Dr. Vicente Rodriguez-Gomez

CONTACT INFORMATION	Instituto de Radioastronomía y Astrofísica Universidad Nacional Autónoma de México Apdo. Postal 72-3, 58089 Morelia, Mexico	*E-mail:* vrodgom.astro [at] gmail.com *Website:* GitHub *ORCID:* 0000-0002-9495-0079

RESEARCH INTERESTS

Galaxy formation and evolution, cosmological simulations, hydrodynamics, galaxy mergers and interactions, galaxy morphology, data analysis

EDUCATION

Harvard University

PhD, Astronomy & Astrophysics — 2016
- Thesis advisor: Lars Hernquist
- Thesis title: *Galaxy mergers and some consequences: the cosmological context*
- Secondary Field in Computer Science and Engineering

AM, Astronomy — 2012

National Autonomous University of Mexico

BS, Physics — 2009

EMPLOYMENT

Associate Professor — 2018 – Present
Instituto de Radioastronomía y Astrofísica, Universidad Nacional Autónoma de México

Postdoctoral Fellow — 2016 – 2018
Department of Physics & Astronomy, Johns Hopkins University
Supervisor: Jennifer Lotz

Postdoctoral Fellow — 2016
Institute for Theory and Computation, Harvard-Smithsonian Center for Astrophysics
Supervisor: Lars Hernquist

SUMMARY OF PUBLICATIONS

Publications: 68 refereed (5 as first author)
Citations: 6566 in total (1467 as first author)
Bibliometrics: h-index of 34

PUBLIC SOFTWARE PACKAGES

- **statmorph** — https://statmorph.readthedocs.io
  Python package for calculating morphological diagnostics of galaxy images
- **SubLink** — https://bitbucket.org/vrodgom/sublink
  C++ code for constructing and analyzing merger trees in cosmological simulations
- **galaxev_pipeline** — https://github.com/vrodgom/galaxev_pipeline
  Python and C code for generating synthetic images of simulated galaxies

GRANTS

- NASA Astrophysics Data Analysis Program (Co-I) — 2022
- NASA JWST Cycle 1 General Observer Program (Co-I) — 2021
- XSEDE Computing allocation (Co-I) — 2019–2020
- PAPIIT Grant, UNAM (PI) — 2019
- UC MEXUS–CONACyT Collaborative Grant (PI) — 2019
- NASA HST Cycle 27 Archival Research Program (Co-I) — 2019
- NASA HST Cycle 22 Theory Program (Co-I) — 2014

GRADUATE STUDENT MENTORSHIP

- Alejandro Guzmán-Ortega — 2020 – Present
- Daniel Montenegro-Taborda — 2020 – Present
- Luis Enrique Pérez-Montaño — 2019 – 2023

ACADEMIC SERVICE	**Referee for:** The Astrophysical Journal (ApJ), ApJ Letters, Monthly Notices of the Royal Astronomical Society (MNRAS), MNRAS Letters, Astronomy & Astrophysics, Astronomy & Computing, MDPI, World Scientific Publishing

Proposal reviewer for: European Research Council, Dutch Research Council (NWO), PAPIIT-UNAM, University of Guanajuato

Topic editor for: Frontiers in Astronomy and Space Sciences (*Complicated Cluster Cores: Synthesizing the Growth of Brightest Cluster Galaxies and the Intracluster Medium*)

TEACHING

- **Professor**, Instituto de Radioastronomía y Astrofísica, UNAM — Fall 2021
  Preparatory Course in Electromagnetism
- **Professor**, Instituto de Radioastronomía y Astrofísica, UNAM — Spring 2021
  Cosmology
- **Professor**, Instituto de Radioastronomía y Astrofísica, UNAM — Fall 2020
  Preparatory Course in Electromagnetism
- **Professor**, Instituto de Radioastronomía y Astrofísica, UNAM — Fall 2019
  Cosmology
- **Workshop Instructor**, Clubes de Ciencia, Mexico — Summer 2019
  High-Performance Computing: from Climate Models to Cosmology
- **Professor**, Escuela Nacional de Estudios Superiores - Morelia — Spring 2019
  Distributed Computing
- **Workshop Instructor**, Clubes de Ciencia, Mexico — Summer 2015
  Accelerating Science Using Multiple Processors
- **Workshop Instructor**, Clubes de Ciencia, Mexico — Summer 2014
  Simulating Structure Formation in the Universe
- **Teaching Fellow**, Harvard University — Fall 2013
  Computing Foundations for Computational Science
- **Teaching Fellow**, Harvard University — Fall 2012
  Introduction to Quantum Mechanics
- **Trainer**, Physics Olympiad — 2009 – 2010
  Instructor of the Mexican students who participated in the 40th and 41st International Physics Olympiads

