

Gianfranco Bertone – CV

PERSONAL	<i>Address:</i> Institute for Theoretical Physics University of Amsterdam Science Park 904, Postbus 94485 1090 GL Amsterdam Netherlands	<i>Tel.:</i> +31 20 525 7658 <i>Date of Birth:</i> 1/11/1975 <i>Citizenship:</i> Italian <i>E-mail:</i> g.bertone@uva.nl <i>Homepage:</i> http://gianfrancobertone.net
EMPLOYMENT	Institute for Theoretical Physics , U. of Amsterdam, NL Associate Professor (Hoofddocent UHD1)	Since October 2011
	Institute for Theoretical Physics , U. of Zürich, CH Visiting Professor (on leave of absence from IAP Paris)	October 2009 - October 2011
	Institut d’Astrophysique de Paris , France Permanent CNRS Researcher. Coordinator of the Theoretical Physics group 2007-2009	April 2006 - present
	Department of Physics , U. of Padova, Italy INFN/DESY Research Associate, Helmholtz association fellow	October 2005 - March 2007
	Particle Astrophysics Center, Fermilab , Chicago USA Research Associate, Theoretical Astrophysics group Associate Fellow at Center for Cosmological Physics, U. of Chicago	October 2003 - September 2005
EDUCATION	Institut d’Astrophysique de Paris , Paris, France PhD Physics (with <i>félicitations du Jury</i>). Advisors: G. Sigl and J. Silk	September 2000 - September 2003
	University of Oxford , Oxford, UK Marie Curie visiting PhD student	September 2000 - September 2001
	Observatoire de Paris - Meudon , Paris, France Master (DEA) in Theoretical Astrophysics and Cosmology	September 1999 - August 2000
	U. of Rome ”La Sapienza” , Rome, Italy ”Laurea” in Theoretical Physics, full marks	September 1993 - July 1999
PROFESSIONAL ACTIVITIES	Spokesperson , <i>GRAPPA</i> (Gravitation and Astroparticle Physics in Amsterdam) Center of Excellence, a Research Priority Area of the U. of Amsterdam	2014 - present
	Editor-in-chief , <i>Physics of the Dark Universe</i> , Elsevier	2011 - present
	Member , Committee for Astroparticle physics in the Netherlands (CAN)	2013 - present
	Member , Astroparticle Commission, Int. Union of Pure and Appl. Phys. (IUPAP)	2012 - 2014
	Member , Young Academy of Europe (YAE)	2012 - present

PROFESSIONAL
ACTIVITIES
(CONTINUED)

Expert reviewer for:

ERC, European Research Council, EU
NSF, National Science Foundation, USA
ASI, Italian Space Agency; ANVUR; MIUR, Italy
NSERC, Natural Sciences and Engineering Research Council of Canada
STFC, Science and Technology Facilities Council, UK
ANR, Agence Nationale pour la Recherche, France
NWO, Organisation for Scientific Research, Netherlands
Helmholtz Alliance for Astroparticle Physics, Germany

Member, External Advisory Committee, International Doctorate in Particle Physics, Astrophysics and Cosmology (IDPASC) 2014 - present

Member, Scientific Committee, International School on AstroParticle Physics (ISAPP) - European Doctorate School 2014 - present

Short Term Associate, ATLAS collaboration at CERN 2014 - 2015

Manuscript referee, *Nature*, *Science*, *Phys.Rev.Lett.*, *Phys.Rev. D.*, *JCAP*, *Mon.Not.Roy.Astron.Soc.*, *Astrophys. Journal*, *Astron. & Astrophys.*, *JHEP* and *Phys.Lett. B* 2000 - present

Chair Faculty Search committee, U. of Amsterdam 2012 - 2013

Coordinator of Dark Matter studies, French network ‘GdR Terascale’ 2007 - 2011

Coordinator of Indirect Dark Matter searches, Spanish network ‘MultiDark’ 2010 - present

Coordinator of the Theoretical Physics group, Institut d’Astrophysique de Paris 2007 - 2009

Member of the Conseil de Laboratoire, Institut d’Astrophysique de Paris 2009 - 2011

Associate scientist, Fundacao para a Ciencia e a Tecnologia, Portugal 2001 - 2002

Member, European Network Supersymmetry and Early Universe 2000 - 2002

GRANTS AND
FELLOWSHIPS

PI, **ERC Starting Grant** *WIMPS Kairos* 2011-2016
• Starting Independent Researcher Grant, European Research Council (1.3 M€)

Co-Investigator, **NWO Gravitation Program** 2013 - 2018
• *D-ITP: Matter at all scales* (20 M€)

Co-Investigator, **FOM Program** 2013 - 2018
• *The missing universe: What is the subatomic constituent of dark matter?* (2 M€)

Co-Investigator, **NASA Fermi Guest Investigator** Cycle II Program 2009 - 2010
• *Anisotropy and energy spectrum of the GRB as probes of DM and astrophysics*

ANR project *ToolsDMColl* 2008 - 2011
• Participating Institutions: LAPP, LAPTh, LPSC & IAP, PI: Fawzi Boudjema
• Title: *Tools for Dark Matter and New Physics at Colliders and in Astrophysics*

Supervisor, **Marie Curie** fellowships IEF-235878 and PIIF-GA-2013-628997 2009-2011, 2014-2016

CNRS **Physique des 2 Infinis** grant (with M. Cirelli) , 1 postdoctoral position 2008 - 2010

Helmholtz Association of National Research Centres Fellowship 2005 - 2007

Supported by Fermilab, DEAC02-76CH03000, and by NASA, NAG5-10842 2003 - 2005

Allocation de Recherche (French Government PhD fellowship) 2000 - 2003

Marie Curie Visiting PhD Student at the U. of Oxford 2000 - 2001

ORGANIZATION OF
CONFERENCES,
SEMINARS AND
JOURNAL CLUBS

Chair of the conference series **TeV Particle Astrophysics**, held at
Fermilab, Batavia IL, USA 2005

