Refereed publications

2015

   Gap interpolation by inpainting methods: Application to Ground and Space-based Asteroseismic data,
   A&A, 574, 18

   Rapid Rotation of Low-mass Red Giants Using APOKASC: A Measure of Interaction Rates on the Post-
   main-sequence,

   Faulty Clocks and Failing Fields: Anomalous Stellar Rotation in Old Field Stars,
   Nature, in press

   Analysis of the acoustic cut-off frequency and HIPs in six Kepler stars with stochastically excited pulsations,
   A&A, in press

   Young ?/Fe-enhanced stars discovered by CoRoT and APOGEE: What is their origin?,
   A&A, 576, 12

   Asteroseismology of solar-type stars with K2,
   PNAS, in press

   Young ?-enriched giant stars in the solar neighbourhood,
   MNRAS, 451, 2230

   Oscillating Red Giants Observed during Campaign 1 of the Kepler K2 Mission: New Prospects for Galactic Archaeology,

   The Eleventh and Twelfth Data Releases of the Sloan Digital Sky Survey: Final Data from SDSS-III,
   ApJS, 219, 12
11. S. Mathur, D. Salabert, R. A. García, and T. Ceillier
   *Studying surface magnetic activity with Kepler photometric data*, Journal of Space Weather and Space Climate, 4, 15
   *Rotation of solar analogs and twins candidates revealed by the Kepler mission*, ApJL, 790, 23
   *Surface rotation of solar-like pulsating stars observed with Kepler: Towards asteroseismically calibrated age-rotation-activity relations for Kepler solar-like stars*, A&A, 752, 34
   *The PLATO 2.0 Mission*, Experimental Astronomy, 38, 259
   *The connection between stellar granulation and oscillation as seen by the Kepler mission*, A&A, 570, 41
   *Bayesian distances and extinctions for giants observed by Kepler and APOGEE*, MNRAS, 445, 2758
21. R. A. García, F. Pérez Hernandez, O. Benomar, ..., S. Mathur et al.
   *Study of KIC 8561221 observed by Kepler: an early red giant showing depressed dipolar modes*, A&A, 563, 84
   *Pulsating red giant stars in eccentric binary systems discovered from Kepler space-based photometry: A sample study and the analysis of KIC 5006817*, A&A, 564, 36
24. A. Raja Bayanna, B. Kumar, P. Venkatkrishnan, S. Matthews, B. Ravindra, S. Mathur and R. A. García
   *On the line profile changes observed during the X2.2 class flare in the active region NOAA 11158*, RAA, 14, 207
   *Asteroseismic fundamental properties of solar-type stars observed by the NASA Kepler Mission*, ApJS, 210, 1
   *Revised stellar properties of Kepler targets for the quarter 1-16 transit detection run*, ApJS, 211, 2
27. P. Boumier, O. Benomar, F. Baudin, ..., S. Mathur et al.
   *Seismic analysis of HD 43587Aa, a solar-like oscillator in a quadruple system*, A&A, 564, 34
28. C. Epstein, J. Johnsons, B. Mosser, ..., S. Mathur et al.
Constraining magnetic-activity modulation in 3 solar-like stars observed by CoRoT and NARVAL,

Study of HD 169392A observed by CoRoT and HARPS,
A&A, 549, 12

and S. Basu
Magnetic Activity Cycles in the Exoplanet Host Star epsilon Eridani,
ApJL, 763, 26

32. G. Dogan, T. S. Metcalfe, S. Deheuvels, ..., S. Mathur et al.
Characterizing two solar-type Kepler subgiants with asteroseismology: KIC 10920273 and KIC 11395018,

33. L. Gizon, J. Ballot, S. Vauclair, ..., S. Mathur et al.
Seismic constraints on rotation of Sun-like star and mass of exoplanet,
PNAS, 110, 13267

34. N. Ozel, B. Mosser, A.-A. Dupret, ..., S. Mathur et al.
Differential asteroseismic study of seismic twins observed by CoRoT. Comparison of HD 175272 with HD 181420,
A&A, 558, 79

