

Massimo Viola

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Nationality: Italian

Education

2007-2010 PhD in Astronomy at Heidelberg University (Germany)

On shear and flexion measurements and properties of dark matter halos

final mark magna cum laude

2005-2007 M.Sc. in Astrophysics at Universita' di Trieste (Italy)

final mark 110/110 cum laude

2002-2005 B.Sc. in Physics at Universita' di Trieste (Italy)

final mark 110/110 cum laude

Research positions

from 10/12 Senior post-doctoral research position at Leiden Observatory, University of Leiden

03/11-09/12 Post-doctoral research position at the Institute for Astronomy, University of Edinburgh

01/11-02/11 Post-doctoral research position at the Institute for Theoretical Astrophysics, University of Heidelberg

09/07-12/10 Phd student in astronomy (supervision Prof. M. Bartelmann at ITA, University of Heidelberg)
Phd Thesis on weak lensing shear and flexion measurement and properties of dark matter halos.

09/06-07/07 Master Thesis in astrophysics (supervisor Prof. S.Borgani). Gas cooling in dark matter halos: semi-analytical and numerical models.

Professional skills

- Co-lead of the weak lensing working group in the Kilo Degree Survey (KiDS) collaboration.
- Referee of article for MNRAS, A&A, ApJ, PASP.
- Responsible for requirements for weak lensing measurements in the context of the ESA's Euclid mission.

Student supervision

2011/2012

- Alexandra Amon (Summer students for 8 weeks; now PhD student in Edinburgh)

2012/2013

- Chaoli Zhang (Master degree: minor research project; now visiting student at Shanghai Astronomical Observatory)

- Thomas Riley (Summer students for 12 weeks; now PhD student in Amsterdam)

2014/2015

- Leon Trapman (Master degree: minor research project)

2015/2016

- Gonzalo Santaella (Master degree: minor research project)
- Eimear O'Reilly (Master degree: minor research project)

Teaching

2009

- Teaching Assistant for General Relativity at Heidelberg University.
- 4 hours of lecturing at undergraduate level during a course of General Relativity

Conferences and seminar talk

2015

Measuring cosmic shear: the CFHTLenS case and open challenges for current lensing surveys

Workshop: cosmological test of general relativity (Leiden Lorentz centre)

KiDS: The Kilo Degree Survey. First lensing results.

Institute colloquium at the GRavitation and AstroParticle Physics centre in Amsterdam.

Dark matter halo properties of GAMA galaxy groups from 100 square degree of KiDS weak lensing data.

In the Footsteps of Galaxies: Tracing the evolution of environmental effects (Soverato, Italy).

Accurate Astrophysics, Correct Cosmology (UCL, London)

Let's group workshop (ESO, Munich)

2014

Dark matter halo properties of GAMA galaxy groups from 100 square degree of KiDS weak lensing data.

GAMA meeting (Cape Town, South Africa)

KiDS consortium meeting (Naples, Italy)

The probability distribution of ellipticity: implications for weak lensing measurements.

IAU Symposium 306 - Statistical Challenges in 21st Century Cosmology!

2013

From noisy pixels to unbiased cosmology: challenges in weak lensing

Colloquium at European Space Agency (Estec)

Shape measurements calibration

Euclid weak-lensing working group meeting (Rome, Italy)

2012

Flexion: facts and opinion

Invited talk at Ohio State University

Workshop ‘Beyond LCDM’ (Sexten, Italy)

Unbending the light

Invited talk at Jeremiah Horrocks Institute, UCLAN, Preston (UK)

Invited talk at INAF-Trieste

Flexed Universe

VIII Durham-Edinburgh Workshop, Durham (UK)

2011

Shear and flexion measurements with DEIMOS

‘From pixel to shear’ workshop, Edinburgh (UK)

Shear-flexion cross-talk in weak-lensing measurements

VIII Nottingham-Birmingham extragalactic workshop, Nottingham (UK)

2010

“Central mass density profile slopes and scales conspiracy in KSB”

Talk at the DUEL [Dark Universe with Extragalactic Lensing EU network] meeting, Ringberg (Germany)

“On flexion measurements in galaxy clusters”

Talk at the DUEL meeting, Sorrento (Italy)

“Biases in and corrections to KSB shear measurements”

Talk at the ‘10 years of cosmic shear’ conference Edinburgh (UK)

2009

“Determination of halo density slope”

Talk at the DUEL meeting, Heidelberg (Germany)

“Dark matter halos density inner slope from weak gravitational lensing”

Talk at the Bertinoro astrophysics school, Bertinoro (Italy)

“Weak gravitational lensing: halo filtering techniques”

Research talk at the International Max Planck Research School, Heidelberg (Germany)

Observational experience

- Five nights observing at the Isaac Newton Telescope, INT, using the Wide Field Camera.

Public outreach

Sep 11 Open day at the Institute for Astronomy (Edinburgh)

Languages

Italian: Mother tongue

English: Very good

German: Intermediate