U. of Wisconsin, Madison WI, USA 2006

Istituto Veneto, Venice, Italy 2007

IHEP, Beijing, China 2008

SLAC, Stanford U., Palo Alto CA, USA 2009

IAP Paris, France 2010

U. of Stockholm, Sweden 2011

TIFR Mumbai, India 2012

University of California, Irvine, USA 2013

University of Amsterdam, NL 2014

University of Tokyo, Japan 2015

Member, Local Organizing Committee, *ICRC*, The Hague 07/2015

Organizer, "Trends in Theory symposium of the DRSTP, Dalfsen NL 05/2015

Organizer, IFT Program in Particle Physics, Astroparticles and Cosmology, Madrid 04-05/2015

Chair Symposium "History and Future of Dark Matter", Amsterdam 06/2014

Member, International Advisory Committee, *International Dark Matter* series 2008 - present

Organizer, yearly Amsterdam-Paris-Stockholm meetings 2012-present

Organizer, UvA Institute of Physics Colloquia 2012-present

Organizer, weekly GRAPPA Club meetings 2012-present

Member, International Advisory Committee, Origin of Mass, U. of Southern Denmark 2013

Organizer, KITP workshop "Hunting for Dark Matter", Santa Barbara, USA 2013

Organizer CosmoStat2013, Banff, Canada 2013

Organizer, Dark Universe Workshop, GGI Florence, Italy 2011

Convener, *Astroparticle Physics* session, EPS-HEP meeting, Grenoble FR 2011

Organizer , 2011 Aspen Winter Workshop, Aspen Co, USA	2011
Organizer , “Dark Matter All Around” Workshop, IAP Paris	2010
Chair , CTS Workshop ”Dark Matter in the Sky and Underground”, ITP Zurich	2010
Co-Chair , “ γ in \mathcal{Z} ” Workshop, ITP Zurich	2009
Co-Chair , TANGO in PARIS Workshop, IAP Paris France	2008
Organizer , “Café GReCO” weekly meetings at IAP	2007 - 2009
Organizer , “Caffé Teorico” meetings at INFN, Padova	2005 - 2006
Organizer , Fermilab Astrophysics Seminars	2004 - 2005
Organizer , Fermilab Astrophysics “Munch” Journal Club meetings	2004 - 2005

ACADEMIC DUTIES

Supervision of postdoctoral fellows

Jennifer Siegal-Gaskins (Marie Curie fellow)	2014-2016
Christopher McCabe (GRAPPA fellow)	2014-2017
Nassim Bozorgnia (ERC postdoc)	2014-2016
Sofia Sivertsson (SRC postdoc)	2013-2015
Mark Lovell (D-ITP postdoc)	2013-2015
Douglas Spolyar (ERC postdoc)	2013-2014
Francesca Calore (ERC postdoc)	2013-2015
Christoph Weniger (GRAPPA fellow)	2012-2015
Maria Cabrera (ERC postdoc)	2012-2014
Chiara Arina (ERC postdoc)	2012-2013
Fabio Iocco (Marie Curie fellow)	2008-2011
Lidia Pieri (<i>Ville de Paris</i> fellow)	2008-2009
Gabrijela Zaharijas (P2I fellow)	2010-2011

PhD advisor of

Sebastien Liem (U. of Amsterdam)	2013-2017
Hamish Silverwood (U. of Amsterdam)	2012-2016
Miguel Pato (IAP Paris, ITP Zurich)	2008-2011
Mattia Fornasa (IAP Paris/INFN)	2006-2009
Marco Taoso (IAP Paris/INFN)	2006-2009

Supervision of Master students

Djoeke Schoonenberg (U. of Amsterdam)	2014-2015
Veerle Tammer (U. of Amsterdam)	2014-2015
Jaco de Swart (U. of Amsterdam, with Jeroen van Dongen)	2013-2014
Mark Wanders (U. of Amsterdam)	2013-2014
Anna Gimbrere (U. of Amsterdam, with Ben Freivogel)	2013-2014
Margot Brouwer (U. of Amsterdam)	2012-2013
Vincent Bizouard (E. Polytechnique, Paris)	2011
Aion Viana da Escossia (E. Polytechnique, Paris)	2009

Supervision of PhD research projects

Eun-Joo Ahn (U. of Chicago)	2004-2005
Edoardo Roza (U. of Chicago)	2004-2005

External examiner for PhD defenses of

Priscilla Pani (NIKHEF)	2014
Sofia Sivertsson (U. of Stockholm)	2012
Giorgio Arcadi (SISSA, Italy)	2012
Daniel Cumberbatch (Doctor of Philosophy, U. of Oxford)	2009

TEACHING

U. of Amsterdam, NL	2013-2015
MSc course on “Particle Cosmology”	
U. of Amsterdam, NL	2013-2015
BSc course, “ITFA Workshop: Introduction to Theoretical Physics”	
U. of Amsterdam, NL	2011-2013
MSc course on “Astroparticle Physics”	
U. of Amsterdam, NL	2012-2013
BSc course, “ITFA Workshop: Dark Matter, from Experiments to Theory”	
ITP, U. of Zurich, Switzerland	2009-2011
Graduate course on “Particle Astrophysics”	
ITP, U. of Zurich, Switzerland	2009-2010
BSc lectures on “Physics of the Universe”	
Univ. of Rome “Roma Tre”, Italy	2010
Graduate lectures on “Dark Matter”	
Ecoles de Physique des Houches, France	2007
Graduate lectures on “Indirect DM signatures and astrophysical sources”	
Ecoles de Physique des Houches, France	2005
Graduate lectures on “Exotic non-thermal processes”	
Institut Universitaire de Technologie, Paris, France	2002-2003
MSc lectures on Computer Science	

PUBLIC OUTREACH

• Radio interview “Ciel et Espace” magazine, Paris, France	11/15
• Public debate at Amsterdam Academic Club	01/15
• Public lecture at West Cape University, Cape Town South Africa	11/14
• Public lecture at Royal Institution, London UK	05/14
• Public lecture at Perimeter Institute, Waterloo, Ontario, Canada	05/14
• Alfred Russel Wallace Lecture, Cafe de Rumite, Amsterdam	12/13
• TV Interview for Al Jazeera	12/13
• World Science Festival Amsterdam, Round table speaker	10/13
• Interview for “New Scientist”	09/13
• Interview for the <i>Jodcast</i> , U. of Manchester’s Jodrell Bank podcast	6/11
• Article <i>Matière Noire: effervescence autour des détecteurs</i> , La Recherche	09/10
• Interview <i>A-t-on trouvé des particules de matière noire?</i> , La Recherche	06/09

