark Matter?"
1997: NRAO Charlottesville
24. "Low Surface Brightness Galaxies"
1997: SUNY at Stony Brook, Astronomy department colloquium
23. "Low Surface Brightness Galaxies"
1997: Fermilab
22. "Spiral Galaxy Evolution: Complementary Approaches at High and Low Redshift"
1997: Space Telescope Science Institute
21. "Low Surface Brightness Galaxies"
1997: Department of Physics, Stanford University
20. "Gravity or Dark Matter?"
1997: Department of Physics and Astronomy, University of Pennsylvania
19. "Gravity or Dark Matter?"
1996: Department of Terrestrial Magnetism, Carnegie Institution of Washington
18. "The Formation and Evolution of Low Surface Brightness Galaxies"
1996: Yale University
17. "Gravity or Dark Matter?"
1996: Pontificia Universidad Catolica de Chile

16. "The Curtis Schmidt Very Low Surface Brightness Galaxy Survey"
1996: CTIO/NOAO
15. "Constraints on Dark Matter from Low Surface Brightness Galaxies"
1996: STScI
14. "The Physical Properties of Low Surface Brightness Galaxies"
1995: Department of Terrestrial Magnetism, Carnegie Institution of Washington
13. "The Physical Properties of Low Surface Brightness Galaxies"
1995: University of Virginia
12. "The Faint Galaxy Problem"
1995: Institute of Astronomy, University of Cambridge
11. "Things as a Function of Surface Brightness"
1995: Institute of Astronomy, University of Cambridge
10. "Low Surface Brightness Galaxies in a Cosmological Context"
1995: University of Oxford
9. "The Physical Properties of Low Surface Brightness Galaxies"
1995: Queen Mary & Westfield College, University of London
8. "The Physical Properties of Low Surface Brightness Galaxies"
1994: University of Durham
7. "The Physical Properties of Low Surface Brightness Galaxies"
1994: Kapteyn Astronomical Institute, University of Groningen
6. "The Physical Properties of Low Surface Brightness Galaxies"
1993: College of Cardiff, University of Wales
5. "The Physical Properties of Low Surface Brightness Galaxies"
1993: Instituto Astrofisica de Canarias
4. "The Formation and Evolution of Low Surface Brightness Galaxies"
1992: Institute of Astronomy, University of Cambridge
3. "The Constancy of the IMF as a Function of Metallicity"
1992: Kapteyn Institute, University of Groningen

2. “Low Surface Brightness Galaxies”
1991: KPNO/NOAO
1. “Models of Giant Extragalactic HII Regions”
1990: University of Michigan

Public Talks

40. “Testing Modified Theories of Gravity in Galaxies”
5/21/24: Origin Science Scholars
39. “MOND and the Acceleration Discrepancy”
12/16/22: Brian Keating podcast
38. “The Acceleration Discrepancy”
1/26/22: Akron Physics Club
37. “The Acceleration Discrepancy”
10/18/21: Rose City Astronomers (Oregon, remote)
36. “Dark Matter and Gravity in the Universe”
3/19/21: Crawley Astronomical Society (UK, remote)
35. “Dark Matter and Gravity: What is the Universe Made of, and which is Calling the Shots?”
1/15/21: Golden Webinar in Astrophysics, Instituto de Astrofísica, Pontificia Universidad Católica de Chile (Remote with over 800 unique viewers)
34. “Dark Matter and Gravity in the Universe”
9/9/19: Cuyahoga Astronomical Association
33. “Into the Darkness — Was Newton Not Quite Right?”
2/7/19: Beer & Science, Theodor Schiotz Brewing Co. (Odense, Denmark)
32. “Divining the Difference between the Dark and the Light”
11/16/18: Astronomy Club of Akron
31. “The Mysterious Missing Mass and the Acceleration Discrepancy”
12/07/17: Cleveland Astronomical Society
30. “The Mysterious Missing Mass and the Acceleration Discrepancy”
09/15/17: University Lowbrow Astronomers, University of Michigan

29. "Dark Matter or Modified Gravity? What the Acceleration Scale Suggests"
03/13/17: Science Cafe, Music Box Supper Club
28. "Light or Dark? Mass and Gravity in the Universe"
03/08/17: CWRU Physics & Astronomy Club
27. "Dark Matter or Modified Gravity?"
03/03/17: Burrell Observatory Open House, Baldwin Wallace University
26. "Gravity and Cosmology a Century after Einstein"
04/07/16: Benson Lecture, Miami University
25. "The Dark Horses of Dark Matter"
06/02/16: Shaking Up the Dark Universe, World Science Festival
<http://livestream.com/WorldScienceFestival/events/5415878>
24. "Gravity and Orbits"
11/20/15: TEDxCLE
<http://www.tedxcle.com/stacy-mcgaugh/>
23. "Dark Matter or Modified Gravity?"
03/06/15: Toledo Astronomical Association
<https://www.youtube.com/watch?v=C0oZQpQbFx4>
22. "Cracking the Cosmic Code"
12/06/13: Astronomy Distinguished Alumnus Lecture, University of Michigan
21. "The case for modifying our current understanding of gravity"
09/25/13: Institute for the Science of Origins: Origins Science Scholars Program
20. "Star Formation in Dim Galaxies"
04/18/12: CWRU Physics & Astronomy Club
19. "The Driving Role of Gravity in Cosmology"
12/09/10: Cleveland Museum of Natural History
18. "Origins: the Universe"
09/08/10: Clarice Smith Origins program
17. "Gravity and the Fate of the Universe: Mostly Dark, or all Bright?"
03/25/09: MIT club of NE Ohio