A uniform asteroseismic analysis of 22 solar-type stars observed by Kepler,

Characterization with Kepler of the power excess of solar-like oscillations in red giants,

37. O. L. Creevey, D. Stello, A. Frasca, ..., S. Mathur et al.
Strong stellar constraints using solar-like oscillations from eight months of Kepler observations,

First study of dark matter properties with detected solar gravity modes and neutrinos,
ApJL, 2012, 746, 123

Seismic evidence for a fast rotating core in a lower-giant-branch star observed with Kepler,

40. E. Corsaro, D. Stello, D. Huber, ..., S. Mathur et al.
Asteroseismology of the open clusters NGC 6791, NGC 6811, and NGC 6819 from nineteen months of Kepler photometry,
A&A, 757, 190

41. A. Bonaca, S. Basu, ..., S. Mathur et al.
An Asteroseismic Calibration of Convection in Stars,
A&A, 755, 12

42. S. Deheuvels, R. A. García, W. J. Chaplin, ..., S. Mathur et al.
Seismic evidence for a fast rotating core in a lower-giant-branch star observed with Kepler,
A&A, 756, 19

43. A.-M. Broomhall, D. Salabert, W. J. Chaplin, R. A. García, Y. Elsworth, R. Howe and S. Mathur
Misleading variations in estimated rotational frequency splittings of solar p modes: Consequences for helio- and asteroseismology,
48. H. Bruntt, S. Basu, B. Smalley, ..., S. Mathur et al.
Accurate fundamental parameters and detailed abundance patterns from spectroscopy of 93 solar-type Kepler targets,
MNRAS, 423, 122

Verifying Asteroseismically Determined Parameters of Kepler Stars Using Hipparcos Parallaxes: Self-consistent Stellar Properties and Distances,

50. Mosser, B., Goupil, M.J., Belkacem, K.,..., S. Mathur et al.
Spin down of the core rotation in red giants,
A&A, 548, 10

Oscillation mode frequencies of 61 main-sequence and subgiant stars observed by Kepler,
A&A, 543, 54

2011

52. S. Mathur, R. Handberg, T. L. Campante et al.
Solar-like oscillations in KIC 11395018 and KIC 11234888 from 8 months of Kepler data,

Granulation in Red Giants: observations by the Kepler mission and 3D convection simulations,

54. T. L. Campante, R. Handberg, S. Mathur et al.
Asteroseismology from the Kepler ten-month time series: the evolved Sun-like stars KIC 10273246 and KIC 10920273,
A&A, 2011, 530, 100

55. B. Kumar, P. Venkatakrishnan, S. Mathur, S. Tiwari and R. A. García
On the flare induced seismicity in the active region NOAA 10930 and related enhancement of global waves in the Sun,

Testing asteroseismic scaling relations using Kepler long-cadence and short-cadence data,

Asteroseismic inferences on red giants in open clusters NGC 6791, NGC 6819 and NGC 6811 using Kepler,
A&A, 2011, 530, 100

Solar-like oscillations in red giants observed with Kepler: comparison of global oscillation parameters from different methods,

Sounding open clusters: asteroseismic constraints from Kepler on the properties of NGC 6791 and NGC 6819,
ApJL, 2011, 729, 10

Accurate p-mode measurements in the G0V metal-rich CoRoT target HD 52265,
A&A, 2011, 530, 97

61. P. Beck, T. Bedding, ..., S. Mathur et al.
Detection of gravity-mode period spacings in red giant stars by the Kepler Mission,
Science, 2011, 332, 205

Distinguishing between hydrogen- and helium-burning red giant stars with asteroseismology using gravity-mode period spacings,
Nature, 2011, 471, 608

Global asteroseismic properties of solar-like oscillations observed by Kepler: Comparison of nine analysis methods,