OUTREACH

- **Popular Media**, Scientific American — 2023
  Earliest Merging Galaxies Discovered in New JWST Photos
- **Popular Media**, The Atlantic — 2022
  Look at What Happens When Two Galaxies Collide
- **Outreach Talk**, Tecnológico de Costa Rica (remote) — 2021
  The Unexpected Effect of Black Holes on Neighboring Galaxies
- **Popular Media**, El Sol de Zamora — 2021
  Agujeros negros podrían regular creación de galaxias
- **Outreach Talk**, Tecnológico de Costa Rica (remote) — 2021
  A Decade of Cosmological Simulations
- **Outreach Talk**, La Jacaranda Cultural, Patzcuaro — 2020
  A Decade of Cosmological Simulations
- **Interview**, Sistema Michoacano de Radio y TV — 2019
  Featured in the weekly radio program *Clasificaciónc... pero con C de Ciencia*
- **Interview**, UNAM Campus Morelia — 2019
  Featured in the 77th issue of the BUM bimonthly bulletin

SELECTED SCIENTIFIC TALKS

- IAU Symposium 377, Kuala Lumpur, Malaysia — 2023
- GECO Seminar, Laboratoire d'Astrophysique de Marseille, France (remote) — 2022
- Astroclub, Observatorio Astronómico de Córdoba, Argentina (remote) — 2022

- Astroseminar, Macquarie University, Sydney, Australia (remote)   2021
- Clash of the Titans Workshop, Lorentz Center, Leiden, Netherlands (remote) 2021
- Galaxy Crawl, University of Arizona, Tucson, AZ (remote)   2020
- Seminar, Mesoamerican Centre for Theoretical Physics, Tuxtla, Mexico   2020
- Astronomy Colloquium, IRyA-UNAM, Morelia, Mexico   2020
- II Mexican Extragalactic Meeting, Morelia, Mexico   2019
- Galaxy Angular Momentum Alignment, Shanghai, China   2019
- LXII Meeting of the Mexican Physical Society, Villahermosa, Mexico   2019
- Santa Cruz Galaxy Workshop, University of California, Santa Cruz, CA   2019
- Construyendo el futuro - Encuentros de ciencia, Xochitepec, Mexico   2018
- IllustrisTNG Science Workshop, Garching, Germany   2018
- Santa Cruz Galaxy Workshop, University of California, Santa Cruz, CA   2018
- Galaxy Interactions and Mergers Across Cosmic Time, Sexten, Italy   2018
- The Growth of Galaxies in the Early Universe - IV, Sexten, Italy   2018
- Astronomy Colloquium, IRyA-UNAM, Morelia, Mexico   2018
- Galaxy Evolution in Groups and Clusters, Ringberg Castle, Germany   2017
- Astronomy Seminar, CCA, Flatiron Institute, New York, NY   2017
- ITC Luncheon, Harvard University, Cambridge, MA   2017
- Santa Cruz Galaxy Workshop, University of California, Santa Cruz, CA   2017
- HotSci Talk Series, Space Telescope Science Institute, Baltimore, MD   2017
- Galaxies Journal Club, Space Telescope Science Institute, Baltimore, MD   2016
- Astronomy Lunch Seminar, Tufts University, Medford, MA   2016
- The Many Pathways to Galaxy Growth, Prato, Italy   2015
- Astronomy Seminar, University of California, Riverside, CA   2015
- ITC Luncheon, Harvard University, Cambridge, MA   2015
- Astronomy Colloquium, IRyA-UNAM, Morelia, Mexico   2015
- AREPOfest-2 workshop, Cambridge, MA   2014
- Astronomy Colloquium, Columbia University, New York, NY   2014
- AREPOfest workshop, Heidelberg, Germany   2013
- Sussing Merger Trees workshop, Midhurst, UK   2013