16. "Observing at Kitt Peak"
12/05/05: Maryland Observatory Open House
15. "Light in the Darkness: The Role of Mass, Energy, and Gravity in Modern Cosmology"
12/09/04: Cleveland Museum of Natural History
14. "Dark Matter Puzzles"
11/22/04: Physics & Astronomy Student Club, Case Western Reserve University
13. "What is the Universe Made of?"
01/20/04: Maryland Observatory Open House
12. "Distinguishing Cosmologies: Arguments for and Against the Standard World Model, Then and Now"
10/03/03: First Year Seminar, John Carroll University
11. "Gravity, the Universe, and Dark Matter"
05/13/03: Public talk, Society for Industrial and Applied Mathematics
10. "What is the Universe Made of?"
02/05/03: Maryland Observatory Open House
9. "Collective Denial and Individual Responsibility: Galileo's Daughters"
10/04/02: First Year Seminar, John Carroll University
8. "Where is Most of the Universe Hiding? The Missing Mass Problem"
03/05/02: Smithsonian Associates Lecture Series, Smithsonian Institution
7. "Dark Matters: Faith and the Scientific Method"
02/07/02: Doubt Seminar, John Carroll University
6. "Basic Cosmology"
01/17/02: *Great Ideas in Science* Honors class, University of Michigan-Flint
5. "What is the Universe Made of?"
11/20/01: Maryland Observatory Open House
4. "Mass Gone Missing in the Universe"
11/20/00: Maryland Observatory Open House
3. "Dim Galaxies shed New Light on Old Problems"
05/02/00: Public talk, Space Telescope Science Institute

2. “What is the Universe Made of?”
04/05/00: Maryland Observatory Open House
1. “Galaxies are Made of Stars”
01/20/99: Maryland Observatory Open House

Other Talks

31. “The Imprint of Spiral Arms on the Galactic Rotation Curve”
5/20/21, Division of Dynamical Astronomy (remote)
30. “Bumps and Wiggles in the Milky Way: the Imprint of Spiral Arms on the Galactic Rotation Curve”
1/7/19, American Astronomical Society, Honolulu, Hawaii
29. “Predicting the Velocity Dispersions of the Dwarf Satellite Galaxies of Andromeda”
5/23/16, Division of Dynamical Astronomy, Nashville, Tennessee
28. “Stellar Population Mass Indicators”
01/20/13, RESOLVE team meeting, UNC
27. “From Massive Galactic Spiral Arms to Subtle Solar System Perturbations”
05/09/12, Division of Dynamical Astronomy, Timberline Lodge, Oregon
26. “MOND: An Empiricist’s Perspective”
03/05/12 Dark Matter Seminar, University of Arizona
25. “Deviations from the Baryonic Tully Fisher Relation”
02/28/12 First Galaxies and Faint Dwarfs: Clues to the Small Scale Structure of Cold Dark Matter, KITP UCSB
24. “Tidal Effects in the Ultrafaint Dwarf Satellite Galaxies of the Milky Way”
04/13/11, Division of Dynamical Astronomy, Austin, Texas
23. “Dark Matter in Dwarf Galaxies”
05/27/10, Advances in Theoretical and Observational Cosmology, University of Maryland
22. “Calibrating the Baryonic Tully-Fisher Relation with Gas Dominated Galaxies”
05/03/09, Division of Dynamical Astronomy, Virginia Beach, Virginia

21. "Calibrating the Baryonic Tully-Fisher Relation with Gas Dominated Galaxies"
01/09/09: Long Beach, 213th AAS, *BAAS*, **41**, 397, 335.07
20. "Reconstructing the Mass Profile of the Milky Way"
04/28/08, Division of Dynamical Astronomy, Boulder, Colorado
19. "The Kinematic Signature of a Bar in the Edge-on Galaxy NGC 2683"
03/15/08, Flash talk, NOAO
18. "An overview of MOND"
03/06/06, Astronomy Journal Club, University of Maryland
17. "The Mass of Spiral Galaxies"
09/20/05, Club Galax, University of Maryland
16. "Were Primordial Dark Halos Hollow?: Decompression of Fabry Perot Rotation Curves"
05/03/02: ALTS lunch talk, Maryland Astronomy Dept.
15. "Ripples in the Cosmic Microwave Background"
03/27/01: Junior Faculty Seminar Series, CMPS Dean
14. "From Galaxy Dynamics to the Cosmic Microwave Background: A Quick tour"
03/09/01: ALTS lunch talk, Maryland Astronomy Dept.
13. "The Second Peak: CDM or No CDM?"
01/09/01: San Diego, 197th AAS, *BAAS*, **32**, 4, 55.06
12. "The Baryonic Tully-Fisher Relation"
11/04/99: Washington Area Astronomer's Meeting
11. "Cosmological Constraints from Dark Matter Dominated Galaxies"
11/02/99: Department of Terrestrial Magnetism, Carnegie Institution of Washington
10. "Puzzles in Disk Stability"
1997: Fermilab, lunch discussion
9. "Faint Galaxy Counts and Local Galaxy Gas Fractions: an Evolutionary Conundrum"
1997: Aspen Winter Astrophysics Conference
8. "Baryon Fractions in Low Surface Brightness Galaxies"
1997: Aspen Winter Astrophysics Conference

7. “Reverse Baryon Catastrophe in Extremely Dark Matter Dominated Galaxies”
1997: Toronto, 189th AAS, *BAAS*, **28**, 4, 84.03
6. “Relations between Luminous and Dark Mass Distributions in Disk Galaxies”
1995: IFACS, NASA GSFC
5. “Rotation Curves of Spiral Galaxies as a Function of Density”
1995: Cambridge, 36th Herstmonceux Conference, *Gravitational Dynamics*
4. “The Number Density of Low Surface Brightness Galaxies”
1993: Washington, D. C., 183rd AAS, *BAAS*, **25**, 1384
3. “Low Surface Brightness Galaxies”
1991: Atlanta, 179th AAS, *BAAS*, **23**, 1444
2. “Understanding the HII Region Oxygen Abundance Sequence”
1990: Philadelphia, 177th AAS, *BAAS*, **22**, 1268
1. “The Shell Galaxy Arp 230: A Merger Induced Starburst”
1989: University of Michigan

