

CURRICULUM VITAE

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Date and place of birth: 15th May 1962, Arezzo, Italy

Nationality: Italian

Education:

- 1996–1998, Ph. D. in Astronomy with *Università “La Sapienza” di Roma*
- “Laurea in Fisica”, achieved on April 18, 1994 with *Università degli Studi di Firenze*, full quotation.

Work experience:

- 2001 to present, Osservatorio Astrofisico di Arcetri, staff
- 2000–2001, fellowship with Osservatorio Astronomico di Collurania-Teramo
- 2000, collaboration (under contract) with Osservatorio Astronomico di Collurania-Teramo
- 1999, fellowship with Osservatorio Astronomico di Roma

Thesis dissertation on:

Radio Observations of Molecular Clouds in the Star Forming Region NGC 6357
supervisor: Marcello Felli

Ph. D. dissertation on:

A Study of Star Formation in the Vela Molecular Clouds through Multi-wavelength
Observations (from NIR to mm)
supervisor: Dario Lorenzetti

Positions held in working groups, science policy, committees and SOC:

- June 2007 to present: AMBER-VLTI Science Working Group, member
- October 2008 to June 2010 : TNG Time Allocation Committee, secretary
- member of Sardinia Radio Telescope Astrophysical Validation Team
- member of International Astronomical Union

Research Activities:

My thesis work was based on observations collected at the Swedish-ESO Submillimeter Telescope (SEST), La Silla, Chile. Two sky areas towards the HII regions G353.2+0.7 and G353.1+0.6, associated with the star forming region NGC 6357, were mapped in the molecular transitions CO(1-0), $^{13}\text{CO}(1-0)$, $\text{C}^{18}\text{O}(1-0)$, CO(2-1), $^{13}\text{CO}(2-1)$, $\text{C}^{18}\text{O}(2-1)$, $\text{HCO}^+(1-0)$ and $\text{H}^{13}\text{CO}^+(1-0)$, at millimeter wavelengths. Under the supervision of Marcello Felli, and in collaboration with Jan Brand, I carried out reduction and analysis of all spectra observed towards G353.1+0.6. After

my thesis dissertation, I continued the study of NGC 6357 working on G353.2+0.9 data. The results were reported in paper form (1997, Massi F., Brand J., Felli M., *Molecular Cloud/HII Region Interfaces in the Star Forming Region NGC 6357*, *Astronomy & Astrophysics*, 320, 972). During this period, working on more than 400 spectra, I could gain a good experience both in reduction and analysis of line data from single dish millimetric telescopes, and in the use of radio-astronomy software packages (CLASS).

As a work for my Ph. D. thesis, I was involved in reduction and analysis of Near IR images of Young Stellar Objects in the Vela Molecular Ridge, under the supervision of Dario Lorenzetti (Osservatorio Astronomico di Roma). I studied the association of intermediate-mass Class I sources in Vela with young star clusters through broadband J, H and K observations, and their mass-loss activity through narrow-band H₂ (2.12 μm) images. Two papers on this study have been published in *Astronomy & Astrophysics*, Supplement Series (Massi et al. 1999), and *Astronomy & Astrophysics*, main journal (Massi et al. 2000). By reducing tens of NIR images and having performed photometry on them, I gained an insight into NIR data managing and the use of related softwares (IRAF). Further observations of Vela were performed between January 26–29, 1998; during this period we obtained narrow- and broadband NIR images at the ESO 2.2m telescope (including H₂ and a filter centred on FeII lines at 1.7 μm), using the IRAC–2 camera. A CO(1–0) mapping of a sky area towards the Vela Molecular Ridge was carried out at SEST during the period September 1–6, and a survey of the same area in the *L* band was performed from the South Pole by Spirex, an Australian 60-cm telescope, in collaboration with L. Testi (Osservatorio astrofisico di Arcetri) and L. Vanzi (ESO).

After the Ph.D. I continued my work on both NGC 6357 and Vela. I observed again G353.2+0.9 in molecular transitions of CS, C³⁴S, C¹⁸O, CN, H₂CO e CH₃CCH with the SEST during the period 1–7 September, 1999, in collaboration with Jan Brand (Istituto di Radioastronomia) and Achim Tieftrunk (University of Koeln). Data reduction is currently in progress. NIR spectra ($R \sim 600$) of sources taken at the NTT with SOFI (ESO, La Silla) by D. Lorenzetti and T. Giannini in 1999, along with the narrow-band H₂ and FeII images of Vela previously obtained, allowed to sketch some important properties of mass-loss activity in young stellar sources associated with the Vela Molecular Ridge, finding evidence of C-shocks. A paper has been published on the *Astrophysical Journal* (Lorenzetti et al. 2002). Some of the young embedded clusters of stars found within the Vela Molecular Ridge were observed again more deeply and enlarging the field of view with SOFI at the NTT. The results were discussed in a contribution published on *The ESO Messenger* (Testi L., Vanzi L., Massi F., 2001) and in a paper (Massi et al 2006).