REFEREED
PUBLICATIONS
AS FIRST AUTHOR

Galactic angular momentum in the IllustrisTNG simulation - I. Connection to morphology, halo spin, and black hole mass
Rodriguez-Gomez, V., Genel, S., Fall, S. M., Pillepich, A., Huertas-Company, M., Nelson, D., Pérez-Montaño, L. E., Marinacci, F., Pakmor, R., Springel, V., Vogelsberger, M., and Hernquist, L., 2022, Monthly Notices of the Royal Astronomical Society, 512, 5978

The optical morphologies of galaxies in the IllustrisTNG simulation: a comparison to Pan-STARRS observations
Rodriguez-Gomez, V., Snyder, G. F., Lotz, J. M., Nelson, D., Pillepich, A., Springel, V., Genel, S., Weinberger, R., Tacchella, S., Pakmor, R., Torrey, P., Marinacci, F., Vogelsberger, M., Hernquist, L., and Thilker, D. A., 2019, Monthly Notices of the Royal Astronomical Society, 483, 4140

The role of mergers and halo spin in shaping galaxy morphology
Rodriguez-Gomez, V., Sales, L. V., Genel, S., Pillepich, A., Zjupa, J., Nelson, D., Griffen, B., Torrey, P., Snyder, G. F., Vogelsberger, M., Springel, V., Ma, C.-P., and Hernquist, L., 2017, Monthly Notices of the Royal Astronomical Society, 467, 3083

The stellar mass assembly of galaxies in the Illustris simulation: growth by mergers and the spatial distribution of accreted stars
Rodriguez-Gomez, V., Pillepich, A., Sales, L. V., Genel, S., Vogelsberger, M., Zhu, Q., Wellons, S., Nelson, D., Torrey, P., Springel, V., Ma, C.-P., and Hernquist, L., 2016, Monthly Notices of the Royal Astronomical Society, 458, 2371

The merger rate of galaxies in the Illustris simulation: a comparison with observations and semi-empirical models
Rodriguez-Gomez, V., Genel, S., Vogelsberger, M., Sijacki, D., Pillepich, A., Sales, L. V., Torrey, P., Snyder, G., Nelson, D., Springel, V., Ma, C.-P., and Hernquist, L., 2015, Monthly Notices of the Royal Astronomical Society, 449, 49

REFEREED
PUBLICATIONS
AS CO-AUTHOR

Giant low surface brightness galaxies in TNG100
Zhu, Q., Pérez-Montaño, L. E., **Rodriguez-Gomez, V.**, Cervantes Sodi, B., Zjupa, J., Marinacci, F., Vogelsberger, M. and Hernquist, L., 2023, Monthly Notices of the Royal Astronomical Society, 523, 3991

Negligible Effects of Baryons on the Angular Momentum Scaling Relations of Galactic Dark Matter Halos
Fall, S. M. and **Rodriguez-Gomez, V.**, 2023, The Astrophysical Journal, 949, L14

The growth of brightest cluster galaxies in the TNG300 simulation: dissecting the contributions from mergers and in situ star formation
Montenegro-Taborda, D., **Rodriguez-Gomez, V.**, Pillepich, A., Avila-Reese, V., Sales, L. V., Rodríguez-Puebla, A. and Hernquist, L., 2023, Monthly Notices of the Royal Astronomical Society, 521, 800

The contribution of in situ and ex situ star formation in early-type galaxies: MaNGA versus IllustrisTNG
Cannarozzo, C., Leauthaud, A., Oyarzún, G. A., Nipoti, C., Diemer, B., Huang, S., **Rodriguez-Gomez, V.**, Sonnenfeld, A. and Bundy, K., 2023, Monthly Notices of the Royal Astronomical Society, 520, 5651

Morphological signatures of mergers in the TNG50 simulation and the Kilo-Degree Survey: the merger fraction from dwarfs to Milky Way-like galaxies
Guzmán-Ortega, A., **Rodriguez-Gomez, V.**, Snyder, G. F., Chamberlain, K. and Hernquist, L., 2023, Monthly Notices of the Royal Astronomical Society, 519, 4920

ERGO-ML I: inferring the assembly histories of IllustrisTNG galaxies from integral observable properties via invertible neural networks
Eisert, L., Pillepich, A., Nelson, D., Klessen, R. S., Huertas-Company, M. and **Rodriguez-Gomez, V.**, 2023, Monthly Notices of the Royal Astronomical Society, 519, 2199

