

# PHIL MARSHALL

## Professional Preparation

University of Cambridge	Natural Sciences (Physics)	B. A. (Hons.) M. Sci. (class I), 2000
University of Cambridge	Astrophysics	Ph. D. (" <i>Bayesian Analysis of Clusters of Galaxies</i> ,"), 2004
KIPAC, SLAC	Observational Cosmology	KIPAC Fellow, 2003–2006
Physics Dept., UCSB	Observational Cosmology	TABASAGO Fellow, 2006–2009
KIPAC, Stanford University	Observational Cosmology	Kavli Fellow, 2009–2010

## Appointments

6/2013–onwards	Staff Scientist, SLAC National Accelerator Laboratory (Kavli Institute for Particle Astrophysics and Cosmology)
10/2010–5/2013	Royal Society University Research Fellow Department of Physics, University of Oxford

## Selected Publications

1. Schneider, M. D., . . . , **Marshall, P. J.** et al  
*Hierarchical probabilistic inference of cosmic shear*  
ApJ accepted, 2015. <http://arxiv.org/abs/1411.2608>
2. Brewer, B. J., **Marshall, P. J.** et al  
*The SWELLS survey - VI. Hierarchical inference of the initial mass functions of bulges and discs*  
MNRAS, **437**, 1950, 2014. <http://arxiv.org/abs/1310.5177>
3. Suyu, S. H., . . . , **Marshall, P. J.** et al  
*Cosmology from gravitational lens time delays and Planck data*  
ApJ, **788**, 35, 2014. <http://arxiv.org/abs/1306.4732>
4. Collett, T. E., **Marshall, P. J.**, et al  
*Reconstructing the lensing mass in the Universe from photometric catalogue data*  
MNRAS, **432**, 679, 2013. <http://arxiv.org/abs/1303.6564>
5. Ivezić, Z., . . . , **Marshall, P. J.**, and the LSST Collaboration.  
*LSST: from Science Drivers to Reference Design and Anticipated Data Products*  
<http://arxiv.org/abs/0805.2366>,
6. **Marshall, P. J.** et al  
*Space Warps – I. Crowd-sourcing the Discovery of Gravitational Lenses*  
MNRAS accepted, 2015. <http://arxiv.org/abs/1504.06148>
7. Sonnenfeld, Alessandro, . . . , **Marshall, P. J.** et al  
*The SL2S Galaxy-scale Lens Sample. V. Dark Matter Halos and Stellar IMF of Massive ETGs out to Redshift 0.8*  
ApJ, **800**, 94, 2015. <http://arxiv.org/abs/1410.1881>
8. Busha, M. T., **Marshall, P. J.**, et al  
*The Mass Distribution and Assembly of the Milky Way from the Properties of the Magellanic Clouds*  
ApJ, **743**, 40, 2011. <http://arxiv.org/abs/1011.2203>

9. Oguri, M., & **Marshall, P.J.**  
*Gravitationally lensed quasars and supernovae in future wide-field optical imaging surveys*  
MNRAS, **405**, 2579, 2010. <http://arxiv.org/abs/1001.2037>
10. Suyu, S., **Marshall, P. J.**, Hobson, M. P. & Blandford, R. D.  
*A Bayesian analysis of regularised source inversions in gravitational lensing*  
MNRAS, **371**, 983, 2006. <http://arxiv.org/abs/0601493>

## Synergistic Activities

- 2015— Stanford Physics Graduate Lecture Course Leader, “Statistical Methods in Astrophysics”
- 2014— Organizer and Lecturer, “Astro Hack Week”
- 2012— Co-Principal Investigator, “Space Warps” citizen science project
- 2011 Workshop Organiser, “Cosmology Meets Machine Learning,” NIPS, Granada, Spain.
- 2010— Outreach Coordinator, University of Oxford Astrophysics Group and KIPAC