In the framework of the scientific activity carried out by the Infrared Group of the Osservatorio Astronomico di Roma, a NIR survey of star forming regions employed SWIRCAM. This is a camera based on a NICMOS3-class detector equipping the AZT-24 1.1m telescope in Campo Imperatore (on the Gran Sasso). I took part in both the observations and the data reduction of JHK and H₂ images of IC1396, unveiling the presence of jets from young stellar objects within that region. The results were presented in a paper published in *Astronomy & Astrophysics* (Nisini et al., 2001). I was also involved in a project aimed to the study of star formation in high galactic latitude clouds towards the Draco region, in collaboration with L. Angelo Antonelli (Osservatorio Astronomico di Roma). A field containing a cluster of X-ray sources and discovered by Beppo-SAX was observed at optical wavelengths (BVR) with OiG at the TNG 3.5m telescope and in the NIR (JHK) both with

ARNICA at the TNG and with SWIRCAM at the AZT24.

In March 2000, I joined the SWIRT group at the Osservatorio Astronomico di Collurania-Teramo. SWIRT is a project devoted to the search of supernova events in the NIR through a monitoring of a large sample of galaxies. The observations are carried out in the H band with SWIRCAM at the AZT-24 telescope (see above). In particular, I worked on observational and data-reduction issues, and I developed a software for the identification of supernovae through a comparison of images. At the same time, I participated in the optical observations with the TNT, a 0.7m telescope located in Teramo. Analysis of NIR and optical light curves of supernovae SN1999el and SN2000E have been published on ApJ (Di Carlo et al. 2002; Valentini et al. 2003).

Since November 1st, 2001, I have held a staff position in the Osservatorio astrofisico di Arcetri where currently I deal with star formation issues. In particular, I have been carrying out both NIR to mm observations and data reduction of observations towards the Vela Molecular Ridge, G353.2+0.9, S235, Herbig-Haro objects, HII regions associated with triggered star formation and a few Bok Globules. I have worked with satellite data from the Spitzer IRAC/MIPS instruments. As a member of the local radio group, I have been also performing radio observations of water masers with the MEDICINA radiotelescope. Since 2008, I have also been involved in NIR interferometric observations of young stars with AMBER/VLTI.

Experience on Computers and Data Analysis:

- *Operating Systems:* Unix, Linux, Windows95, WindowsXP
- *Programming Languages:* Fortran, SPP, html, css, PHP, MySQL, Python
- *Astrophysical Packages:* GILDAS (CLASS, GREG), IRAF, IDL, AMDLIB, CASA, ASAP

Refereed Papers:

- Massi F., Brand J., Felli M.: “*Molecular Cloud/HII Region Interfaces in the Star Forming Region NGC 6357*” *Astronomy and Astrophysics* 320, 972 (1997)
- Massi F., Giannini T., Lorenzetti D. et al.: *Star Formation in the Vela Molecular Clouds III. Near IR Images and mm Photometry of D-cloud IRAS Sources* *Astronomy and Astrophysics Supplement Series* 136, 471 (1999)
- Massi F., Lorenzetti D., Giannini T., Vitali F.: *Star Formation in the Vela Molecular Clouds IV. Young Embedded Star Clusters towards D-cloud Class I Sources* *Astronomy & Astrophysics* 353, 598 (2000).
- Nisini B., **Massi F.**, Vitali F., et al.: “*Multiple H₂ Protostellar Jets in the Bright-Rimmed Globule IC1396-N*”, *Astronomy & Astrophysics* 376, 553 (2001).
- Lorenzetti D., Giannini T., Vitali F., **Massi F.**, Nisini B.: “*Near-IR H₂ and [FeII] Imaging and Spectroscopy of New Jets in the Vela Molecular Clouds*”, *The Astrophysical Journal* 564,839 (2002).
- Di Carlo E., Massi F., Valentini G. et al.: “*Optical and Infrared Observations of Supernova SN 1999el*”, *The Astrophysical Journal* 573, 144 (2002).
- Massi F., Lorenzetti D., Giannini T.: “*Star Formation in the Vela Molecular Ridge V. Young Stellar Objects and Star Clusters towards the C-cloud*” *Astronomy & Astrophysics* 399, 147 (2003).