64. W. J. Chaplin, S. Basu, A. Miglio, ..., S. Mathur et al.
Ensemble asteroseismology of solar-type stars with the NASA Kepler Mission,
Science, 2011, 332, 216
Predicting the detectability of oscillations in solar-type stars observed by Kepler,  

Verification of the Kepler Input Catalog from asteroseismology of solar-type stars,  
ApJL, 2011, 738, 28

The impact of stellar activity on the detectability of solar-like oscillations observed by Kepler,  

Asteroseismic diagrams from a survey of 500 solar-type stars: early results from Kepler,  
ApJL, 2011, 742, 3

Constructing a one-solar mass evolutionary sequence using asteroseismic data from Kepler,  

70. D. Stello, ..., S. Mathur, et al.  
An asteroseismic membership study of three open clusters in the Kepler field: NGC 6791, NGC 6819, and NGC 6811,  

71. D. Stello, ..., S. Mathur, et al.  
Amplitude of solar-like oscillations: constraints from the red giants in open clusters observed by Kepler,  

72. R. A. García, S. Hekker, D. Stello, J. Gutierrez-Soto, ..., S. Mathur et al.  
Preparation of Kepler lightcurves for asteroseismic analyses,  

73. D. Salabert, C. Régulo, R. A. García, J. Ballot and S. Mathur  
Activity cycle frequency shifts in the solar-like oscillation star HD49933,  

2010

Determining global parameters of the oscillations of solar-like stars,  

75. S. Mathur, R. A. García, C. Catala et al.  
HD170987: a solar-like oscillating CoRoT target revealed by spectroscopy and seismic observations,  

76. R. A. García, S. Mathur, D. Salabert, J. Ballot, C. Régulo, T. S. Metcalfe and A. Baglin  
CoRoT reveals a magnetic activity cycle in a Sun-like star,  
Science, 2010, 329, 1032

77. B. Kumar, S. Mathur and R. A. García  
On the flare induced high-frequency global waves in the Sun,  
ApJL, 2010, 711, 12

78. A. Moya, S. Mathur and R. A. García  
Sensitivity of the g-mode frequencies to pulsation codes and their parameters,  
Solar Physics, 2010, 77

Asteroseismology of red giants from the first four months of Kepler data: global oscillation parameters for 800 stars,  

Asteroseismology of red giants from the first four months of Kepler data: Fundamental stellar parameters,  

81. T. S. Metcalfe, S. Basu, T.J. Henry, D.R. Soberblom, P. J. Judge, M. Knolker, S. Mathur and M. Rempel  
Discovery of a 1.6-year magnetic activity cycle in the exoplanet host star i Horologii,  

Seismic and spectroscopic characterization of the solar-like pulsating CoRoT target HD 49385,  

83. W. J. Chaplin, T. Appourchaux, Y. Elsworth, ..., S. Mathur et al.  
The asteroseismic potential of Kepler: first results for solar-type stars,  
_Solar-like oscillations in low-luminosity red giants: first results from Kepler_,

85. D. Stello, S. Basu, H. Bruntt, ..., S. Mathur et al.
_Detection of solar-like oscillations from Kepler photometry of the open Cluster NGC 6819_,

_A precise asteroseismic age and radius for the evolved sun-like star KIC 11026764_,

2009

_Solar-like oscillations with low observed amplitude in the CoRoT target HD 181906_,

_On the spectrum of the acoustic oscillations of HD49933_,

_Solar-like oscillations in HD 181420: data analysis of 156 days of CoRoT data_,

_CoRoT sounds the stars: HD 175726, a simultaneously active and passive star_,

2008

91. S. Mathur, A. Eff-Darwich, R. A. García and S. Turck-Chièze
_Sensitivity of helioseismic gravity modes to the dynamics of the solar core_,
A&A, 2008, 484, 517

92. R. A. García, S. Mathur and J. Ballot
_Can we constrain the solar interior physics studying the gravity-mode asymptotic signature?,_
Solar Physics, 2008, 251, 135