Identifying Galaxy Mergers in Simulated CEERS NIRCam Images Using Random Forests
Rose, C., Kartaltepe, J. S., Snyder, G. F., **Rodriguez-Gomez, V.**, Yung, L. Y. A., Haro, P. A., Bagley, M. B., Calabró, A., Cleri, N. J., Cooper, M. C., Costantin, L., Croton, D., Dickinson, M., Finkelstein, S. L., Häußler, B., Holwerda, B. W., Koekemoer, A. M., Kurczynski, P., Lucas, R. A., Mantha, K. B., Papovich, C., Pérez-González, P. G., Pirzkal, N., Somerville, R. S., Straughn, A. N. and Tacchella, S., 2023, The Astrophysical Journal, 942, 54

Galaxy formation in the Santa Cruz semi-analytic model compared with IllustrisTNG - I. Galaxy scaling relations, dispersions, and residuals at z = 0
Gabrielpillai, A., Somerville, R. S., Genel, S., **Rodriguez-Gomez, V.**, Pandya, V., Yung, L. Y. A. and Hernquist, L., 2022, Monthly Notices of the Royal Astronomical Society, 517, 6091

Simulated Bars May Be Shorter but Are Not Slower Than Those Observed: TNG50 versus MaNGA
Frankel, N., Pillepich, A., Rix, H.-W., **Rodriguez-Gomez, V.**, Sanders, J., Bovy, J., Kollmeier, J., Murray, N. and Mackereth, T., 2022, The Astrophysical Journal, 940, 61

The merger and assembly histories of Milky Way- and M31-like galaxies with TNG50: disc survival through mergers
Sotillo-Ramos, D., Pillepich, A., Donnari, M., Nelson, D., Eisert, L., **Rodriguez-Gomez, V.**, Joshi, G., Vogelsberger, M. and Hernquist, L., 2022, Monthly Notices of the Royal Astronomical Society, 516, 5404

A machine learning approach to infer the accreted stellar mass fractions of central galaxies in the TNG100 simulation
Shi, R., Wang, W., Li, Z., Han, J., Shi, J., **Rodriguez-Gomez, V.**, Peng, Y. and Li, Q., 2022, Monthly Notices of the Royal Astronomical Society, 515, 3938

Realistic galaxy images and improved robustness in machine learning tasks from generative modelling
Holzschuh, B. J., O'Riordan, C. M., Vegetti, S., **Rodriguez-Gomez, V.** and Thuerey, N., 2022, Monthly Notices of the Royal Astronomical Society, 515, 652

The formation of low surface brightness galaxies in the IllustrisTNG simulation
Pérez-Montaño, L. E., **Rodriguez-Gomez, V.**, Cervantes Sodi, B., Zhu, Q., Pillepich, A., Vogelsberger, M. and Hernquist, L., 2022, Monthly Notices of the Royal Astronomical Society, 514, 5840

SDSS-IV MaNGA: Cannibalism Caught in the Act-On the Frequency of Occurrence of Multiple Cores in Brightest Cluster Galaxies
Hsu, Y.-H., Lin, Y.-T., Huang, S., Nelson, D., **Rodriguez-Gomez, V.**, Lai, H.-T., Greene, J., Leauthaud, A., Aragón-Salamanca, A., Bundy, K., Emsellem, E., Merrifield, M., More, S., Okabe, N., Rong, Y., Brownstein, J. R., Lane, R. R., Pan, K. and Schneider, D. P., 2022, The Astrophysical Journal, 933, 61

North Ecliptic Pole merging galaxy catalogue
Pearson, W. J., Suelves, L. E., Ho, S. C. -C, Oi, N., Brough, S., Holwerda, B. W., Hopkins, A. M., Huang, T. -C, Hwang, H. S., Kelvin, L. S., Kim, S. J., López-Sánchez, Á. R., Małek, K., Pearson, C., Poliszczuk, A., Pollo, A., **Rodriguez-Gomez, V.**, Shim, H., Toba, Y. and Wang, L., 2022, Astronomy and Astrophysics, 661, A52