- Valentini G., Di Carlo E., **Massi F.**, et al.: “*Optical and Near-Infrared Photometry of the Type Ia Supernova 2000E in NGC6951*”, *The Astrophysical Journal* 595, 779 (2003).
- **Massi F.**, Codella C., Brand J.: “*Discovery of [FeII]- and H₂-emission from protostellar jets in the CB3 and CB230 globules*”, *Astronomy & Astrophysics* 419, 241 (2004).
- Felli M., **Massi F.**, et al.: “*New Light on the S235A-B Star Forming Region*”, *Astronomy & Astrophysics* 420, 553 (2004).
- Caratti o Garatti A., Giannini T., Lorenzetti D., **Massi F.**, et al.: “*Physical and Kinematical Properties of a Newly Discovered Star Cluster and its Associated Jet in the Vela Molecular Clouds*”, *Astronomy & Astrophysics* 422, 141 (2004).
- Giannini T., **Massi F.**, et al.: “*Star Formation in the Vela Molecular Clouds: a New Protostar Powering a a Bipolar Jet*”, *Astronomy & Astrophysics* 433, 941 (2005).
- Nisini B., Bacciotti F., Giannini T., **Massi F.**, et al.: “*A Combined Optical/Infrared Spectral Diagnostic Analysis of the HH1 Jet*”, *Astronomy & Astrophysics* 441, 159 (2005)
- Zavagno A., Deharveng L., Comeron F., Brand J., **Massi F.**, et al.: “*Triggered Massive-Star Formation on the Borders of Galactic HII Regions II. Evidence for the Collect and Collapse Process around RCW 79*” *Astronomy & Astrophysics* 446, 171 (2006).
- **Massi F.**, Testi L., Vanzi L.: “*The IMF and Star Formation History of the Stellar Clusters in the Vela D Cloud*” *Astronomy & Astrophysics* 448, 1007 (2006).
- Felli M., Massi F., Robberto M., Cesaroni R.: “*New Signposts of Massive Star Formation in the S235A-B Region*” *Astronomy & Astrophysics* 453, 911 (2006).
- Podio L., Bacciotti F., Nisini B., Eisloffel J., **Massi F.**, et al.: “*Recipes for Stellar Jets: Results of Combined Optical/Infrared Diagnostics*” *Astronomy & Astrophysics* 456, 189 (2006).
- Codella C., Brand J., Massi F., et al.: “*Inside the Large Globule CB205: YSOs Feeding Multiple Outflows*” *Astronomy & Astrophysics* 457, 891 (2006).
- Deharveng L., Lefloch B., **Massi F.**, et al.: “*Triggered Massive-Star Formation on the Borders of Galactic HII Regions. III. Star Formation at the Periphery of Sh2-219*” *Astronomy & Astrophysics* 458, 191 (2006).
- Elia D., **Massi F.**, et al.: “*Mapping Molecular Emission in Vela Molecular Ridge Cloud D*” *the Astrophysical Journal* 655, 316 (2007).
- **Massi F.**, et al.: “*Star formation in the Vela molecular ridge. Large scale mapping of cloud D in the mm continuum*” *Astronomy & Astrophysics* 466, 1013 (2007).
- De Luca M., Giannini T., Lorenzetti D., **Massi F.**, et al.: “*Near- and Far-Infrared Counterparts of Millimeter Dust Cores in the Vela Molecular Ridge Cloud D*” *Astronomy & Astrophysics*, in Press (Astro-ph0704.1228)
- Giannini T., Lorenzetti D., De Luca M., Nisini B., Marengo M., Allen L., Smith H. A., Fazio G., **Massi F.**, Elia D., Strafella F.: “*Spitzer-MIPS Survey*

of the Young Stellar Content in the Vela Molecular Cloud-D” *the Astrophysical Journal*, in Press (Astro-ph0709.1060)