_Influence of low-degree high-order p-mode splittings on the solar rotation profile_,
Solar Physics, 2008, 251, 119

94. S. Lefebvre, S. J. Jiménez-Reyes, R. A. García, S. Turck-Chièze and S. Mathur
_Variations of the solar granulation motions with height using the GOLF/SoHO experiment_,

2007

95. S. Mathur, S. Turck-Chièze, S. Couvidat and R. A. García
_On the characteristics of solar gravity-mode frequencies_,

_Tracking solar gravity modes: the dynamics of the solar core_,
Science, 2007, 316, 1591
   *Towards solar activity maximum 24 as seen by GOLF and VIRGO/SPM instruments*,
2. R.A. García, G. Davies, A. Jimenez, ..., S. Mathur, et al.
   *The Sun-as-a-star observations: GOLF and VIRGO on SoHO, and BiSON network*,
   2013, JPhCS, 440, 2040 Proceedings of the GONG 2012 / LWS/SDO-5 / SOHO 27 meeting
   *Solar-like oscillations in distant stars as seen by CoRoT: the special case of HD 42618, a solar sister*,
   2013, JPhCS, 440, 2030, Proceedings of the GONG 2012 / LWS/SDO-5 / SOHO 27 meeting

   *Acoustic glitches in solar-type stars from Kepler*,
   2012, AN, 330, 1040

5. S. Mathur, R.A. García, D. Salabert, C. Régulo, J. Ballot, T. Metcalfe and A. Baglin
   *Unveiling stellar magnetic activity using CoRoT seismic observations*,
6. B. Kumar, P. Venkatkrishnan, S. Mathur, S. K. Tiwari and R.A. García
   *Analysis of peculiar penumbral flows observed in the active region NOAA 10930 during a major solar flare*,
   2011, Journal of Physics Conferences, Aix-en-Provence (France), 271, 2020
7. H. Vásquez Ramió, S. Mathur, C. Régulo and R.A. García
   *Effect of line-of-sight inclinations on the observation of solar activity cycle: Lessons for CoRoT & Kepler*,
   2011, Journal of Physics Conferences, Aix-en-Provence (France), 271, 2056
   *The acoustic low-degree modes of the Sun measured with 14 years of continuous GOLF and VIRGO measurements*,
   2011, Journal of Physics Conferences, Aix-en-Provence (France), 271, 2049
   *New insights on the solar core*,
   2011, Journal of Physics Conferences, Aix-en-Provence (France), 271, 2046

10. D. Stello, S. Basu, T. R. Bedding, ... S. Mathur et al.
    *Solar-like oscillations in cluster stars*,
    2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote (Spain), 331, 972
11. C. Karoff, W. J. Chaplin, T. Appourchaux, ... S. Mathur et al.
    *Asteroseismology of Solar-type stars with Kepler I: Data Analysis*,
    2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote (Spain), 331, 985

12. S. Mathur, R. A. García and A. Eff-Darwich
    *Improving our knowledge on the dynamics of the solar core: low-degree high-frequency p modes and g modes*,
    ASSP, 2009, Ed. Hasan & Rutten, p326
    *Towards a complete view of the solar internal magnetism*,

    *The GOLF-NG prototype and the solar European perspective for cosmic vision 2015-2025*,
    Journal of Physics, Conference series, 2008,118, 2044
    *Update on g-mode research*,
    Astronomische Nachrichten, 2008, 329, 476
   Laboratory performances of the solar multichannel resonant scattering spectrometer prototype of the GOLF-New Generation instrument,
   Astronomische Nachrichten, 2008, 329, 521

2006

   GOLF-NG spectrometer, a space prototype for studying the dynamics of the deep solar interior,
   Advances in Space Research, 2006, v38, 1812

BOOK CHAPTER
2015

1. S. Mathur, J. Ballot, R.A. García
   Stellar dynamics: rotation, convection and magnetic fields,
   Gravity Modes with a Resonant Scattering Spectrophotometer,
   2004, SOHO14, Yale, USA