Invited Conference Proceedings

28. “BIG-SPARC: the new SPARC database”
Haubner, K., Lelli, F., Di Teodoro, E., Duey, F., McGaugh, S., Schombert, J., Hess, K.M. , & the Apertif Team 2024, for *IAU Symposium 392: Neutral Hydrogen in and around Galaxies in the SKA Era*, Cape Town
27. “The empirical laws of galaxy dynamics: from gas kinematics to weak lensing”
Lelli, F., Mistele, T., McGaugh, S.S., Schombert, J.M., & Li, P. 2024, for *IAU General Assembly 2024, Focus Meeting 9: Measures of luminous and dark matter in galaxies across time*, Cape Town
26. “The oblateness of dark matter halos of nearby galaxies and its correlation with gas mass fractions”
Das, M., Ianjamasimanana, R., McGaugh, S.S., Schombert, J., & Dwarakanath, K.S. 2023, for *IAU 379: Dynamical Masses of Local Group Galaxies*, Potsdam
25. “A comparison of the UV and HI properties of the extended UV (XUV) disk galaxies NGC 2541, NGC 5832 and ESO406-042”
Das, M., Yadav, J., Patra, N.N., Dwarakanath, K.S., McGaugh, S.S., Schombert, J., Rahna, P.T., & Murthy, J. 2021, *JApA*, 42, 85

24. “Local Group Galaxies from an External Perspective”
McGaugh, S.S., 2023, for *IAU 379: Dynamical Masses of Local Group Galaxies*
23. “Dynamical Regularities in Galaxies”
McGaugh, S.S., Lelli, F., Li, P., & Schombert, J.M. 2019, for *IAU 353: Galactic Dynamics in the Era of Large Surveys*
22. “An Overview of the MHONGOOSE Survey: Observing Nearby Galaxies with MeerKAT”
W.J.G. de Blok et al. 2017, for *MeerKAT Science: On the Pathway to the SKA*
21. “Tidal Dwarf Galaxies: Disc Formation at $z=0$ ”
Lelli, F., Duc, P.-A., Brinks, E., McGaugh, S.S. 2015, European Astronomical Society; in *Galaxies*, 3(4), 184-191
20. “The MOND phenomenology”
Famaey, B., & McGaugh, S.S. 2013, *Rencontres du Vietnam*
19. “Challenges for Lambda-CDM and MOND”
Famaey, B., & McGaugh, S.S. 2013, Florence: *Proceedings of the Meeting of the International Association for Relativistic Dynamics*
18. “Baryons and Their Halos”
10/19/09, Malta: *Hunting for the Dark: The Hidden Side of Galaxy Formation*
17. “Baryonic Masses from Rotation Curves”
06/19/09, Queens University, Kingston, Ontario: *Unveiling the Mass — Extracting and Interpreting Galaxy Masses*
16. “Astronomical and Experimental tests of MOND”
05/20/09, Case Western Reserve University, Cleveland: *Workshop on Tests of Gravity and Gravitational Physics*
15. “Systematic Properties of Galaxy Dynamics”
04/02/09, University of Maryland: *Shedding Light on Dark Matter*
14. “The Baryonic and Dark Matter Distribution of the Milky Way”
and “The Cusp-Core Problem”
03/12/09, Case Western Reserve University, Cleveland: *Detecting Dark Matter in the Milky Way*

13. “Scaling Relations in Dim Galaxies: from the Big and Bright to the Faintest of the Tiny”
08/27/07, University of Michigan, Ann Arbor: *The Globular Clusters — Dwarf Galaxies Connection*
12. “The Halo by Halo Missing Baryon Problem”
McGaugh, S.S. 2007, *IAU Symposium 244, Dark Galaxies & Lost Baryons*, 136 – 145
11. “Balance of Dark and Luminous Mass in Rotating Galaxies”
McGaugh, S.S. 2006, *Applications Of Gravitational Lensing: Unique Insights Into Galaxy Formation And Evolution*
10. “Observational Constraints on the Acceleration Discrepancy Problem”
McGaugh, S.S. 2006, Royal Observatory, Edinburgh: *Alternative Gravities & Dark Matter Workshop* (55 pages: astro-ph/0606351)
9. “Some Systematic Properties of Rotation Curves”
McGaugh, S.S. 2005, *Mass Profiles and Shapes of Cosmological Structures*, the Proceedings of the 21st IAP Colloquium, Paris, July 2005, eds. G. A. Mamon, F. Combes, C. Deffayet, B. Fort, EAS Publications Series, 20, 69 – 76
8. “Galaxy Masses: Disks and Their Halos”
McGaugh, S.S. 2003, *The Mass of Galaxies at Low and High Redshift*, Proceedings of the ESO Workshop held in Venice, Italy, 24-26 October 2001, eds. R. Bender and A. Renzini, 45 – 51
7. “Constraints on the Radial Mass Distribution of Dark Matter Halos from Rotation Curves”
McGaugh, S.S. 2001, *The Shapes of Galaxies and their Dark Halos*, ed. P. Natarajan (New Haven: World Scientific), 186 – 193
6. “Galaxy Dynamics and the Second Peak: Cold Dark Matter?”
McGaugh, S.S. 2001, *International Journal of Modern Physics A*, **16**, 1031 – 1033
5. “Baryonic Tully-Fisher Relations”
McGaugh, S.S. 2001, *Galaxy Disks and Disk Galaxies*, eds. J.G. Funes & E.M. Corsini, ASP **230**, 541 – 544
4. “Dynamical Constraints on Disk Galaxy Formation”
McGaugh, S.S. 2000, *Galaxy Dynamics: from the Early Universe to the Present*, eds. F. Combes, G.A. Mamon, & V. Charmandaris, ASP **197**, 153 – 160

3. “How Galaxies Don’t Form”
McGaugh, S.S. 1999, *Galaxy Dynamics*, eds. D. Merritt & J. Sellwood, ASP **182**, 528 – 538
2. “Optical Galaxy Selection”
McGaugh, S.S. 1999, *IAU Colloquium # 171: The Low Surface Brightness Universe*, eds. J.I. Davies, C. Impey, & S. Phillipps, ASP **170**, 19 – 26
1. “Dwarf and Low Surface Brightness Galaxies”
McGaugh, S.S. 1996, *IAU Symposium # 171: New Light on Galaxy Evolution* eds. R. Bender & R.L. Davies, (Dordrecht: Kluwer), 97–104