- Felli M., Brand J., Cesaroni R., Codella C., Comoretto G., Di Franco S., **Massi F.**, et al.: “Water Maser Variability over 20 Years in a Large Sample of Star Forming Regions: The Complete Database” *Astronomy & Astrophysics*, in Press (2007)
- Di Carlo E., Corsi C., **Massi F.**, et al.: “Near-Infrared Observations of the Type Ib Supernova SN2006jc: Evidence of Interactions with dust” *the Astrophysical Journal* 684, 471 (2008)
- Meilland A., Millour F., Stee P., Spang A., Petrov R. G., Bonneau D., Perraut K., **Massi F.** *δ Cen: a new binary Be star detected by VLTI/AMBER spectro-interferometry* *Astronomy & Astrophysics* 488, L67 (2008)
- **Massi F.**, Codella C., Brand J., Di Fabrizio L., Wouterloot J. G. A. “NIR spectroscopy of the low-mass YSO CB230-A and its jet: cold photosphere or an active accretion disk?” *Astronomy & Astrophysics* 490, 1079 (2008)
- Le Bouquin J.-B., Absil O., Benisty M., **Massi F.**, et al.: “The spin-orbit alignment of the Fomalhaut planetary system probed by optical long baseline interferometry ” *Astronomy & Astrophysics* 498, L41 (2009)
- Beltrán M. T., **Massi F.**, et al.: “The Stellar Population and Complex Structure of the Bright-Rimmed Cloud IC1396N” *Astronomy & Astrophysics* 504, 97 (2009)
- Driebe T., et al. (including **Massi F.**): “Resolving the Asymmetric Inner Wind Region of the Yellow Hypergiant IRC+10420 with VLTI/AMBER in Low and High Spectral Resolution Mode” *Astronomy & Astrophysics* 507, 301 (2009)
- Olmi L. et al. (including **Massi F.**): “The BLAST Survey of the Vela Molecular Cloud: Physical Properties of the Dense Cores in Vela-D” *the Astrophysical Journal* 707, 1836 (2009)
- Benisty M., Natta A., Isella A., Berger J.-P., **Massi F.**, et al.: “Strong NIR emission in the sub-AU disk of the Herbig Ae star HD 163296: evidence for refractory dust?” *Astronomy & Astrophysics* 511, A74 (2010)
- Molinari S., et al. (including **Massi F.**): “Hi-GAL: the Herschel infrared Galactic Plane Survey *PASP* 122, 314 (2010)
- **Massi F.**, Di Carlo E., Codella C., Testi L., Vanzi L., Gomes J.: “Testing circumstellar disk lifetimes in young embedded clusters associated with the Vela Molecular Ridge *Astronomy & Astrophysics* 516, A52 (2010)
- Molinari S., et al. (including **Massi F.**): “Clouds, filaments and protostars: the Herschel Hi-GAL Milky Way *Astronomy & Astrophysics* 518, L100 (2010)
- Strafella F., et al. (including **Massi F.**): “The Spitzer-IRAC Point Source Catalog of the Vela-D Cloud *the Astrophysical Journal* 719, 9 (2010)
- Olmi L., et al. (including **Massi F.**): “The BLAST Survey of the Vela Molecular Cloud: Dynamical Properties of the Dense Cores in Vela-D *the Astrophysical Journal* in Press (2010)
- Benisty M., et al. (including **Massi F.**): “The 2008 outburst in the young stellar system ZCMa: I. Evidence of an enhanced bipolar wind on the AU-scale *Astronomy & Astrophysics* 516, L3 (2010)

- Caratti o Garatti A., et al. (including **Massi F.**): “The outburst of an embedded low-mass YSO in L1641, *Astronomy & Astrophysics*, 526, L1 (2011)
- Russeil D., et al. (including **Massi F.**): “Giving physical significance to the Hi-GAL data: determining the distance of cold dusty cores in the Milky Way” *Astronomy & Astrophysics* 526, 151 (2011)
- Brand J., **Massi F.**, Zavagno A., Deharveng L., Lefloch B.: “Triggered star formation at the borders of the HII region Sh2-217” *Astronomy & Astrophysics* 527, A62 (2011)
- Ohnaka K., et al. (including **Massi F.**): “Imaging the dynamical atmosphere of the i red supergiant Betelgeuse in the CO first overtone lines with VLTI/AMBER” *Astronomy & Astrophysics* 529, 163 (2011)
- Tatulli E., et al. (including **Massi F.**): “Constraining the structure of the planet-forming region in the disk of the Herbig Be star HD 100546” *Astronomy & Astrophysics* 531, 1 (2011)
- Benisty M., et al. (including **Massi F.**): “A low optical depth region in the inner disk of the Herbig Ae star HR 5999” *Astronomy & Astrophysics* 531, 84 (2011)
- Ohnaka K., et al. (including **Massi F.**): “Spatially resolving the outer atmosphere of the M giant BK Virginis in the CO first overtone lines with VLTI/AMBER” *Astronomy & Astrophysics* 537, A53 (2012)
- Giannetti A., Brand J., **Massi F.**, et al.: “Molecular clouds under the influence of massive stars in the Galactic HII region G353.2+0.9” *Astronomy & Astrophysics* 538, A41 (2012)
- Beltrán M. T., **Massi F.**, Fontani F., Codella C., López R.: “Close encounters of the protostellar kind in IC 1396N” *Astronomy & Astrophysics* 542, L26 (2012)
- Morales Ortiz J. L., et al. (including **Massi F.**): “A spectral line survey of the starless and proto-stellar cores detected by BLAST toward the Vela-D molecular cloud” *Astronomy & Astrophysics* 543, A65 (2012)
- Vural J., et al. (including **Massi F.**): “Revealing the inner circumstellar disk of the T Tauri star S Coronae Australis N using the VLTI” *Astronomy & Astrophysics* 543, A162 (2012)
- Wang Y., et al. (including **Massi F.**): “AMBER/VLTI observations of the B[e] star MWC 300” *Astronomy & Astrophysics* 545, L10 (2012)
- Cesaroni R., **Massi F.**, et al.: “A close-up view of a bipolar jet: Sub-arcsecond near-infrared imaging of the high-mass protostar IRAS 20126+4104” *Astronomy & Astrophysics* 549, A146 (2013)
- Stee Ph., et al. (including **Massi F.**): “Evidence of an asymmetrical Keplerian disk in the Br γ and He I emission lines around the Be star HD 110432” *Astronomy & Astrophysics* 550, A65 (2013)
- Meilland A., et al. (including **Massi F.**): “The binary Be star δ Scorpii at high spectral and spatial resolution. II. The circumstellar disk evolution after the periastron” *Astronomy & Astrophysics* 550, L5 (2013)
- Garcia P. J. V., et al. (including **Massi F.**): “Pre-main-sequence binaries with tidally disrupted discs: the Br γ in HD 104237” *MNRAS* 430, 1839 (2013)
- Oliva T., et al. (including **Massi F.**): “A GIANO-TNG high resolution IR