2. R.A. García, S. J. Jiménez-Reyes, S. Turck-Chièze and S. Mathur
   Helioseismology from the Blue and Red Wings of the Na profile as seen by GOLF,
   2004, SOHO14, Yale, USA

   The solar radiative interior: gravity modes and future instrumentation,
   2004, SF2A, Paris, FRANCE

   GOLF New Generation: a spectrophotometer for the quest of solar gravity modes,
   2005, SF2A, Strasbourg, FRANCE

5. S. Turck-Chièze, W. Schmutz, G. Thuillier, ...., S. Mathur et al.
   The Dynamics Project,
   2006, ESA SP-617: Proceedings of SOHO 17

   Scientific Objectives of the Novel Formation Flying Mission Aspicis,
   2006, ESA SP-617: Proceedings of SOHO 17

   The EUV Variability Experiment (EVE) on the Solar Dynamics Observatory (SDO): Science Plan and Instrument Overview,
   2006, ESA SP-624: Proceedings of SOHO 18/GONG 2006/HELAS I, Beyond the spherical Sun

   Detection of the periodic signatures of l=1 solar g modes with 10 years of GOLF/SoHO data,
   2006, ESA SP-617: Proceedings of SOHO 17

   Detection of periodic signatures in the solar power spectrum: on the track of l=1 gravity modes,
   2006, ESA SP-624: Proceedings of SOHO 18/GONG 2006/HELAS I, Beyond the spherical Sun

10. S. Mathur, S. Turck-Chièze, S. Couvidat and R. A. García
    Sensitivity of the predicted frequencies of l=1 g modes to known physical processes,
    2006, ESA SP-624: Proceedings of SOHO 18/GONG 2006/HELAS I, Beyond the spherical Sun

    The Dynamics perspective,
    2006, ESA SP-624: Proceedings of SOHO 18/GONG 2006/HELAS I, Beyond the spherical Sun

    Knowledge of the solar core dynamics through g-modes,
    2006, IAU, Prague, REPUBLIC TCHEQUE

    The GOLF-NG prototype and the Solar European Perspective for Cosmic Vision 2015-2025,
    2007, HELAS II, Göttingen, GERMANY

    What can we learn on the Dynamics and the Structure of the solar core with g modes?,
    2008, Proceedings of GONG 2008/SOHO 21, Boulder, USA

15. S. Mathur, S. J. Jiménez-Reyes and R. A. García
    GOLF: a new proxy of solar magnetism,
    2008, Proceedings of GONG 2008/SOHO 21, Boulder, USA

    Spatial Cross Spectrum: Reducing incoherent convective background of resolved helioseismic instruments,
    2008, Proceedings of GONG 2008/SOHO 21, Boulder, USA
17. O. L. Creevey, S. Mathur and R. A. García

First performances of the GOLF-NG instrumental prototype observing the Sun in Tenerife, 2008, Proceedings of GONG 2008/SOHO 21, Boulder, USA

19. S. Mathur
The quest of solar gravity modes: probing the solar interior, 2009, ASI bulletin, Bangalore, INDIA

Analysing solar-like oscillations with an automated pipeline, 2009, American Institute of Physics, Proceedings of the Stellar Pulsation Conference, Santa Fe, USA

2010

23. B. Kumar, S. Mathur, R.A. García and P. Venkatkrishnan
Can major solar flares excite high-frequency global waves in the Sun?, 2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote, Spain

24. S. Mathur, R.A. García, C. Régulo, O. L. Creevey, J. Ballot and D. Salabert
An automatic pipeline analyzing solar-like oscillating targets tested on CoRoT and simulated data, 2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote, Spain

25. R.A. García, S. Mathur, J. Ballot and C. Régulo
Enhancing the signal-to-noise ratio of solar-like targets, 2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote, Spain

26. A. Moya, S. Mathur and R.A. García
Accuracy of the numerical computation of solar g modes, 2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote, Spain