- Public lecture *La pâle lueur de la matière noire*, Museum de Nantes 03/09
- Radio Interview, Alternantes FM 03/09
- Public lecture at the Institut d' Astrophysique de Paris, France 03/08
- *Dov'è e cos'è la Materia Oscura?*, Le Stelle 10/07

SEMINARS AND
CONFERENCES

- 2015
- Plenary talk, European Committee for Future Accelerators, CERN CH 11/15
 - Seminar at EPFL, Versoix CH 11/15
 - SOC chair, TeVPA Tokyo, Japan 10/15
 - Plenary talk at CosmoCruise 09/15
 - Science FOO Camp. Googolplex Mountain View, CA (USA) 06/15
 - Plenary talk at Alternative Gravity and Alternative Matter. Heraklion, GR 06/15
 - Co-Chair IFT Workshop on Dark Matter. Universidad Autonoma Madrid, Spain 04/15
 - Seminar at APC, Paris FR 01/15
 - Seminar at College de France, Paris FR 01/15
- 2014
- Invited plenary talk, Dark Side of the Universe, Cape Town South Africa 11/14
 - Graduate lectures at INFN-LNGS, L'Aquila IT 10/14
 - Chair, Astroparticle Physics conference, Amsterdam NL 06/14
 - Chair Public Symposium "History and Future of DM searches", Amsterdam NL 06/14
 - Colloquium, Institute of Astronomy, U. of Cambridge, UK 05/14
 - Invited colloquium, Astrophy. Dept., American Museum of Natural History 05/14
 - Invited plenary talk, *Rencontres de Blois*, France 05/14
 - University of Amsterdam Faculty Colloquium Academic Highlights 03/14
 - Invited presentation at ATLAS Collaboration meeting, CERN 02/14
- 2013
- Joint Astronomy Colloquium, ESO Garching DE 12/13
 - Plenary Speaker, Kavli Prize Event, Royal Society, London UK 10/13
 - Lecture, London International Youth Science Forum, London UK 07/13
 - Organizer, 2-months KITP workshop, Santa Barbara CA April to June 2013
 - Seminar, Theory group @ NIKHEF, Amsterdam NL 04/2013
 - Plenary talk, ATLAS-SUSY group workshop, NIKHEF, Amsterdam NL 04/2013
 - Amsterdam-Paris-Stockholm meeting in Stockholm, Sweden 03/2013
 - Plenary talk, XV International Workshop on Neutrino Telescopes, Venice, Italy 03/13
 - Review talk at Amsterdam-Paris-Stockholm meeting, Stockholm, Sweden 03/13
- 2012
- Concluding remarks, TeVPA Mumbai, India 12/12
 - Plenary talk, CTA-Link meeting, Buenos Aires, Argentina 11/12
 - Plenary talk, NNV meeting, Lunteren, NL 10/12
 - Summary Talk, IDM 2012, Chicago USA 7/12
 - Colloquium, U. of Groningen NL 4/12
 - Colloquium, U. of Utrecht, NL 3/12
 - Seminar at DAMTP, Cambridge UK 2/12
 - Seminar at King's College, London UK 1/12
 - 1 week scientific visit at Imperial College, London UK 1/12
 - Seminar at Obs. de Geneve, CH 1/12
 - Seminar at EPFL, Basel, CH 1/12
- 2011
- Graduate Lectures, IDPASC Dark Matter School, Evora PT 12/11
 - Colloquium, U. of Innsbruck, Austria 12/11
 - Organizer, Dark Workshop at the Galileo Galilei Institute, Italy 10/11
 - Welcome address, TeVPA11 Workshop, Stockholm U., Sweden 8/11
 - Convener "Astroparticle Phys.", HEP Europhys. Conference, Grenoble 7/11

• “Key participant”, CERN Theory Institute DMUH11, Geneva CH	7/11
• Graduate Lectures, Dublin Summer School DIAS/UCD, Dublin IE	7/11
• Invited plenary talk, WIMPs/Axion Patras Workshop, Mykonos GR	6/11
• Invited plenary talk, Royal Astronomical Society Meeting, Llandudno UK	4/11
• Seminar at LLR, E. Polytechnique, Saclay, France	3/11
• Seminar at ICC, U. of Barcelona, Spain	3/11
• Seminar at Obs. of Brera, Milano, Italy	2/11
2010	
• Invited plenary talk, <i>DISCRETE 2010</i> , U. of Rome	12/10
• Seminar at Caltech, Pasadena CA, USA	11/10
• Seminar at UCI, Irvine CA, USA	11/10
• Seminar at UCLA, Los Angeles CA, USA	11/10
• Invited plenary talk, <i>Darkness visible</i> , IoA Cambridge UK	08/10
• Graduate lectures at ICTP school, Trieste Italy	07/10
• Invited Plenary Talk, <i>Electron-Nucleus Scattering</i> , Elba Island	06/10
• Colloquium, Max-Planck-Institute for Physics, Munich, Germany	06/10
• Invited Plenary Talk, <i>Neutrino 2010</i> , Athens, Greece	06/10
• Seminar at LAPP, Montpellier, France	06/10
• Seminar at ULB, Bruxelles, Belgium	04/10
• Graduate lectures on Particle Astrophysics, U. of Roma 3, Rome Italy	04/10
• Invited Talk, IOP meeting, Imperial College. London UK	04/10
• Joint THC/APP talk, University of Amsterdam NL	03/10
• Joint Cosmology Seminar, ICTP Trieste, Italy	03/10
2009	
• Invited Talk, Workshop on future ACTs, Obs. de Paris	12/09
• 1 week-visit to Univ. Autonoma, Madrid, Spain	11/09
• Invited Plenary Talk, COSMO09 CERN, CH	09/09
• Welcome address, TeVPA09 Workshop, Stanford USA	07/09
• Physics/Astronomy Colloquium, UCSC, USA	06/09
• ACKS Seminar, SLAC Stanford USA	06/09
• 1-month visit to KIPAC Stanford USA	06/09
• Seminar, U. of Rome ”La Sapienza”. Rome, Italy	05/09
• Plenary talk, RICAP 09 Rome, Italy	05/09
• Concluding remarks TANGO in Paris, France	05/09
• Seminar, CfA Harvard U., USA	03/09
• ITC Luncheon, CfA Harvard U., USA	03/09
• Seminar, Ohio State U., Columbus OH, USA	03/09
• Invited talk, CERCA, Cleveland OH, USA	03/09
• Invited talk, GGI Florence, Italy	02/09
• Public lecture, Museum de Nantes	03/09
2008	
• Concluding Remarks at TeVPA08 workshop in Beijing, China	09/08
• Seminar, Observatory of Shanghai, China	09/08
• Invited Plenary talk, DESY Theory Workshop	09/08
• Invited plenary talk, PASCOS08, Perimeter Inst., Canada	06/08
• Invited talk, Substructures Workshop, Perimeter Inst., Canada	06/08
• Seminar, U. of Zürich, CH	05/08
• Seminar, Dept. of Phys., U. of Stockholm, Sweden	05/08
• Invited talk, PONT dAvignon, France	04/08
• 1-month visit and seminar at the Universidad Autonoma, Madrid, Spain	03/08
• Public lecture at the Institut dAstrophysique de Paris, France	03/08