- spectrum of the airglow emission ” *Astronomy & Astrophysics* 555, A78 (2013)
- Origlia L., et al. (including **Massi F.**): “GIANO-TNG spectroscopy of red supergiants in the young star cluster RSGC2 ” *Astronomy & Astrophysics* 560, 460 (2013)
 - Vural J., et al. (including **Massi F.**): “The inner circumstellar disk of the UX Orionis star V1026 Scorpii *Astronomy & Astrophysics* 564, 118 (2014)
 - Vural J., et al. (including **Massi F.**): “Study of the sub-AU disk of the Herbig B[e] star HD 85567 with near-infrared interferometry *Astronomy & Astrophysics* 569, A25 (2014)
 - **Massi F.**, Giannetti A., Di Carlo E., Brand J., Beltran M. T., Marconi G.: “Young open clusters in the Galactic star forming region NGC 6357 *Astronomy & Astrophysics*, 573, A95 (2015)
 - Strafella F., et al. (including **Massi F.**): “The Young Stellar Object Population in the Vela-D Molecular Cloud *Astrophysical Journal*, 798, 104 (2015)
 - Oliva E., et al. (including **Massi F.**): “Lines and continuum sky emission in the near infrared: observational constraints from deep high spectral resolution spectra with GIANO-TNG *Astronomy & Astrophysics*, 581, A47 (2015)
 - Caratti o Garatti A., et al. (including **Massi F.**): “AMBER/VLTI high spectral resolution observations of the Br γ emitting region in HD 98922. A compact disc wind launched from the inner disc region *Astronomy & Astrophysics*, 582, A44 (2015)
 - Tinetti G., et al. (including **Massi F.**): “The EChO science case *Experimental Astronomy*, 40, 329 (2015)
 - Faggi S., et al. (including **Massi F.**): “Search for ammonia in comet C/2012 S1 (ISON) *Planetary and Space Science*, 118, 173 (2015)
 - Origlia L., et al. (including **Massi F.**): “GIANO-TNG spectroscopy of red supergiants in the young star cluster RSGC3 *Astronomy & Astrophysics*, 585, A14 (2016)
 - Chen L., et al. (including **Massi F.**): “Monte-Carlo radiative transfer simulation of the circumstellar disk of the Herbig Ae star HD 144432 *Astronomy & Astrophysics*, 586, A54 (2016)
 - Kurosawa R., et al. (including **Massi F.**): “Probing the wind launching regions of the Herbig Be star HD 58647 with high spectral resolution interferometry *MNRAS*, 457, 2236 (2016)
 - Pecchioli T., Sanna N., **Massi F.**, Oliva E.: “Deriving the extinction to young stellar objects using [FeII] near-infrared emission lines. Prescriptions from GIANO high-resolution spectra *PASP*, 128, 3001 (2016)
 - Faggi S., et al. (including **Massi F.**): “Detailed Analysis of Near-IR Water (H₂O) Emission in Comet C/2014 Q2 (Lovejoy) with the GIANO/TNG Spectrograph *Astrophysical Journal*, 830, 157 (2016)
 - Lamberts A., et al. (including **Massi F.**): “Numerical simulations and infrared spectro-interferometry reveal the wind collision region in gamma2 Velorum
 - Prandoni I., et al. (including **Massi F.**): “The Sardinia Radio Telescope: From a Technological Project to a Radio Observatory *Astronomy & Astrophysics*, 608, A40 (2017)