## Collaborators and Affiliations

### Collaborators (principals in bold):

Abbott, T., Abdalla, F. B., Adami, C., Aghamousa, A., **Agnello, A.**, Ajello, M., Allam, S., Amin, M. A., Annis, J., Armstrong, R., Auger, M. W., Baeten, E., Bamford, S., Banerji, M., **Bard, D. J.**, **Barnabè, M.**, Barone-Nugent, R., Basa, S., Bastieri, D., Belles, P.-E., Benoist, C., Benoit-Lévy, A., Bertin, E., Beswick, R., Biviano, A., **Blandford, R. D.**, **Bolton, A. S.**, Bonvin, V., Bosch, J., Boutigny, D., Bradley, L. D., **Brewer, B. J.**, Briain, D. Ó., Brooks, D., Brownstein, J. R., Buckley-Geer, E. J., Bulmash, D., Burgett, W. S., Burke, D. L., Cappi, A., Carretero, J., Chambers, K. C., **Chan, J. H. H.**, Chekhtman, A., **Cheung, C. C.**, **Chiang, J.**, Chiueh, T., Ciprini, S., **Clowe, D.**, Coles, J., **Collett, T. E.**, Corbet, R. H. D., Cornen, C., Coupon, J., Courbin, F., Cox, B. E., Cunha, C. E., Cypriano, E. S., Czoske, O., D’Ammando, F., D’Andrea, C. B., **Dawson, W. A.**, Desai, S., Diehl, H. T., Dietrich, J. P., **Dobler, G.**, Doel, P., Donnarumma, A., Durret, F., **Dutton, A. A.**, Eifler, T. F., Erben, T., Erickson, N. J., Estrada, J., Falco, E. E., **Fassnacht, C. D.**, FenechConti, I., Finley, D., Flaugher, B., Fletcher, L. N., Fortson, L., Fosalba, P., Frieman, J., Garrington, S., **Gavazzi, R.**, **Geach, J. E.**, Gentile, M., Gerdes, D. W., Gill, M. S. S., Giroletti, M., Green, P. J., Grove, J. E., Gruen, D., Guennou, L., Gutierrez, G., Halliday, C., Harrison, P. A., Harrington, K., **Hezaveh, Y. D.**, **Hilbert, S.**, **Hogg, D. W.**, Hojjati, A., Honscheid, K., Huff, E. M., Hughes, D. H., Ilbert, O., Ivison, R. J., Jackson, N., James, D. J., Jee, M. J., Johnston, D., Jordan, C., **Jullo, E.**, Just, D., Kacprzak, T., Kaiser, N., Kapadia, A., Kashyap, V., Kaviraj, S., Kelly, B. C., Kilbinger, M., Kind, M. C., **Kneib, J.-P.**, **Koopmans, L. V. E.**, Kubo, J. M., Kuehn, K., Kuntzer, T., Kuropatkin, N., Küng, R., Lahav, O., **Lang, D.**, Larsson, S., LeBrun, V., Leauthaud, A., **Liao, K.**, LimaNeto, G. B., Lima, M., Limousin, M., **Linder, E.**, **Lintott, C. J.**, Lin, H., Lin, Y.-T., Lott, B., Luo, W., **Lynn, S.**, Macmillan, C., Magnier, E. A., Maia, M. A. G., Makler, M., Mamon, G. A., Mandelbaum, R., Mandel, K., March, M. C., Marshall, J. L., Martinet, N., Martini, P., Mason, C. A., Masters, K. L., Maurogordato, S., Mazure, A., McKean, J., McMahon, R. G., Melchior, P., Melvin, T., Meng, X.-L., Metcalf, R. B., **Meyers, J. E.**, Meylan, G., Miller, C. J., Miller, G., Miller, L., Miquel, R., Miyatake, H., Montaña, A., Montero-Dorta, A. D., **More, A.**, **More, S.**, **Morganson, E.**, Morgan, J. S., **Moustakas, L. A.**, Mujica, R., Murphy, K. J., Muxlow, T., Márquez, I., Nakajima, R., Narayanan, G., Neto, A. F., Ngolémboula, F. M., Nichol, R. C., Nipoti, C., Nurbaeva, G., O’Brien, T., Odermatt, J., Ogando, R., **Oguri, M.**, Ojha, R., Okura, Y., Orienti, M., Ostrovski, F., Paget, E., Pandey-Pommier, M., Parrish, M., Paulin-Henriksson, S., Perkins, J. S., Plana, H., Plazas, A. A., Prabhu, T. P., Price, P. A., RathnaKumar, S., Razzano, M., Reil, K., Rhodes, J., Rix, H.-W., Romero-Wolf, A., Romer, A. K., Roodman, A., Rosell, A. C., Ross, N. P., Rostagni, F., Rowe, B., **Rozo, E.**, Rumbaugh, N., Russeil, D., Rusu, C. E., Rybak, M., **Rykoff, E. S.**, **Saha, P.**, Sako, M., Sanchez-Argüelles, D., Sanchez, E., Santiago, B., Scargle, J. D., Scarpine, V., Schawinski, K., Schechter, P. L., Schirmer, M., Schlafly, E. F., Schloerb, F. P., **Schmidt, K. B.**, **Schneider, M. D.**, Schrabback, T., Schubnell, M., Serjeant, S., Sevilla-Noarbe, I., Shafieloo, A., Shan, H., Sheldon, E. S., Shu, Y., Siemiginowska, A., Simet, M., **Simmons, B. D.**, **Simpson, R.**, Skibba, R. A., Slezak, E., Smethurst, R. J., Smith, A. W., Smith, R. C., Snyder, C., Soares-Santos, M., Sobreira, F., **Sonnenfeld, A.**, Spiniello, C., Stalin, C. S., Starck, J.-L., Stiavelli, M., Suchyta, E., Sureau, F., **Suyu, S. H.**, Swanson, M. E. C., Tak, H., Tarle, G., Tecza, M., Tewes, M., Thaler, J., Thompson, D. J., Tonry, J. L., Trenti, M., **Treu, T.**, Tucker, D., Ulmer, M. P., VanWaerbeke, L., Vegetti, S., **Verma, A.**, Viero, M., Walker, A. R., Walter, F., Wang, W.-H., **Wechsler, R. H.**, Wilcox, J. K., Willett, K. W., Wilson, G. W., Wood, D. L., Wood, K. S., Wyithe, S., Yun, M. S., ZarbAdami, K., Zaritsky, D., Zeballos, M., Zhang, J., Zhang, Y., Ziegler, B., Zuntz, J.

**Graduate Advisor and Postdoctoral Sponsors:** Michael Hobson (University of Cambridge); Roger Blandford (KIPAC), Tommaso Treu (UCLA), Roger Davies (Oxford).

**Thesis Students Mentored:** Sherry Suyu (ASIAA), Eric Morganson (NCSA/UIUC), Elisabeth Newton (CfA), Chi-hway Chang (ETH Zurich), Thomas Collett (Portsmouth), Alessandro Sonnenfeld (Kavli IPMU), Kai Liao (Wuhan), Nick Rumbaugh (UC Davis).