Other Contributions

42. “Early Galaxy Formation and the Hubble Constant Tension”
McGaugh, S.S. 2023, *RNAAS*, **7**, 20
41. “Dark Matter Halo Masses from Abundance Matching and Kinematics: Tensions for the Milky Way and M31”
McGaugh, S.S., & van Dokkum, P. 2021, *RNAAS*, **5**, 23
40. “Scaling Relations for Molecular Gas and Metallicity: Impact on the Baryonic Tully-Fisher Relation”
McGaugh, S.S., Lelli, F., & Schombert, J.M. 2020, *RNAAS*, **4**, 45
39. “A Precise Milky Way Rotation Curve Model for an Accurate Galactocentric Distance”
McGaugh, S.S. 2018, *RNAAS*, **2**, 156
38. “Strong Hydrogen Absorption at Cosmic Dawn: the Signature of a Baryonic Universe”
McGaugh, S.S. 2018, *RNAAS*, **2**, 37
37. “Comment on ‘Evidence for dark matter in the inner Milky Way’”
McGaugh, Lelli, Pawlowski, Angus, Bienayme, Bland-Hawthorn, de Blok, Famaey, Fraternali, Freeman, Gentile, Ibata, Kroupa, Lughausen, McMillan, Merritt, Minchev, Monari, D’Onghia, Quillen, Sanders, Sellwood, Siebert, & Zhao, 2015, arXiv:1503.07813
36. “From Massive Galactic Spiral Arms to Subtle Solar System Perturbations”
McGaugh, S.S. 2012, Timberline DDA meeting
35. “MOND: An Empiricist’s Perspective”
McGaugh, S.S. 2012, dark matter seminar, University of Arizona

34. "Deviations from the Baryonic Tully Fisher Relation"
McGaugh, S.S. 2012, lunch talk at KITP
33. "Missing the Point - a Brief Reply to Foreman & Scott and Gnedin"
McGaugh, S.S., 2011, arXiv:1109.1599
32. "Tidal Effects in the Ultrafaint Dwarf Satellite Galaxies of the Milky Way"
McGaugh, S.S. 2011, Austin DDA meeting
31. "Dark Matter in Dwarf Galaxies"
McGaugh, S.S., 2010, for Advances in Theoretical and Observational Cosmology, Maryland
30. "VLT/VIMOS Integral field kinematics of the Giant Low Surface Brightness galaxy ESO 323-G064"
Cocato, L., Swaters, R., Rubin, V.C., D'Odorico, S., & McGaugh, S.S. 2007, Formation and Evolution of Galaxy Disks
29. "Radio Emission from AGN in Giant LSB Galaxies"
Das, M., Kantharia, N., & Vogel, S.N., & McGaugh, S.S. 2009, ASP, **407**, 167
28. "Kinematic and Photometric Evidence for a Bar in NGC 2683"
Kuzio de Naray, R., Zagursky, M.J. & McGaugh, S.S. 2009, BAAS, **41**, 902
27. "Constraining the NFW Potential with Observations and Modeling of LSB Galaxy Velocity Fields"
Kuzio de Naray, R., McGaugh, S.S., & Mihos, J.C. 2009, AAS, 213, **41**, 325
26. "Constraining Maximum Disk Velocities of High-Mass Galaxies"
Zagursky, M.J. & McGaugh, S.S. 2007, AAS, **211**, 1303
25. "VLT/VIMOS Integral field kinematics of the Giant Low Surface Brightness galaxy ESO 323-G064"
Cocato, L., Swaters, R., Rubin, V.C., D'Odorico, S. & McGaugh, S. 2007, *IAU 244*, ASP, **396**, 481
24. "Radio Observations of AGN in Low Surface Brightness Galaxies"
Das, M., McGaugh, S.S., Kantharia, N., & Vogel, S.N. 2007, *IAU 244*
23. "Two Dimensional Velocity Fields of Low Surface Brightness Galaxies"
Kuzio de Naray, R., McGaugh, S.S., de Blok, W.J.G., & Bosma, A. 2007, *Island Universes - Structure and Evolution of Disk Galaxies*

22. "Radio Observations of the AGN and Gas in Low Surface Brightness Galaxies"
Das, M., O'Neil, K., Kantharia, N., Vogel, S.N., & McGaugh, S.S. 2006, *IAU Symposium 235: Galaxy Evolution across the Hubble Time*, 135
21. "Two Dimensional Velocity Fields of Low Surface Brightness Galaxies"
Kuzio de Naray, R., McGaugh, S.S., de Blok, W.J.G., & Bosma, A. 2005, *Mass Profiles and Shapes of Cosmological Structures*, eds. G. Mamon, F. Combes, C. Deffayet & B. Fort
20. "The Baryonic Tully Fisher Relation"
Gurovich, S., McGaugh, S.S., Freeman, K., Jerjen, H., Staveley-Smith, L., & de Blok, W.J.G. 2004, PASA
19. "First Results from a Large Survey for Very Low Surface Brightness Galaxies"
Marshall, J.J., McGaugh, S.S., & Aldering, G. 2003, American Astronomical Society Meeting, 203
18. "Hubble Space Telescope Imaging of Globular Clusters in the Face-on Galaxies UGC 5981 & UGC 6614"
Kim, J. H. & McGaugh, S. S. 2002, American Astronomical Society Meeting, 201
17. "CO Detections in Low Surface Brightness Galaxies using the BIMA Array"
Das, M., McGaugh, S. S., Vogel, S. N., Teuben, P. J., & Kim, J. H. 2002, American Astronomical Society Meeting, 201
16. "The Emission Line Ratio of [N II]/[S II] and Luminosity in Spirals"
Kim, J. H., & McGaugh, S. S. 1999, AAS, **31**, 1523
15. "Some Early Universe Predictions of Simple Modified Dynamics"
McGaugh, S. S. 1998, *After the Dark Ages: When Galaxies Were Young (the Universe at $2 < z < 5$)*, eds. S. S. Holt & E. P. Smith, AIP **470**, 72 – 75
14. "The Baryon Fraction Distribution and the Tully-Fisher Relation"
McGaugh, S. S., & de Blok, W. J. G. 1998, *Galactic Halos*, ed. D. Zaritsky, ASP **136**, 210 – 212
13. "The Molecular ISM in Low Surface Brightness Disk Galaxies"
Mihos, J. C., Spaans, M., & McGaugh, S. S. 1998, AAS, **30**, 1355
12. "Gas Content and Star Formation Thresholds in the Evolution of Spiral Galaxies"
McGaugh, S. S., & de Blok, W. J. G. 1997, *Star Formation, Near and Far*, eds. S. S. Holt & L. G. Mundy, AIP **393**, 510 – 513