- González-Álvarez, et al. (including **Massi F.**): “The GAPS Programme with HARPS-N at TNG XV. A substellar companion around a K giant star identified with quasi-simultaneous HARPS-N and GIANO measurements *Astronomy & Astrophysics*, 606, A51 (2017)
- Sanna A., Moscadelli L., Goddi C., Krishnan V., **Massi F.**: “Protostellar Outflows at the Earliest Stages (POETS). I. Radio thermal jets at high resolution nearby H₂O maser sources *Astronomy & Astrophysics*, 619, A107 (2018)
- Sanna A., et al. (including **Massi F.**): “Protostellar Outflows at the Earliest Stages (POETS). II. A possible radio synchrotron jet associated with the EGO G035.02+0.35 *Astronomy & Astrophysics*, in publication (2019)

Other Publications:

- Lorenzetti D., Massi F., Scaramella R., et al.: “*Star Formation in the Vela Molecular Clouds: H₂ Imaging Survey*”, in F. Garzón, N. Epchtein, A. Omont, B. Burton and P. Persi (Eds.), *The Impact of Large Scale Near-IR Sky Surveys*, Proceedings of the 3rd DENIS Euroconference, Kluwer Academic Press, Dordrecht 1997
- Massi F., Lorenzetti D., Vitali F.: “*Near Infrared H₂ imaging of YSOs in Vela Molecular Clouds*” in Malbet F., Castets A. (eds.), *Low Mass Star Formation from Infall to Outflow - Poster Proceedings of the IAU Symposium n. 182 on “Herbig-Haro Flows and the Birth of Low Mass Stars*”, Observatoire de Grenoble 1997
- Massi F., Lorenzetti D., Giannini T., Vitali F.: “*Young Embedded Star Clusters Associated with Intermediate Mass Star Progenitors in the Vela Molecular Ridge*” in Favata F., Kaas A. A., Wilson A. (eds.), Proc. of 33rd ESA Symp. *Star Formation from the Small to the Large Scale*, ESA, SP-445, 2000
- D’Alessio F., Di Paola A., Giannini T., Lorenzetti D., Massi F., Nisini B., Pedichini F., Speziali R., Vitali F., Codella C.: “*Near-Infrared H₂ Imaging of the Bright-Rimmed Globule IC1396-N*” in Favata F., Kaas A. A., Wilson A. (eds.), Proc. of 33rd ESA Symp. *Star Formation from the Small to the Large Scale*, ESA, SP-445, 2000
- Testi L., Vanzi L., **Massi F.**: “*Young Stellar Clusters in the Vela Molecular Cloud*”, *The ESO Messenger* 103, 28 (2001).
- **Massi F.**, Felli M., Cesaroni R., *Intermediate Luminosity YSOs in the S235A-B Star Forming Region*, in Press on the Proceedings of “the Young Local Universe” conference (2004).
- **Massi F.**, Testi L., Vanzi L.: *IMF in Small Young Embedded Star Clusters*, in Press on the Proceedings of “IMF@50” conference (2004).
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- **Massi, F.**, Elia, D., Giannini, T., Lorenzetti, D., Nisini, B.: *A large scale view of molecular gas and dust towards cloud D of the Vela Molecular Ridge*, in Wilson A. (ed.), Proc. of *The Dusty and Molecular Universe: A Prelude to Herschel and ALMA*, ESA SP-577, 2005.
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- **Massi F.**, Codella C., Brand J., Di Fabrizio L., Wouterloot J.: *Outflows and jets from low mass protostars in Bok globules: the case of CB230*, in Testi L., Natta A. (eds.), Proceedings of “*Low-mass stars and Brown Dwarfs: IMF, accretion and activity*”, Mem. SAIIt 76, 400 (2005)
- Podio L., Bacciotti F., Nisini B., Giannini T., **Massi F.**, et al.: *Potential of a combined optical/NIR diagnostics for protostellar jets*, in Testi L., Natta A. (eds.), Proceedings of “*Low-mass stars and Brown Dwarfs: IMF, accretion and activity*”, Mem. SAIIt 76, 396 (2005)