• Invited review talk, 5th ILIAS meeting, Jaca, Spain	02/08
• Seminar, LPT Orsay, France	02/08
2007	
• Seminar, U. of Oxford, UK	12/07
• Chair of the LOC and SOC, TeVPA'07 Venice, Italy	08/07
• Invited Plenary Talk, at Lepton-Photon, Daegu, Korea	07/07
• Plenary talk, Cosmo-LHC workshop, CERN	07/07
• Invited Talk, SciNeGHE'07 Rome Italy	06/07
• Seminar, DESY, Hamburg	04/07
• Lectures at the Les Houches School	03/07
• Review talk, DM Visitors Program, CERN, Switzerland	03/07
• Invited talk, CTA Meeting Paris, France	03/07
• Seminar, Tuebingen U., Germany	03/07
• GLAST Symposium, Stanford, CA	01/07
• Colloquium, Arcetri Obs., Firenze. Italy	
2006	
• Seminar, CEA Saclay, France	11/06
• Invited talk, IDM 2006, Rhodes, Greece	09/06
• Rapporteur talk, TeVPA II, Madison, WI	08/08
• Invited rev. talk, BCN06, Barcelona, ES	07/06
• Seminar, KIPAC, Stanford, CA	06/06
• Chair of DM Parallel Session, SUSY 06, Newport Beach, CA	05/06
• Seminar, UC Irvine, CA	05/06
• KITP long workshop AGN06, Santa Barbara, CA	05/06
• Plenary Talk, Melchiorri Memorial C., Rome, Italy	04/06
• Seminar, Scuola Normale, Pisa, Italy	03/06
• Seminar, U. of Udine, Italy	03/06
• Seminar, MPA Heidelberg, Germany	02/06
• Seminar, Univ. Libre, Bruxelles, Belgium	01/06
2005	
• Dark Matter review at the Antares workshop, Ravenna, Italy	11/05
• Invited talk, ENTAPP Trieste, Italy	10/05
• Lectures, Les Houches School, France	09/05
• Overview talk, TeV Particle Astrophysics, Fermilab, IL, USA	07/05
• Invited talk, INFN Particle Astrophysics meeting, Italy	04/05
• Seminar, Tor Vergata U., Rome Italy	04/05
• Seminar, ISCAP, Columbia U. NY, USA	03/05
• Colloquium, Fermilab IL, USA	02/05
• Seminar, NW U. IL, USA	01/05
• Seminar, SLAC, Stanford CA, USA	01/05
• Seminar, T-8 group, Los Alamos NM, USA	01/05
2004	
• Seminar, IAS, Princeton NJ , USA	12/04
• Seminar, Caltech, Pasadena CA , USA	11/04
• Invited talk, Tamura Symposium, Austin TX USA	11/04
• Seminar, U. of Florida, Gainesville, FL, USA	10/04
• Seminar, OSU, Columbus, OH, USA	10/04
• Seminar, University of Zurich, Switzerland	07/04
• Seminar, Instituto Superior Tecnico, Lisbon, Portugal	06/04
• Talk at Dark Side of the Universe, Ann Arbor, MI, USA	05/04
• Seminar, University of Madison, WI, USA	04/04
• Seminar, UCLA, Los Angeles CA, USA	03/04

PUBLICATIONS

BOOKS

Behind the Scenes of the Universe: from the Higgs to Dark Matter, Gianfranco Bertone, Oxford University Press (2013). Translated to Dutch (Prometheus, 2014) and French (Dunod, 2014). Winner of the "Ciel et Espace" prize for the best Astronomy book in 2015.

Particle Dark Matter: Observations, Models and Searches, Edited by Gianfranco Bertone, Cambridge University Press (2010)