11. “Dynamical Stability and Galaxy Evolution in LSB Disk Galaxies”
Ratio Mihos, J. C., McGaugh, S. S., & de Blok, W. J. G. 1997, *Star Formation, Near and Far*, eds. S. S. Holt & L. G. Mundy, AIP **393**, 311 – 314
10. “Dark Matter in Low Surface Brightness Galaxies”
de Blok, W. J. G., & McGaugh, S. S. 1997, *Dark Matter in Galaxies and Cosmological Implications*, eds. P. Salucci & M. Persic, 39 – 46
9. “An Analysis of the Evolutionary State of SNR G299.2 - 2.9”
Wright, J. T., Slane, P., Vancura, O., Plucinsky, P., Smith, C., & McGaugh, S. 1997, *AAS*, **191**, 4004
8. “The Properties and Evolution of Low Surface Brightness Disk Galaxies”
de Blok, W. J. G., van der Hulst, J. M. & McGaugh, S. S. 1996, *BAAS*, **28**, 1387
7. “Properties of Low Surface Brightness Galaxies”
W. J. G. de Blok, J. M. van der Hulst, S. S. McGaugh 1996,
IAU Symposium # 171: New Light on Galaxy Evolution eds. R. Bender & R. L. Davies, (Dordrecht: Kluwer), 35
6. “The Contribution of Low Surface Brightness Galaxies to Faint Galaxy Number Counts”
Ferguson, H. C. & McGaugh, S. S. 1994: Baltimore, STScI
Quantifying Galaxy Morphology at High Redshift
<http://stsci.edu/meetings/galaxy-morphology/proceedings/posters.html>
5. “The Contribution of Low Surface Brightness Galaxies to Faint Galaxy Number Counts”
Ferguson, H. C. & McGaugh, S. S. 1993, *BAAS*, **25**, 1398
4. “Chemical abundances in low surface brightness galaxies: Implications for their evolution”
McGaugh, S. S., & Bothun, G. D. 1993, *The Evolution of Galaxies and Their Environment*, 88–89
3. “Low Surface Brightness Galaxies”
van der Hulst, J. M., de Blok, W. J. G., McGaugh, S. S., & Bothun, G. D. 1993, *The Evolution of Galaxies and Their Environment*, 92–93
2. “The Geometry, Composition, and Mass of the Crab Nebula”
McGaugh, S., MacAlpine, G., Lawrence, S., & Uomoto, A. 1989, *BAAS*, **21**, 750

1. “A Preliminary Examination of Redshift and Luminosity Characteristics for APM Survey Quasars”
MacAlpine, G. M., McGaugh, S. S., Anderson, S., Weymann, R., Turnshek, D., Hewett, P., Chaffee, F., & Foltz, C. 1989
Proceedings of a Workshop on Optical Surveys for Quasars, 107–111
also in *Active Galactic Nuclei*, 418–423

Contracts and Grants

- “Proper Motions of the Crater-Leo Group: Testing the Group Infall Scenario”
\$16,043 from 1 January 2020 to 31 December 2022
NASA Space Telescope Science Institute: HST-GO-14770.005-A
- “DFG-NSF: Observational Tests of Covariant Emergent Gravity”
\$128,997 from 1 June 2019 to 31 May 2022
NSF PHY-1911909
- “Calibrating the Stellar Mass of Star Forming Galaxies”
\$656,639 from 1 June 2019 to 31 May 2022
NASA Astrophysical Data Program grant 80NSSC19K0570
- “Proper Motions of the Crater-Leo Group: Testing the Group Infall Scenario”
\$16,043 from 1 January 2019 to 31 December 2021
NASA Space Telescope Science Institute: HST-GO-15507.005
- “Exploring the Nature of Dark Matter Through Near-IR CMD’s of LSB Galaxies”
\$30,744 from 1 June 2018 to 31 May 2021
NASA Space Telescope Science Institute: HST-GO-15427.002
- “Investigating Dark Matter and Star Formation in the Outer Disks of galaxies using UV, optical, and 21 cm radio observations”
Rs. 30,29,600 from 9 March 2018 to 7 March 2020
IUSSTF (Indo-U.S. Science & Technology Forum) Indo-U.S. Virtual Networked Joint Center
M. Das (IIA, Bangalore) Indian Nodal PI; S. McGaugh (CWRU) U.S. Nodal PI
- “Proper Motions of the Crater-Leo Group: Testing the Group Infall Scenario”
\$13,693 from 1 December 2016 to 30 November 2019
NASA Space Telescope Science Institute: HST-GO-14770.005

“Vast Immensity, Exquisitely Made: Tidal Dwarf Galaxies and the Cosmic Dark Matter Problem”

\$365,985 from 1 September 2014 to 31 August 2017

John Templeton Foundation 43393

“The Relation between Mass and Light in Spiral Galaxies”

\$158,198 1 September 2012 to 31 March 2016

NASA Astrophysical Data Program NNX13AH32G

“Low Surface Brightness Galaxies”

\$47,500 from 1 April 2011 to 31 March 2014 (PI share \$31,500)

NASA Spitzer Science Center (Cycle 7 Snapshot program)

“The Relation between Mass and Light in Spiral Galaxies”

\$57,675 1 April 2011 to 31 July 2012

NASA Astrophysical Data Program NNX11AF89G

“Primordial Dark Matter Halos and the Present Mass Distribution of Galaxies”