- Podio L., Bacciotti F., Nisini B., Giannini T., **Massi F.**, et al.: *Studying Protostellar Jets through a Combined Infrared/Optical Spectral Analysis in Ap³SS Lecture Series, “Cores to Clusters: Star Formation with Next Generation Telescopes”*, Springer, New York, p. 203 (2005).
- Zavagno A., Deharveng L., Brand J., **Massi F.**, et al.: “*Triggered Massive-Star Formation on the Borders of Galactic HII Regions*” in Cesaroni R., Felli M., Churchwell E., Walmsley, M. (eds.), Proc. of the IAU Symp. 227 “*Massive star birth: A crossroads of Astrophysics*” Cambridge University Press, pp.346-351 (2005).
- Codella C., Beltrán M. T., Panella D., Cesaroni R., Nesti R., **Massi F.**: “*The study of the high-density gas distribution in SFRs with the SRT: the test cases of L1641-S3 and CepA-East*” *Memorie della Societa Astronomica Italiana Supplement*, vol. 10, p. 159 (2006)
- **Massi F.**, et al.: “Large-scale mapping of molecular clouds: what can we learn?” *Memorie della Societa Astronomica Italiana Supplement*, vol. 10, p. 165 (2006)
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- **Massi F.**, Moscadelli L., Arcidiacono C., Bacciotti F. “The innermost regions of massive protostars traced by masers, high-resolution radio continuum, and near-infrared imaging IAU Symp. 336 “*Astrophysical Masers: Unlocking the Mysteries of the Universe*” Cambridge University Press, pp.289-290 (2017)
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Circulars:

- **Massi F.**, Dolci M., Di Carlo E.: “*GRB010222 R-BAND OBSERVATION*”, GCN 980, 2001
- Valentini G., **Massi F.**, Dolci M., Di Carlo E.: “*GRB010222 further R-band photometry*”, GCN 986, 2001

Talks at Conferences:

- *NIR Observations of Jets in the Vela Molecular Clouds*, 4th French-Italian Meeting on Young Stellar Objects, Gif-sur-Yvette (France), 9–10 September, 1996.
- *Molecular Clouds Bordering HII Regions in the Star Forming Complex NGC 6357*, XXIX YERAC, Riccione (Italy), 23–26 September, 1996.
- *Formation of Intermediate Mass Stars in Vela*, 5th Workshop on Young Stellar Objects, Ponza 25–27 May, 1999.
- *Formazione di Stelle di Massa Intermedia nella Regione di Vela*, Scuola Nazionale di Astrofisica, V ciclo, I corso, Carloforte 7–12 June, 1999.
- *Young Star Clusters in the Vela Molecular Clouds*, 6th Franco-Italian Colloquium on Star Formation, Lanslebourg January 31 - February 2, 2002.
- *Intermediate-Luminosity YSOs in the S235A-B Region*, XXIV Moriond Astrophysics Meeting, La Thuile March 21–28, 2004
- *Osservazioni di regioni di formazione stellare*, Astrofisica in Toscana 2, Pisa (Italy), November 26, 2004.
- *Two Examples of Triggered Star Formation: S217 and S219*”, ArGreSa Meet-

ing, Florence (Italy), April 26–28, 2005.

- *Mapping su grande scala di nubi molecolari: cosa si può imparare*, Scienza con SRT, Bologna (Italy) May 10–11, 2005.
- *High-mass end of the Initial Mass Function*, “The Birth and Influence of Massive Stars”, CONSTELLATION Work Package 2 - Interim Meeting, Prague, September 14–17, 2009
- *AMBER observations of circumstellar disks around Herbig AeBe stars*, “The Origin and Fate of the Sun: Evolution of Solar-mass Stars Observed with High Angular Resolution”, ESO meeting, Garching, March 2–5, 2010.
- *Optical Interferometry at the VLTI: Italy’s contribution and the latest advancements in understanding the circumstellar environment of young stars* “30 years of Italian participation to ESO”, EWASS 2012, Symposium 10, Roma, July 2–3, 2012
- *Probing massive star-forming regions with LBT: the latest results from AO observations*, “Workshop Nazionale dedicato al Large Binocular Telescope”, Padova, February 12–13, 2014
- *Physical conditions in disks and winds around Herbig Ae/Be stars from high-resolution, wide-band NIR spectroscopy with GIANO*, “Exchanging mass, momentum, and ideas: connecting accretion and outflows in Young stellar objects”, ESA/ESTEC, Noordwijk, 27–29 October 2015
- *High Spatial and spectral Resolution in the NIR through Ground Instrumentation*, Meeting INAF-Macroarea 2: Stelle, popolazioni stellari e mezzo interstellare, Bologna, June 15–16, 2016
- *Unveiling the circumstellar physics of Young Stellar Objects with GIANO and GRAVITY*, “La missione e le prospettive scientifiche di TNG nell’astrofisica del 2020”, Padova, March 1–3, 2017
- *GIARPS/GRAVITY survey: broad-band 0.44-2.4 micron high-resolution spectra of T-Tauri and Herbig AeBe stars. Combining high spatial and high spectral resolution data to unveil the inner disc physics*, “JETSET FP6, ‘Jet Simulation, Experiments, Theory’ 10 years later, what next?”, Meudon, May 22–24, 2018