The Fornax3D project: The environmental impact on gas metallicity gradients in Fornax cluster galaxies
Lara-López, M. A., Galán-de Anta, P. M., Sarzi, M., Iodice, E., Davis, T. A., Zabel, N., Corsini, E. M., de Zeeuw, P. T., Fahrion, K., Falcón-Barroso, J., Gadotti, D. A., McDermid, R. M., Pinna, F., **Rodriguez-Gomez, V.**, van de Ven, G., Zhu, L., Coccato, L., Lyubenova, M. and Martín-Navarro, I., 2022, Astronomy and Astrophysics, 660, A105

The building up of observed stellar scaling relations of massive galaxies and the connection to black hole growth in the TNG50 simulation
Varma, S., Huertas-Company, M., Pillepich, A., Nelson, D., **Rodriguez-Gomez, V.**, Dekel, A., Faber, S. M., Iglesias-Navarro, P., Koo, D. C. and Primack, J., 2022, Monthly Notices of the Royal Astronomical Society, 509, 2654

The abundance of satellites around Milky Way- and M31-like galaxies with the TNG50 simulation: a matter of diversity
Engler, C., Pillepich, A., Pasquali, A., Nelson, D., **Rodriguez-Gomez, V.**, Chua, K. T. E., Grebel, E. K., Springel, V., Marinacci, F., Weinberger, R., Vogelsberger, M. and Hernquist, L., 2021, Monthly Notices of the Royal Astronomical Society, 507, 4211

Lower-luminosity Obscured AGN Host Galaxies Are Not Predominantly in Major-merging Systems at Cosmic Noon

Lambrides, E. L., Chiaberge, M., Heckman, T., Kirkpatrick, A., Meyer, E. T., Petric, A., Hall, K., Long, A., Watts, D. J., Gilli, R., Simons, R., Tchernyshyov, K., **Rodriguez-Gomez, V.**, Vito, F., de la Vega, A., Davis, J. R., Kocevski, D. D. and Norman, C., 2021, The Astrophysical Journal, 919, 129

ZFIRE: The Beginning of the End for Massive Galaxies at z 2 and Why Environment Matters
Harshan, A., Gupta, A., Tran, K.-V., **Rodriguez-Gomez, V.**, Pillepich, A., Alcorn, L. Y., Nanayakkara, T., Kacprzak, G. G. and Glazebrook, K., 2021, The Astrophysical Journal, 919, 57

Anisotropic satellite galaxy quenching modulated by black hole activity
Martín-Navarro, I., Pillepich, A., Nelson, D., **Rodriguez-Gomez, V.**, Donnari, M., Hernquist, L. and Springel, V., 2021, Nature, 594, 187

The stellar halos of ETGs in the IllustrisTNG simulations. II. Accretion, merger history, and dark halo connection
Pulsoni, C., Gerhard, O., Arnaboldi, M., Pillepich, A., **Rodriguez-Gomez, V.**, Nelson, D., Hernquist, L. and Springel, V., 2021, Astronomy and Astrophysics, 647, A95

A deep learning approach to test the small-scale galaxy morphology and its relationship with star formation activity in hydrodynamical simulations
Zanisi, L., Huertas-Company, M., Lanusse, F., Bottrell, C., Pillepich, A., Nelson, D., **Rodriguez-Gomez, V.**, Shankar, F., Hernquist, L., Dekel, A., Margalef-Bentabol, B., Vogelsberger, M. and Primack, J., 2021, Monthly Notices of the Royal Astronomical Society, 501, 4359

MOSEL and IllustrisTNG: Massive Extended Galaxies at $z = 2$ Quench Later Than Normal-size Galaxies
Gupta, A., Tran, K.-V., Pillepich, A., Yuan, T., Harshan, A., **Rodriguez-Gomez, V.** and Genel, S., 2021, The Astrophysical Journal, 907, 95

Quenched fractions in the IllustrisTNG simulations: the roles of AGN feedback, environment, and pre-processing
Donnari, M., Pillepich, A., Joshi, G. D., Nelson, D., Genel, S., Marinacci, F., **Rodriguez-Gomez, V.**, Pakmor, R., Torrey, P., Vogelsberger, M. and Hernquist, L., 2021, Monthly Notices of the Royal Astronomical Society, 500, 4004

Towards a consistent framework of comparing galaxy mergers in observations and simulations
Wang, L., Pearson, W. J. and **Rodriguez-Gomez, V.**, 2020, Astronomy and Astrophysics, 644, A87