\$163,995 from 15 August 2009 to 31 July 2012

NSF AST0908370

“Star Formation and the Tully-Fisher Relation”

\$25,000 from 1 July 2008 to 30 June 2010 (PI share \$19,000)

NASA Spitzer Science Center (Archival)

“The Spitzer Tully-Fisher Relation”

\$31,401 from 1 July 2008 to 30 June 2010 (PI share \$23,401)

NASA Spitzer Science Center (Cycle 5 Observations)

“REU supplement to High Resolution Velocity Fields of Low Surface Brightness Galaxies”

\$12,450 from 22 May 2008 to 30 June 2009

NSF AST0505956

“High Resolution Velocity Fields of Low Surface Brightness Galaxies”

\$340,237 from 15 July 2005 to 30 June 2009

NSF AST0505956

“Mass Profiles of Spiral Galaxies”

\$122,377 from 15 Mar 2003 to 14 Mar 2006

NASA Astrophysical Data Program: NAG513108

“Discovery and Dynamics of Very Low Surface Brightness Disk Galaxies”

\$341,001 from 1 Aug 2002 to 31 July 2005

NSF AST0206078

“Globular Clusters of Low Surface Brightness Galaxies”

\$18,209 from 1 Apr 2000 to 31 Mar 2003

NASA Space Telescope Science Institute: NAS526555

“Analysis of a Survey for Ultra Low Surface Brightness Galaxies”

\$141,001 from 15 Feb 1999 to 31 Jan 2002

NSF AST9901663

Reviewing Activities

I have refereed over 100 papers for various journals, including the *Astrophysical Journal*, *Monthly Notices of the Royal Astronomical Society*, the *Astronomical Journal*, *Astronomy & Astrophysics*, *Nature*, *Science*, *Physical Review* (including *Phys. Rev. Lett.*), *Journal of Cosmology and Astroparticle Physics*, *Philosophical Transactions of the Royal Society*, *New Astronomy*, *Classical and Quantum Gravity*, *Publications of the Astronomical Society of Australia*, *Physics Letters A*, *Advances in High Energy Physics*, *Physics Comments*, *Symmetry*, *Gravitation and Cosmology*, *European Physical Society Letters*, *Scholarpedia*, the *Reinvention Journal*, the *Jordan Journal of Physics*, the *Proceedings of the Pakistan Academy of Sciences*, and multiple books for the Cambridge University Press.

Other

I was an early-adopter of transparent data sharing, having built and actively maintained several web-based databases for scientific use:

The Data Pages: <http://astroweb.case.edu/ssm/data/>

On-line since 1999. Provides rapid and easy access to data that I have published.

The Model Pages: <http://astroweb.case.edu/ssm/data/>

Provides rapid and easy access to theoretical models that I have published.

The SPARC Pages: <http://astroweb.case.edu/SPARC/>

Provides rapid and easy access to rotation curves and mass models constructed with Spitzer Space Telescope data. This database is heavily utilized — the associated data paper is in the top percentile of citations.

The MOND Pages: <http://astroweb.case.edu/ssm/mond/>

Provides links to the literature concerning MOND and various commentary.

Since 2016 I have blogged about science at Triton Station (tritonstation.com).

In 2024, I wrote 22 posts that received 597,505 page views.

Teaching and Advising

Courses Taught — University of Maryland

CORE courses

Semester	Course	Title	Credit	Enrollment
Fall 1999	ASTR 220	Collisions in Space	3	54
Spring 2000	ASTR 220	Collisions in Space	3	52
Fall 2000	ASTR 100[U]	Introduction to Astronomy	3	258
Spring 2001	ASTR 100	Introduction to Astronomy	3	217
Fall 2002	ASTR 100[U]	Introduction to Astronomy	3	266
Spring 2004	ASTR 100	Introduction to Astronomy	3	233
Fall 2005	ASTR 120	Intro. Astr.: Solar System	3	40
Spring 2006	ASTR 121	Intro. Astr.: Stars and Beyond	3	29
Fall 2006	ASTR 120	Intro. Astr.: Solar System	3	41
Spring 2007	ASTR 121	Intro. Astr.: Stars and Beyond	3	24
Fall 2008	ASTR 100	Introduction to Astronomy	3	280
Fall 2009	ASTR 100	Introduction to Astronomy	3	273
Fall 2010	ASTR 100	Introduction to Astronomy	3	270

Specialized Courses

Semester	Course	Title	Credit	Enrollment
Spring 1999	ASTR 688S	Observational Cosmology	3	18
Fall 2001	ASTR 620	Galaxies	3	17
Spring 2002	ASTR 688C	Observational Cosmology	3	12
Fall 2003	ASTR 620	Galaxies	3	16
Fall 2007	ASTR 620	Galaxies	3	8
Spring 2008	HONR 219Q	Perspectives on the Cosmos	3	19
Spring 2009	HONR 219Q	Perspectives on the Cosmos	3	19
Spring 2010	ASTR 622	Cosmology	3	14
Spring 2011	ASTR 421	Galaxies	3	15

Courses Taught — Case Western Reserve University

Semester	Course	Title	Credit	Enrollment
Spring 2013	USNA 287A	Perspectives on the Cosmos	3	17
Fall 2013	ASTR 333/433	Dark Matter	3	7/6
Spring 2014	USNA 287A	Perspectives on the Cosmos	3	17
Fall 2014	USNA 287A	Perspectives on the Cosmos	3	17
Spring 2015	ASTR 201	The Sun and its Planets	3	29
Spring 2015	ASTR 151	Doing Astronomy	1	18
Fall 2015	ASTR 201	The Sun and its Planets	3	23
Spring 2016	ASTR 333/433	Dark Matter	3	11/1
Spring 2016	ASTR 310	Astrophysics Seminar II	1	6
Fall 2016	ASTR 201	The Sun and its Planets	3	33
Fall 2017	ASTR 201	The Sun and its Planets	3	36
Spring 2018	ASTR 333/433	Dark Matter	3	13/3
Spring 2018	ASTR 151	Doing Astronomy	1	11
Spring 2019	ASTR 101	The Sun and its Planets	3	82
Fall 2019	ASTR 101	The Sun and its Planets	3	47
Spring 2020	ASTR 333/433	Dark Matter	3	8/3
Fall 2020	ASTR 328/428	Cosmology	3	11/1
Fall 2021	ASTR 333/433	Dark Matter	3	10/2
Fall 2022	ASTR 328/428	Cosmology	3	21/2
Spring 2023	ASTR 310	Astrophysics Seminar II	1	8
Spring 2023	ASTR 497	Special Topics in Astronomy	2	13
Spring 2024	ASTR 333/433	Dark Matter	3	12/1
Fall 2024	ASTR 328/428	Cosmology	3	13/1