PAPERS IN REFEREED JOURNALS

1. **"Simulated Milky Way analogues: implications for dark matter indirect searches,"**
F. Calore, Bozorgnia, N.; Lovell, M.; Bertone, G.; Schaller, M.; Frenk, C. S.; Crain, R. A.; Schaye, J.; Theuns, T.; Trayford, J. W.
arXiv:1509.02164 [astro-ph.GA].
2. **"Dark matter annihilation radiation in hydrodynamic simulations of Milky Way haloes,"**
Schaller, Matthieu; Frenk, Carlos S.; Theuns, Tom; Calore, Francesca; Bertone, Gianfranco; Bozorgnia, Nassim; Crain, Robert A.; Fattahi, Azadeh; Navarro, Julio F.; Sawala, Till; Schaye, Joop
arXiv:1509.02166 [astro-ph.CO].
3. **"A non-parametric method for measuring the local dark matter density,"**
H. Silverwood, S. Sivertsson, P. Steger, J. I. Read and G. Bertone,
arXiv:1507.08581 [astro-ph.GA].
4. **"Global analysis of the pMSSM in light of the Fermi GeV excess: prospects for the LHC Run-II and astroparticle experiments,"**
G. Bertone, F. Calore, S. Caron, R. R. de Austri, J. S. Kim, R. Trotta and C. Weniger,
arXiv:1507.07008 [hep-ph].
5. **"Testing modified Newtonian dynamics in the Milky Way,"** F. Iocco, M. Pato and G. Bertone, arXiv:1505.05181 [astro-ph.GA].
6. **"Dynamical constraints on the dark matter distribution in the Milky Way,"**
M. Pato, F. Iocco and G. Bertone,
arXiv:1504.06324 [astro-ph.GA].
7. **"On the sensitivity of CTA to gamma-ray boxes from multi-TeV dark matter,"**
A. Ibarra, A. S. Lamperstorfer, S. L. Gehler, M. Pato and G. Bertone, arXiv:1503.06797 [astro-ph.HE].
8. **"Evidence for Dark Matter in the Inner Milky Way,"**
F. Iocco, M. Pato and G. Bertone
Accepted for publication on Nature Physics (February 2015)
9. **"Decaying dark matter: the case for a deep X-ray observation of Draco,"**
M. R. Lovell, G. Bertone, A. Boyarsky, A. Jenkins and O. Ruchayskiy,
arXiv:1411.0311 [astro-ph.CO].
10. **"No WIMP Mini-Spikes in Dwarf Spheroidal Galaxies,"**
M. Wanders, G. Bertone, M. Volonteri and C. Weniger,
arXiv:1409.5797 [astro-ph.HE].

11. **“A realistic assessment of the CTA sensitivity to dark matter annihilation,”**
H. Silverwood, C. Weniger, P. Scott and G. Bertone,
arXiv:1408.4131 [astro-ph.HE].
12. **“Profile likelihood maps of a 15-dimensional MSSM,”**
C. Strege, G. Bertone, G. J. Besjes, S. Caron, R. R. de Austri, A. Strubig and R. Trotta,
JHEP 1409 (2014) 081 [arXiv:1405.0622 [hep-ph]]
13. **“LHC and dark matter phenomenology of the NUGHM,”**
M. E. Cabrera, A. Casas, R. R. de Austri and G. Bertone,
arXiv:1311.7152 [hep-ph].
14. **“Complementarity of direct and indirect Dark Matter detection experiments,”**
C. Arina, G. Bertone and H. Silverwood, Phys.Rev. D88 (2013) 1, 013002 [arXiv:1304.5119
[hep-ph]]
15. **“CMB bounds on dark matter annihilation: nucleon energy-losses after recombination,”**
C. Weniger, P. D. Serpico, F. Iocco and G. Bertone, Phys.Rev. D87 (2013) 12, 123008
[arXiv:1303.0942 [astro-ph.CO]]
16. **“Hints on the Nature of Dark Matter from the Properties of Milky Way Satellites,”**
D. Anderhalden, A. Schneider, A. V. Maccio, J. Diemand and G. Bertone,
JCAP 1303 (2013) 014 [arXiv:1212.2967 [astro-ph.CO]]
17. **“Global Fits of the cMSSM and NUHM including the LHC Higgs discovery and new XENON100 constraints,”**
C. Strege, G. Bertone, F. Feroz, M. Fornasa, R. R. de Austri and R. Trotta,
JCAP 1304 (2013) 013 [arXiv:1212.2636 [hep-ph]]
18. **“Taming astrophysical bias in direct dark matter searches,”**
M. Pato, L. E. Strigari, R. Trotta and G. Bertone,
JCAP 1302 (2013) 041 [arXiv:1211.7063 [astro-ph.CO]]
19. **“Investigating Gamma-Ray Lines from Dark Matter with Future Observatories”**
L. Bergstrom, G. Bertone, J. Conrad, C. Farnier and C. Weniger.
JCAP 1211 (2012) 025 [arXiv:1207.6773 [hep-ph]]
20. **“The Galactic Halo in Mixed Dark Matter Cosmologies”**
D. Anderhalden, J. Diemand, G. Bertone, A. V. Maccio and A. Schneider.
JCAP 1210 (2012) 047 [arXiv:1206.3788 [astro-ph.CO]]
21. **“Fundamental statistical limitations of future dark matter direct detection experiments”**
C. Strege, R. Trotta, G. Bertone, A. H. G. Peter and P. Scott.
Phys. Rev. D 86, 023507 (2012) [arXiv:1201.3631 [hep-ph]]
22. **“Updated global fits of the cMSSM including the latest LHC SUSY and Higgs searches and XENON100 data”**
C. Strege, G. Bertone, D. G. Cerdeno, M. Fornasa, R. Ruiz de Austri and R. Trotta.
JCAP 1203, 030 (2012) [arXiv:1112.4192 [hep-ph]]
23. **“Complementarity of Indirect and Accelerator Dark Matter Searches”**
G. Bertone, D. G. Cerdeno, M. Fornasa, L. Pieri, R. Ruiz de Austri and R. Trotta.
Phys. Rev. D 85, 055014 (2012) [arXiv:1111.2607 [astro-ph.HE]]
24. **“Dark Matter distribution in the Milky Way: microlensing and dynamical constraints”**
F. Iocco, M. Pato, G. Bertone, P. Jetzer,
JCAP 1111 (2011) 029 [arXiv:1107.5810 [astro-ph.GA]].