The Morphology-Density Relationship in $1 < z < 2$ Clusters
Sazonova, E., Alatalo, K., Lotz, J., Rowlands, K., Snyder, G. F., Boone, K., Brodwin, M., Hayden, B., Lanz, L., Perlmutter, S. and **Rodriguez-Gomez, V.**, 2020, The Astrophysical Journal, 899, 85

The fate of disc galaxies in IllustrisTNG clusters
Joshi, G. D., Pillepich, A., Nelson, D., Marinacci, F., Springel, V., **Rodriguez-Gomez, V.**, Vogelsberger, M. and Hernquist, L., 2020, Monthly Notices of the Royal Astronomical Society, 496, 2673

The bivariate gas-stellar mass distributions and the mass functions of early- and late-type galaxies at $z \sim 0$
Rodríguez-Puebla, A., Calette, A. R., Avila-Reese, V., **Rodriguez-Gomez, V.** and Huertas-Company, M., 2020, Publications of the Astronomical Society of Australia, 37, e024

Correlations between Black Holes and Host Galaxies in the Illustris and IllustrisTNG Simulations
Li, Y., Habouzit, M., Genel, S., Somerville, R., Terrazas, B. A., Bell, E. F., Pillepich, A., Nelson, D., Weinberger, R., **Rodriguez-Gomez, V.**, Ma, C.-P., Pakmor, R., Hernquist, L. and Vogelsberger, M., 2020, The Astrophysical Journal, 895, 102

MOSEL Survey: Tracking the Growth of Massive Galaxies at 2 < z < 4 Using Kinematics and the IllustrisTNG Simulation
Gupta, A., Tran, K.-V., Cohn, J., Alcorn, L. Y., Yuan, T., **Rodriguez-Gomez, V.**, Harshan, A., Forrest, B., Kewley, L. J., Glazebrook, K., Straatman, C. M., Kacprzak, G. G., Nanayakkara, T., Labbé, I., Papovich, C. and Cowley, M., 2020, The Astrophysical Journal, 893, 23

Galaxy interactions in IllustrisTNG-100, I: The power and limitations of visual identification
Blumenthal, K. A., Moreno, J., Barnes, J. E., Hernquist, L., Torrey, P., Claytor, Z., **Rodriguez-Gomez, V.**, Marinacci, F. and Vogelsberger, M., 2020, Monthly Notices of the Royal Astronomical Society, 492, 2075

The Hubble Sequence at $z \sim 0$ in the IllustrisTNG simulation with deep learning
Huertas-Company, M., **Rodriguez-Gomez, V.**, Nelson, D., Pillepich, A., Bottrell, C., Bernardi, M., Domínguez-Sánchez, H., Genel, S., Pakmor, R., Snyder, G. F. and Vogelsberger, M., 2019, Monthly Notices of the Royal Astronomical Society, 489, 1859

A study of stellar orbit fractions: simulated IllustrisTNG galaxies compared to CALIFA observations
Xu, D., Zhu, L., Grand, R., Springel, V., Mao, S., van de Ven, G., Lu, S., Wang, Y., Pillepich, A., Genel, S., Nelson, D., **Rodriguez-Gomez, V.**, Pakmor, R., Weinberger, R., Marinacci, F., Vogelsberger, M., Torrey, P., Naiman, J. and Hernquist, L., 2019, Monthly Notices of the Royal Astronomical Society, 489, 842

Morphology and star formation in IllustrisTNG: the build-up of spheroids and discs
Tacchella, S., Diemer, B., Hernquist, L., Genel, S., Marinacci, F., Nelson, D., Pillepich, A., **Rodriguez-Gomez, V.**, Sales, L. V., Springel, V. and Vogelsberger, M., 2019, Monthly Notices of the Royal Astronomical Society, 487, 5416

Atomic and molecular gas in IllustrisTNG galaxies at low redshift
Diemer, B., Stevens, A. R. H., Lagos, C. d. P., Calette, A. R., Tacchella, S., Hernquist, L., Marinacci, F., Nelson, D., Pillepich, A., **Rodriguez-Gomez, V.**, Villaescusa-Navarro, F. and Vogelsberger, M., 2019, Monthly Notices of the Royal Astronomical Society, 487, 1529

Automated distant galaxy merger classifications from Space Telescope images using the Illustris simulation
Snyder, G. F., **Rodriguez-Gomez, V.**, Lotz, J. M., Torrey, P., Quirk, A. C. N., Hernquist, L., Vogelsberger, M. and Freeman, P. E., 2019, Monthly Notices of the Royal Astronomical Society, 486, 3702