Course Development

University of Maryland

I developed the new graduate course *Cosmology* in 1999. This subject had not previously been taught at the graduate level at the University of Maryland. It has since been incorporated into the standard astronomy graduate curriculum. I developed the new Honors Seminar *Perspectives on the Cosmos: From the Ancient Philosophers to Modern Science* in 2008. This course qualified for Humanities CORE credit as a Philosophy course. I redeveloped the undergraduate major offering *Galaxies* in Spring 2011.

Case Western Reserve University

I developed a new SAGES University Seminar *USNA 287A: Perspectives on the Cosmos: From the Ancient Philosophers to Modern Science*, first offered in Spring 2013.

I developed a novel, mixed upper level/graduate course *ASTR 333/433: Dark Matter* in Fall 2013. The subject of dark matter is now fundamental to extragalactic astronomy and cosmology, but is usually introduced in a piecemeal fashion in other courses.

I redeveloped the program major required course on Cosmology in Fall 2020 during peak pandemic.

I led a graduate-level seminar in the Modified Newtonian Dynamics in Spring 2023.

Educational Web pages

I have developed and maintained extensive web pages for every course I teach. Beginning in 1999, this was *Canvas* before there was even *Blackboard*. Links to course web pages can be found at <http://astroweb.case.edu/ssm/courses.html>

Research Advising

Undergraduate Research Students

— University of Maryland:

Anil Kochhar, *Faint Blue Galaxies*, 2000

Mike Barker, *Cosmology from Rotation Curves*, 2000 – 2001

Mia Bovill, *Stellar Populations in a Low Surface Brightness Galaxy*, 2004

Matt Parlette *Large Scale Structure Formation*, 2004

Dan Schwartz, *Finding Very Low Surface Brightness Galaxies*, 2006 – 2007

Matt Zagursky, *Stellar Mass from near-IR Images*, 2006 – 2009

Cathy Caviglia, *Tracers of Populations in Low Surface Brightness Galaxies*, 2007 – 2009

David Stark, *The Tully-Fisher Relation of Gas Dominated Galaxies*, 2007 – 2008

Karina Alvarez, *The Role of Molecular Gas in the Baryonic Tully-Fisher Relation*, 2009

Joshua Dingott, *Calibrating Stellar Population Mass-Color Relations*, 2010 – 2011

Harley Katz, *Numerical Simulations of Structure Formation in MOND*, 2011 – 2013

— Case Western:

Wesley Peters, *The Dark Matter Tully-Fisher Relation*, 2013 – 2014

Elizabeth Tarantino, *The Inner Slope of the Dark Mater Profile*, 2015 – 2016

Nathaniel Starkman *An Algorithm for Objective Definition of Maximum Disk*, 2017 – 2018

Kaelee Parker *HI Data Cubes of Dwarf Galaxies*, 2017 – 2020
Darius Walker *Local Variations in the Milky Way Rotation Curve from Gaia*, 2018 – 2020
Julia Falcone *The Masses of Local Group Galaxies and Abundance Matching*, 2019 – 2020
Luke Robbins *The Shape of the Radial Acceleration Relation*, 2019 – 2020
Hannah Gold *Predicting Velocity Dispersions in Dwarf Galaxies*, 2023 – 2023
Evan Steirman *Quantifying the Baryon Deficit in Galaxies and Clusters*, 2024 –
Joey Rodriguez *Weak Gravitational Lensing Around Clusters of Galaxies*, 2024 –

Masters Research Students

— **University of Maryland:**

Ji Hoon Kim, *[S II]/[N II] Line Ratio as a Distance Indicator*, 1999 – 2000
Rachel Kuzio, *Primordial Helium Abundance*, 2002 – 2003
Jee Hye Han, *Simulating HI Data Cubes*, 2011

— **Case Western:**

Lei Yang, *High Resolution Optical Rotation Curves*, 2012
Ashley Shukayr, *HI in Elliptical Galaxies*, 2015

Doctoral Research Students

— **University of Maryland:**

Jim Marshall, Ph.D. 2004: *A Large Survey for Very Low Surface Brightness Galaxies*
Rachel Kuzio de Naray, Ph.D. 2007: *High Resolution Optical Velocity Fields of Low Surface Brightness Galaxies and the Density Profiles of Dark Matter Halos*
Ji Hoon Kim, Ph.D. 2007: *Star Formation History of Low Surface Brightness Galaxies*

— **Case Western Reserve University:**

Jay Franck, Ph.D. 2017: *Identifying Protoclusters in the High Redshift Universe and Mapping their Evolution*
Pengfei Li, Ph.D. 2020: *The Dark Matter Problem in Rotationally Supported Galaxies*
Tiffany Visgaitis: *Do Tidal Dwarf Galaxies Contain Dark Matter?*
Francis Duey: *The Hubble Constant from the Baryonic Tully-Fisher Relation*

Other

Erwin de Blok, Ph.D. (Groningen) 1997 (external co-advisor)
Benoit Famaey, Habilitation (Strasbourg) 2013 (senior advisor)

Dissertation Committees:

Rachel Gibbons, Ph.D. 2002
David Mattingly, Ph.D. 2003 (Physics)
Amir Farbin, Ph.D. 2003 (Physics)