25. **“Dark Matter Searches: The Nightmare Scenario”**
G. Bertone, D. Cumberbatch, R. R. de Austri, R. Trotta,
JCAP **1201** (2012) 004 [arXiv:1107.5813 [astro-ph.HE]].
26. **“Global fits of the cMSSM including the first LHC and XENON100 data”**
G. Bertone, D. G. Cerdeno, M. Fornasa, R. R. de Austri, C. Strege, R. Trotta
JCAP **1201** (2012) 015 [arXiv:1107.1715 [hep-ph]].
27. **“Updated CMB constraints on Dark Matter annihilation cross-sections”**
S. Galli, F. Iocco, G. Bertone, A. Melchiorri,
Phys.Rev. **D84** (2011) 027302 [arXiv:1106.1528 [astro-ph.CO]].
28. **“Complementarity of Dark Matter Direct Detection Targets”**
M. Pato, L. Baudis, G. Bertone, R. Ruiz de Austri, L. Strigari, R. Trotta
Phys. Rev. **D83** (2011) 083505 [arXiv:1012.3458 [astro-ph.CO]].
29. **“The Moment of Truth for WIMP Dark Matter”**
G. Bertone
Nature, **468** (2010) 389-393.
30. **“Discriminating the source of high-energy positrons with AMS-02”**
M. Pato, M. Lattanzi and G. Bertone
JCAP, **12**, 020 (2010) [arXiv:1010.5236 [astro-ph.HE]]
31. **“Global fits of the Minimal Universal Extra Dimensions scenario”**
G. Bertone, K. Kong, R. R. de Austri and R. Trotta
Phys. Rev. D **83**, 036008 (2011) [arXiv:1010.2023 [hep-ph]]
32. **“Gamma Ray Lines from a Universal Extra Dimension”**
G. Bertone, C. B. Jackson, G. Shaughnessy, T. M. P. Tait and A. Vallinotto
arXiv:1009.5107 [astro-ph.HE]. Submitted to PRD
33. **“Astrophysical limitations to the identification of dark matter: indirect neutrino signals vis-a-vis direct detection recoil rates”**
P. D. Serpico and G. Bertone
Phys. Rev. D **82**, 063505 (2010) [arXiv:1006.3268 [astro-ph.HE]]
34. **“Systematic uncertainties in the determination of the local dark matter density”**
M. Pato, O. Agertz, G. Bertone, B. Moore and R. Teyssier
Phys. Rev. D **82**, 023531 (2010) [arXiv:1006.1322 [astro-ph.HE]]
35. **“Effect of low mass dark matter particles on the Sun”**
M. Taoso, F. Iocco, G. Meynet, G. Bertone and P. Eggenberger
Phys. Rev. D **82**, 083509 (2010) [arXiv:1005.5711 [astro-ph.CO]]
36. **“Identification of Dark Matter particles with LHC and direct detection data”**
G. Bertone, D. G. Cerdeno, M. Fornasa, R. R. de Austri and R. Trotta
Phys. Rev. D **82**, 055008 (2010) [arXiv:1005.4280 [hep-ph]]
37. **“Implications of High-Resolution Simulations on Indirect Dark Matter Searches”**
L. Pieri, J. Lavalle, G. Bertone and E. Branchini
Phys. Rev. D **83**, 023518 (2011) [0908.0195 [astro-ph.HE]]
38. **“Dark Matter Annihilation around Intermediate Mass Black Holes: an update”**
G. Bertone, M. Fornasa, M. Taoso and A. R. Zentner
arXiv:0905.4736 [astro-ph.HE], Invited contribution to NJP Focus Issue on ”Dark Matter and Particle Physics”
39. **“Multi-messenger constraints on the annihilating dark matter interpretation of the positron excess”**
M. Pato, L. Pieri and G. Bertone
Phys. Rev. D, **80** 103510 (2009) [arXiv:0905.0372 [astro-ph.HE]]

40. **“CMB constraints on Dark Matter models with large annihilation cross-section”**
S. Galli, F. Iocco, G. Bertone and A. Melchiorri
Phys. Rev. D **80**, 023505 (2009) [arXiv:0905.0003 [astro-ph.CO]]
41. **“The WIMP Forest: Indirect Detection of a Chiral Square”**
G. Bertone, C. B. Jackson, G. Shaughnessy, T. M. P. Tait and A. Vallinotto
Phys. Rev. D **80**, 023512 (2009) [arXiv:0904.1442 [astro-ph.HE]]
42. **“Anisotropy probe of galactic and extra-galactic Dark Matter annihilations”**
M. Fornasa, L. Pieri, G. Bertone and E. Branchini
Phys. Rev. D **80**, 023518 (2009) [arXiv:0901.2921 [astro-ph]]
43. **“Gamma-ray and Radio Constraints of High Positron Rate Dark Matter Models Annihilating into New Light Particles”**
L. Bergstrom, G. Bertone, T. Bringmann, J. Edsjo and M. Taoso
Phys. Rev. D **79**, 081303 (2009) [arXiv:0812.3895 [astro-ph]]
44. **“Angular correlations in the cosmic gamma-ray background from dark matter annihilation around intermediate-mass black holes”**
M. Taoso, S. Ando, G. Bertone and S. Profumo
Phys. Rev. D **79**, 043521 (2009) [arXiv:0811.4493 [astro-ph]]
45. **“Gamma-ray and radio tests of the e^+e^- excess from DM annihilations”**
G. Bertone, M. Cirelli, A. Strumia and M. Taoso
JCAP **0903**, 009 (2009) [arXiv:0811.3744 [astro-ph]]
46. **“Search for Gamma-rays from Dark Matter annihilations around Intermediate Mass Black Holes with the H.E.S.S. experiment”**
F. Aharonian *et al.* [HESS Collaboration]
Phys. Rev. D **78**, 072008 (2008) [arXiv:0806.2981 [astro-ph]]
47. **“Pre-launch estimates for GLAST sensitivity to Dark Matter annihilation signals”**
E. A. Baltz *et al.*
JCAP **0807**, 013 (2008) [arXiv:0806.2911 [astro-ph]]
48. **“Dark Matter annihilations in Pop III stars”**
M. Taoso, G. Bertone, G. Meynet and S. Ekstrom
Phys. Rev. D **78**, 123510 (2008) [arXiv:0806.2681 [astro-ph]]
49. **“Dark Matter Candidates: A Ten-Point Test”**
M. Taoso, G. Bertone and A. Masiero
JCAP **0803**, 022 (2008) [arXiv:0711.4996 [astro-ph]]
50. **“Black Holes as Dark Matter Annihilation Boosters”**
M. Fornasa and G. Bertone
Int. J. Mod. Phys. D **17**, 1125 (2008) [arXiv:0711.3148 [astro-ph]]
51. **“Consequences of dark matter self-annihilation for galaxy formation”**
P. Natarajan, D. Croton and G. Bertone
arXiv:0711.2302 [astro-ph]
52. **“Gamma-Rays from Decaying Dark Matter”**
G. Bertone, W. Buchmuller, L. Covi and A. Ibarra
JCAP **0711**, 003 (2007) [arXiv:0709.2299 [astro-ph]]
53. **“Compact Stars as Dark Matter Probes”**
G. Bertone and M. Fairbairn
Phys. Rev. D **77**, 043515 (2008) [arXiv:0709.1485 [astro-ph]]
54. **“Dark Matter Annihilation in Substructures Revised”**
L. Pieri, G. Bertone and E. Branchini
Mon. Not. Roy. Astron. Soc. **384**, 1627 (2008) [arXiv:0706.2101 [astro-ph]]