Inpainting: A powerful interpolation technique for helio- and asteroseismic data, 2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote, Spain

28. R.A. García, J. Ballot, S. Mathur, and C. Régulo
Signature of a magnetic activity cycle in HD49933 observed by CoRoT, 2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote, Spain

Towards a detection of individual g modes in the Sun, 2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote, Spain

On the likelihood-ratio test applied in asteroseismology for mode identification, 2010, AN, Proceedings of the Fourth HELAS International Conference, Lanzarote, Spain

2011

31. S. Mathur
Seismic analysis of two solar-type stars observed by Kepler, 2011, SF2A, Paris, France (Invited talk), 221

32. S. Mathur
   Investigating stellar activity with CoRoT observations,
   2012, ASP Proceedings, “Recent progresses in solar/stellar physics with helio- and asteroseismology”,
   Hakone, Japan

   Investigating the properties of granulation in the red giants observed by Kepler,
   2012, ASP Proceedings, “Recent progresses in solar/stellar physics with helio- and asteroseismology”,
   Hakone, Japan

   Seismic analysis of four solar-like stars observed during more than eight months by Kepler,
   2012, ASP Proceedings, “Recent progresses in solar/stellar physics with helio- and asteroseismology”,
   Hakone, Japan

36. T. S. Metcalfe, S. Mathur, G. Dogan, and M. Woitaszek
   First Results from the Asteroseismic Modeling Portal,
   2012, ASP Proceedings, “Recent progresses in solar/stellar physics with helio- and asteroseismology”,
   Hakone, Japan

    Bonanno, A. S. Brun, W. J. Chaplin, J. Christensen-Dalsgaard et al.
   Fast Rotating solar-like stars using asteroseismic datasets,
   2012, ASP Proceedings, “Recent progresses in solar/stellar physics with helio- and asteroseismology”,
   Hakone, Japan

38. S. Turck-Chièze, S. Couvidat, A. Eff-Darwich, V. Duez, R. A. García, S. Mathis, S. Mathur, L. Piau, and
    D. Salabert
   The long term dynamics of the solar radiative zone associated to new results from SoHO and young solar
    analogs,
   2012, ASP Proceedings, “Recent progresses in solar/stellar physics with helio- and asteroseismology,
   Hakone, Japan

2013

39. S. Mathur, C. Catala, H. Bruntt et al.
   Asteroseismic Analysis of the CoRoT Target HD 169392,
   2013, ASP Proceedings, “Progress in Physics of the Sun and Stars: A New Era in Helio- and Asteroseis-
    mology”, Hakone, Japan

40. C. Hedges, S. Mathur, M. J. Thompson, K. B. and MacGregor
   Oscillations and Surface Rotation of Red Giant Stars
   2013, ASP Proceedings, “Progress in Physics of the Sun and Stars: A New Era in Helio- and Asteroseis-
    mology”, Hakone, Japan

41. S. Mathur
   Study of Stellar Magnetic Activity with CoRoT and mBoxKepler Data
   2013, ASP Proceedings, “Progress in Physics of the Sun and Stars: A New Era in Helio- and Asteroseis-
    mology”, Hakone, Japan

2014

42. R. A. García, T. Ceillier, S. Mathur, and D. Salabert
   Measuring Reliable Surface Rotation Rates from Kepler Photometric Observations
   2013, ASP Proceedings, “Progress in Physics of the Sun and Stars: A New Era in Helio- and Asteroseis-
    mology”, Hakone, Japan

43. S. Mathur, K. Augustson, A. S. Brun, and R. A. García
   Dynamo modeling of the Kepler F star KIC 12009504
   2014, Cool stars proceedings, Flagstaff, USA

44. S. Mathur
   Constraining stellar magnetic activity with Asteroseismology
   2014, SF2A, Paris, France

45. S. Mathur
   Towards age/rotation/magnetic activity relation with seismology
   2014, CoRoT3-KASC7 meeting, Toulouse, France