Studying the physical properties of tidal features - I. Extracting morphological substructure in CANDELS observations and VELA simulations
Mantha, K. B., McIntosh, D. H., Ciaschi, C. P., Evan, R., Ferguson, H. C., Fries, L. B., Guo, Y., Koekemoer, A. M., Landry, L. D., McGrath, E. J., Simons, R. C., Snyder, G. F., Thompson, S. E., Bell, E. F., Ceverino, D., Hathi, N. P., Pacifici, C., Primack, J. R., Rafelski, M. and **Rodriguez-Gomez, V.**, 2019, Monthly Notices of the Royal Astronomical Society, 486, 2643

The IllustrisTNG simulations: public data release
Nelson, D., Springel, V., Pillepich, A., **Rodriguez-Gomez, V.**, Torrey, P., Genel,

S., Vogelsberger, M., Pakmor, R., Marinacci, F., Weinberger, R., Kelley, L., Lovell, M., Diemer, B. and Hernquist, L., 2019, Computational Astrophysics and Cosmology, 6, 2

Anomalously Low-metallicity Regions in MaNGA Star-forming Galaxies: Accretion Caught in Action?
Hwang, H.-C., Barrera-Ballesteros, J. K., Heckman, T. M., Rowlands, K., Lin, L., **Rodriguez-Gomez, V.**, Pan, H.-A., Hsieh, B.-C., Sánchez, S., Bizyaev, D., Sánchez Almeida, J., Thilker, D. A., Lotz, J. M., Jones, A., Nair, P., Andrews, B. H. and Drory, N., 2019, The Astrophysical Journal, 872, 144

Jellyfish galaxies with the IllustrisTNG simulations - I. Gas-stripping phenomena in the full cosmological context
Yun, K., Pillepich, A., Zinger, E., Nelson, D., Donnari, M., Joshi, G., **Rodriguez-Gomez, V.**, Genel, S., Weinberger, R., Vogelsberger, M. and Hernquist, L., 2019, Monthly Notices of the Royal Astronomical Society, 483, 1042

The frequency of dwarf galaxy multiples at low redshift in SDSS versus cosmological expectations
Besla, G., Patton, D. R., Stierwalt, S., **Rodriguez-Gomez, V.**, Patel, E., Kallivayalil, N. J., Johnson, K. E., Pearson, S., Privon, G. C. and Putman, M. E., 2018, Monthly Notices of the Royal Astronomical Society, 480, 3376

SDSS-IV MaNGA: spatially resolved star formation histories and the connection to galaxy physical properties
Rowlands, K., Heckman, T., Wild, V., Zakamska, N. L., **Rodriguez-Gomez, V.**, Barrera-Ballesteros, J., Lotz, J., Thilker, D., Andrews, B. H., Boquien, M., Brinkmann, J., Brownstein, J. R., Hwang, H. -C and Smethurst, R., 2018, Monthly Notices of the Royal Astronomical Society, 480, 2544

Formation of a Malin 1 analogue in IllustrisTNG by stimulated accretion
Zhu, Q., Xu, D., Gaspari, M., **Rodriguez-Gomez, V.**, Nelson, D., Vogelsberger, M., Torrey, P., Pillepich, A., Zjupa, J., Weinberger, R., Marinacci, F., Pakmor, R., Genel, S., Li, Y., Springel, V. and Hernquist, L., 2018, Monthly Notices of the Royal Astronomical Society, 480, L18

Subhalo demographics in the Illustris simulation: effects of baryons and halo-to-halo variation
Chua, K. T. E., Pillepich, A., **Rodriguez-Gomez, V.**, Vogelsberger, M., Bird, S. and Hernquist, L., 2017, Monthly Notices of the Royal Astronomical Society, 472, 4343

Massive close pairs measure rapid galaxy assembly in mergers at high redshift
Snyder, G. F., Lotz, J. M., **Rodriguez-Gomez, V.**, Guimarães, R. d. S., Torrey, P. and Hernquist, L., 2017, Monthly Notices of the Royal Astronomical Society, 468, 207

The Information Content of Stellar Halos: Stellar Population Gradients and Accretion Histories in Early-type Illustris Galaxies
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