55. **“Towards Closing the Window on Strongly Interacting Dark Matter: Far-Reaching Constraints from Earth’s Heat Flow”**
G. D. Mack, J. F. Beacom and G. Bertone
Phys. Rev. D **76**, 043523 (2007) [arXiv:0705.4298 [astro-ph]]
56. **“WIMP identification through a combined measurement of axial and scalar couplings”**
G. Bertone, D. G. Cerdeno, J. I. Collar and B. C. Odom
Phys. Rev. Lett. **99**, 151301 (2007) [arXiv:0705.2502 [astro-ph]]
57. **“Antiproton and Positron Signal Enhancement in Dark Matter Mini-Spikes Scenarios”**
P. Brun, G. Bertone, J. Lavalle, P. Salati and R. Taillet
Phys. Rev. D **76**, 083506 (2007) [arXiv:0704.2543 [astro-ph]]
58. **“Gamma-Rays from Dark Matter Mini-Spikes in M31”**
M. Fornasa, M. Taoso and G. Bertone
Phys. Rev. D **76**, 043517 (2007) [arXiv:astro-ph/0703757]
59. **“Impact of astrophysical processes on the gamma-ray background from dark matter annihilations”**
E. J. Ahn, G. Bertone and D. Merritt
Phys. Rev. D **76**, 023517 (2007) [arXiv:astro-ph/0703236]
60. **“GLAST sensitivity to point sources of dark matter annihilation”**
G. Bertone, T. Bringmann, R. Rando, G. Busetto and A. Morselli
arXiv:astro-ph/0612387
61. **“Collisionally Regenerated Dark Matter Structures in Galactic Nuclei”**
D. Merritt, S. Harfst and G. Bertone
Phys. Rev. D **75**, 043517 (2007) [arXiv:astro-ph/0610425]
62. **“Prospects for detecting dark matter with neutrino telescopes in intermediate mass black holes scenarios”**
G. Bertone
Phys. Rev. D **73**, 103519 (2006) [arXiv:astro-ph/0603148]
63. **“A new signature of dark matter annihilations: Gamma-rays from intermediate-mass black holes”**
G. Bertone, A. R. Zentner and J. Silk
Phys. Rev. D **72**, 103517 (2005) [arXiv:astro-ph/0509565]
64. **“Statistics of Magnification Perturbations by Substructure in the Cold Dark Matter Cosmological Model”**
E. Rozo, A. R. Zentner, G. Bertone and J. Chen
Astrophys. J. **639**, 573 (2006) [arXiv:astro-ph/0506573]
65. **“Dark matter dynamics and indirect detection”**
G. Bertone and D. Merritt
Mod. Phys. Lett. A **20**, 1021 (2005) [arXiv:astro-ph/0504422]
66. **“Time-dependent models for dark matter at the Galactic center”**
G. Bertone and D. Merritt
Phys. Rev. D **72**, 103502 (2005) [arXiv:astro-ph/0501555]
67. **“Gamma-ray constraint on Galactic positron production by MeV dark matter”**
J. F. Beacom, N. F. Bell and G. Bertone
Phys. Rev. Lett. **94**, 171301 (2005) [arXiv:astro-ph/0409403]
68. **“Annihilation radiation of dark matter in heterotic orbifold models”**
G. Bertone, P. Binetruy, Y. Mambrini and E. Nezri
Astropart. Phys. **24**, 44 (2005) [arXiv:hep-ph/0406083]

69. **“Gamma ray bursts and the origin of galactic positrons”**
G. Bertone, A. Kusenko, S. Palomares-Ruiz, S. Pascoli and D. Semikoz
Phys. Lett. B **636**, 20 (2006) [arXiv:astro-ph/0405005]
70. **“Particle dark matter: Evidence, candidates and constraints”**
G. Bertone, D. Hooper and J. Silk
Phys. Rept. **405**, 279 (2005) [arXiv:hep-ph/0404175]
71. **“Neutrinos from dark matter annihilations at the galactic centre”**
G. Bertone, E. Nezri, J. Orloff and J. Silk
Phys. Rev. D **70**, 063503 (2004) [arXiv:astro-ph/0403322]
72. **“Gamma rays from the Galactic bulge and large extra dimensions”**
M. Casse, J. Paul, G. Bertone and G. Sigl
Phys. Rev. Lett. **92**, 111102 (2004) [arXiv:hep-ph/0309173]
73. **“Indirect detection of Kaluza-Klein dark matter”**
G. Bertone, G. Servant and G. Sigl
Phys. Rev. D **68**, 044008 (2003) [arXiv:hep-ph/0211342]
74. **“Ultra-high energy heavy nuclei propagation in extragalactic magnetic fields”**
G. Bertone, C. Isola, M. Lemoine and G. Sigl
Phys. Rev. D **66**, 103003 (2002) [arXiv:astro-ph/0209192]
75. **“Solar seismic model as a new constraint on supersymmetric dark matter”**
I. P. Lopes, G. Bertone and J. Silk
Mon. Not. Roy. Astron. Soc. **337**, 1179 (2002) [arXiv:astro-ph/0205066]
76. **“Annihilation Radiation from a Dark Matter Spike at the Galactic Centre”**
G. Bertone, G. Sigl and J. Silk
Mon. Not. Roy. Astron. Soc. **337**, 98 (2002) [arXiv:astro-ph/0203488]
77. **“Astrophysical limits on massive dark matter”**
G. Bertone, G. Sigl and J. Silk
Mon. Not. Roy. Astron. Soc. **326**, 799 (2001) [arXiv:astro-ph/0101134]