Jim Marshall, Ph.D. 2004 (**Chair**)
Hock Seng Goh, Ph.D. 2004 (Physics)
David Rupke, Ph.D. 2004 (Physics)
Lisa Mazucca, Ph.D. 2006
Rachel Kuzio de Naray, Ph.D. 2007 (**Chair**)
Rahul Shetty, Ph.D. 2007
Ji Hoon Kim, Ph.D. 2007 (**Chair**)
Mia Bovill, Ph.D. 2011
Mike Gill, Ph.D. 2011
Hannah Krug, Ph.D. 2013
Adam Bradley, Ph.D. 2013 (Physics)
Chang Lee, Ph.D. 2015 (Physics)
Danielle LaHurd, Ph.D. 2016 (Physics)
Aaron Watkins, Ph.D. 2017
Jay Franck, Ph.D. 2017 (**Chair**)
Ryan Lorek, Ph.D. 2019 (Physics)
Wes Peters, Ph.D. 2019 (Georgia State U.)
Marcio O'Dwyer, Ph.D. 2019 (Physics)
Pengfei Li, Ph.D. 2020 (**Chair**)
Ray Garner, Ph.D. 2023

Service

Reviewing Activities for Agencies

Domestic

NSF

External Reviewer, 1995
Member, Extragalactic Panel, 2000
Member, Extragalactic Panel, 2003
External Reviewer, 2005
Member, Galaxy Morphology & Properties Panel, 2007
External Reviewer, 2020 (PHYS)

NASA

Spitzer Space Telescope, Cycle 8 Telescope Allocation Committee 2011
Reviewer for NASA Postdoctoral Program 2013 – 2016
Astrophysical Data Analysis 2014 Galaxies panel

Astrophysical Data Analysis 2016 Galaxies panel
Hubble Space Telescope, Telescope Allocation Committee 2023

GBT Green Bank Telescope
Telescope Allocation Committee (External Reviewer) 2009 – 2011

Cottrell College Science Award (Research Corporation)
External Reviewer, 2006

International

NWO (Netherlands Organization for Scientific Research)
International Reviewer: 2001, 2002, 2003, 2005, 2007

Padua (University of Padova)
External Referee, University Research Programmes: 2003, 2011

DFG (German Research Foundation)
International Reviewer: 2005

ARC (Australian Research Council)
International Reviewer: 2006, 2007

Leverhulme Trust (UK)
External Reviewer, 2006

CNRS (French National Center for Scientific Research)
International Reviewer: 2009

EKOS (Council of Canadian Academies)
Invited Participant, Survey of Science & Technology Strengths: 2011

Royal Society (UK)
Reviewer for University Research Fellowships scheme: 2012

National Research Foundation (South Africa)
International Reviewer: 2013

Gemini (Canada)
External TAC reviewer: 2014

Humboldt Foundation (Germany)

External Reviewer: 2021

ARC (Irish Research Council)

International Reviewer: 2023

Other non-University Committees

Division on Dynamical Astronomy Nominating Committee (2014 – 2016)

Users Committee, National Optical Astronomy Observatories (2006 – 2009)

Officer, Committee of the Division on Dynamical Astronomy (2007 – 2009)

International Ph.D. thesis committees:

Internal Examiner, University of Cambridge: J.E. Telles, Ph.D. 1995

External Examiner, University of Groningen: W.J.G. de Blok, Ph.D. 1997 (co-advisor)

External Examiner, Australian National University, S.H. Oh, Ph.D. 2009

External Examiner, University of Sydney, S.T.N. Fernando, Ph.D. 2018

External Examiner, Observatoire de Paris, PSL University, Y. Jiao, Ph.D. 2024

Frequently quoted in the popular press; see <http://astroweb.case.edu/ssm/pressquotes.html>

University Service

— Case Western Reserve University —

Faculty Senate 2024 —

Faculty Senate Committee on Faculty Compensation 2023 — (Chair 2024)

Faculty Senate Committee on Faculty Personnel 2024 —

Faculty Senate Finance Committee 2023 —

CAS Executive Committee 2023 —

Director, Program of Astronomy 2023 —

Chair, Department of Astronomy 2016 — 2022

Graduate Advisor, Department of Astronomy 2018 —

Faculty Search Chair, Department of Astronomy, 2017, 2019

Committee on Appointments, College of Arts & Sciences, 2015 — 2018 (Chair 2017, 2018)

Graduate Admissions, Department of Astronomy 2014 — 2019

Strategic Planning Committee, Department of Astronomy 2014 — 2015, 2018

Strategic Planning Task Force Committee on Research, College of Arts & Sciences, 2014

Observatory Strategic Planning, Department of Astronomy 2013

Colloquium Organizer, Department of Astronomy 2012 — 2015

— **University of Maryland** —

Research scientist research award (internal reviewer), College of Computer, Mathematical, and Natural Sciences 2011

Awards Committee, Department of Astronomy 2011

Teaching Peer Review, Department of Astronomy 2008 — 2009

Observational Stream Graduate Advisor, Department of Astronomy 2007 — 2009

Faculty Search Committee, Department of Astronomy 2007

Kitt Peak Summer School 2004, 2005, 2007

Faculty Review Committee, Department of Astronomy 2005

Graduate Curriculum Committee, Department of Astronomy 2005, 2006 (Chair)

MTAC (Maryland Telescope Allocation Committee) 2003 — 2008

COMAND (Kitt Peak Collaboration Committee) 2003 — 2008

Qualifying Exam Committee, Department of Astronomy 2003, 2004, 2005, 2008

TA Award Committee, Department of Astronomy 2002, 2004

Second Year Project Committee, Department of Astronomy 2000 — 2004, 2007 — 2010
(Chair 2004, 2007)

Committee for Cosmology Initiative, Departments of Physics and Astronomy 1999, 2000

SNAP satellite committee, Departments of Physics and Astronomy 1999, 2000

Graduate Admissions Chair, Department of Astronomy 1999 — 2001, 2009 — 2011 (Chair
2000, 2001, 2009)

Colloquium Committee, Department of Astronomy 1998, 1999, 2002, 2003, 2005, 2006, 2008
(Chair 1998, 1999, 2002, 2005, 2008)