PROCEEDINGS AND OTHER PUBLICATIONS

78. **“Identification of dark matter particles”**
G. Bertone
J.Phys.Conf.Ser. **335** (2011) 012004
Proceedings of DISCRETE 2010: Symposium on Prospects in the Physics of Discrete Symmetries 6-11 Dec 2010: Rome, Italy
79. **“Multi-messenger constraints on the annihilating dark matter interpretation of the positron excess”**
M. Pato, L. Pieri and G. Bertone
AIP Conf. Proc. **1241**, 439 (2010)
Prepared for INVISIBLE UNIVERSE INTERNATIONAL CONFERENCE: Toward a new cosmological paradigm, Paris, France, 29 Jun - 3 Jul 2009
80. **“WIMPs annihilations in Pop III stars”**
M. Taoso, G. Bertone, G. Meynet and S. Ekstrom
PoS **IDM2008**, 076 (2008)
Prepared for IDM 2008: 7th International Workshop on the Identification of Dark Matter 2008, Stockholm, Sweden, 18-22 Aug 2008
81. **“The Cosmic Ray Lepton Puzzle”**
P. Brun, G. Bertone, M. Cirelli, E. Moulin, J. F. Glicenstein, F. Iocco and L. Pieri
arXiv:1001.5408 [astro-ph.HE]

82. **“Multiwavelength/multimessenger constraints on dark matter”**
 G. Bertone
 Nucl. Phys. Proc. Suppl. **194**, 11 (2009)
83. **“Section on Prospects for Dark Matter Detection of the White Paper on the Status and Future of Ground-Based TeV Gamma-Ray Astronomy”**
 J. Buckley *et al.*
 arXiv:0812.0795 [astro-ph]
 Report from the Dark Matter Science Working group of the APS commissioned White paper on ground-based TeV gamma ray astronomy
84. **“Dark matter spikes and mini-spikes”**
 G. Bertone
 Prepared for 5th Workshop on Science with the New Generation High Energy Gamma-ray Experiments (SciNe-GHE07): *The Light of the Dark: Solving the Mysteries of the Universe, Frascati, Rome, Italy, 18-20 Jun 2007*
85. **“The effect of substructures on dark matter indirect detection with gamma-rays”**
 L. Pieri, G. Bertone and E. Branchini
 Prepared for 5th Workshop on Science with the New Generation High Energy Gamma-ray Experiments (SciNe-GHE07): *The Light of the Dark: Solving the Mysteries of the Universe, Frascati, Rome, Italy, 18-20 Jun 2007*
86. **“Indirect dark matter searches with the MAGIC telescope”**
 M. Doro *et al.* [MAGIC Collaboration]
 Prepared for 5th Workshop on Science with the New Generation High Energy Gamma-ray Experiments (SciNe-GHE07): *The Light of the Dark: Solving the Mysteries of the Universe, Frascati, Rome, Italy, 18-20 Jun 2007*
87. **“Science with the new generation high energy gamma- ray experiments”**
 M. Alvarez *et al.*
 arXiv:0712.1548 [astro-ph]
 The proceedings of 5th Workshop on Science with the New Generation High Energy Gamma-ray Experiments (SciNe-GHE07): *The Light of the Dark: Solving the Mysteries of the Universe, Frascati, Rome, Italy, 18-20 Jun 2007*
88. **“Dark Matter: A Multidisciplinary Approach”**
 G. Bertone
 arXiv:0710.5603 [astro-ph]
 Invited talk at 23rd International Symposium on Lepton-Photon Interactions at High Energy (LP07), Daegu, Korea, 13-18 Aug 2007
89. **“GLAST sensitivity to point sources of dark matter annihilation”**
 A. Morselli, G. Bertone, G. Busetto, R. Rando and T. Bringmann [GLAST LAT Collaboration]
 AIP Conf. Proc. **921**, 506 (2007)
 Prepared for 1st GLAST Symposium, Stanford, Palo Alto, 5-8 Feb 2007
90. **“Black holes as dark matter annihilation boosters”**
 G. Bertone
 AIP Conf. Proc. **903**, 693 (2007)
 Prepared for SUSY06: 14th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Irvine, California, 12-17 Jun 2006
91. **“Black holes as dark matter annihilation ’boosters”**
 G. Bertone
 J. Phys. Conf. Ser. **60**, 179 (2007)
 Prepared for 2nd Workshop on TeV Particle Astrophysics, Madison, Wisconsin, 28-31 Aug 2006

92. **“Light from darkness: Searching for Dark Matter with gamma-ray and neutrino telescopes”**
G. Bertone
New Astron. Rev. **51**, 321 (2007)
93. **“Dark matter: The connection with gamma-ray astrophysics”**
G. Bertone
Astrophys. Space Sci. **309**, 505 (2007) [arXiv:astro-ph/0608706]
Prepared for The Multi-Messenger Approach to Unidentified Gamma-Ray Sources: 3rd Workshop on the Nature of Unidentified High-Energy Sources, Barcelona, Spain, 4-7 Jul 2006
94. **“Gravitational effects on particle dark matter and indirect detection”**
G. Sigl and G. Bertone
arXiv:astro-ph/0307206
To appear in the proceedings of 38th Rencontres de Moriond on Gravitational Waves and Experimental Gravity, Les Arcs, Savoie, France, 22-29 Mar 2003
95. **“Relativistic Thomas-Fermi Model at Finite Temperatures”**
G. Bertone and R. Ruffini
arXiv:astro-ph/0105143
To appear in the proceedings of 9th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories (MG 9), Rome, Italy, 2-9 Jul 2000
96. **“Equilibrium configurations of relativistic White Dwarfs”**
G. Bertone and R. Ruffini
Nuovo Cim. B **115**, 935 (2000) [arXiv:astro-ph/0006036]
To appear in the proceedings of 3rd ICRA Network Workshop: Electrodynamics and Magneto-hydrodynamics around Black Holes, Rome and Pescara, Italy, 12-24 Jul 1999
97. **“Annihilations from the galactic centre”**
G. Bertone, J. Silk and G. Sigl
arXiv:astro-ph/0011553
Contribution to the proceedings of the 3rd International Workshop on the Identification of Dark Matter (IDM2000), York, England, 18-22 Sep 2000