Participations at Schools and Conferences:

- 4th French-Italian Meeting on Young Stellar Objects, Gif-Sur-Yvette (Paris, France), 9–10 September, 1996.
- XXIX Young Radio Astronomers Conference (YERAC), Riccione (Italy), 23–26 September, 1996.
- IAU Symposium n. 182, “Herbig-Haro Flows and the Birth of Low Mass Stars”, Chamonix (France) 20–24 January 1997.
- Scuola Nazionale di Astrofisica IV ciclo (97–98) - 4° corso: Interstellar medium - AGN’s, Riccione (Italy) 5–10 October, 1998.
- Workshop sull’astronomia millimetrica e submillimetrica in Italia, Florence (Italy) 28–29 October, 1998.
- 5th Workshop on Young Stellar Objects, Ponza (Italy) 25–27 May, 1999.
- Scuola Nazionale di Astrofisica V ciclo (1999–2000) - 1° corso: Popolazioni

stellari come orologi cosmici - Dal lontano infrarosso al millimetro, Carloforte, Isola di S. Pietro (Italy), 7–12 June, 1999.

- Scuola Nazionale di Astrofisica V ciclo (1999–2000) - 2° corso: Proprietá globali delle galassie - Strumentazione spaziale, Marciana Marina, Isola d'Elba (Italy), 20–25 September 1999.
- 33rd ESLAB Symposium, “Star Formation from the Small to the Large Scale”, ESTEC, Noordwijk (NL), 2–5 November 1999.
- Workshop Volterra2000, “High-Mass Star Formation: an Origin in Clusters?”, Volterra (Italy) 31 maggio - 3 June 2000.
- XLV Congresso nazionale SAIIt, Bologna (Italy) May 2–5, 2001.
- Convegno Nazionale di Astronomia Infrarossa, Perugia (Italy) 4–7 December 2001.
- International School on “Young Stellar Clusters: the Angular Limit”, Grenoble (France) 13–15 December 2001.
- 6th Franco-Italian Colloquium on Star Formation, Lanslebourg (France) January 31 - February 2, 2002.
- Third IRAM Millimeter Interferometry School, Grenoble (France) September 30 - October 5, 2002.
- XXIV Moriond Astrophysics Meeting, “The Young Local Universe”, La Thuile (Italy) March 21–28, 2004.
- IMF@50, “The Initial Mass Function 50 Years Later”, Abbazia di Spineto, Siena (Italy) May 16–20, 2004.
- “Low-mass Stars and Brown Dwarfs: IMF, Accretion and Activity”, Volterra (Italy), October 17–19, 2004.
- “Astrofisica in Toscana 2”, Pisa (Italy), November 26, 2004,
- “ArGreSa meeting”, Florence (Italy), April 26–28, 2005.
- Workshop on “Scienza con SRT”, Bologna (Italy), May 10–11, 2005.
- IAU Symposium n. 227, “Massive Star Birth: A Crossroads of Astrophysics”, Acireale (Italy) 16–20 May 2005.
- ELBA 2006, 2nd European School on “Jets from Young Stars: High Angular Resolution Observations”, Marciana Marina (Elba Island - Italy), September 4–8, 2006.
- “Science with ALMA: a new era for Astrophysics”, Madrid (Spain), November 13–17, 2006
- “The Birth and Influence of Massive Stars”, CONSTELLATION Work Package 2 - Interim Meeting, Prague, September 14–17, 2009.
- “AMBER Data Reduction Workshop, Nice (Francia), January 18–20, 2010
- “The Origin and Fate of the Sun: Evolution of Solar-mass Stars Observed with High Angular Resolution, ESO meeting, Garching, March 2–5, 2010.
- “CASA Tutorial at the Italian ALMA Regional Centre, Bologna (Italy), April 27–29, 2010
- “The Origin of Stellar Masses”, Tenerife (Spagna), October 18–22 2010

- “30 years of Italian participation to ESO”, EWASS 2012, Symposium 10, Roma, July 2–3, 2012
- “Workshop Nazionale dedicato al Large Binocular Telescope”, Padova, February 12–13, 2014
- “From Galactic to Extragalactic Star Formation GESF2014”, Marseille, September 8–12, 2014
- “Frontiere dell’astrofisica italiana: come ottimizzare il ritorno scientifico delle grandi infrastrutture internazionali”, Roma, March 18–19, 2015
- “Exchanging mass, momentum, and ideas: connecting accretion and outflows in Young stellar objects”, ESA/ESTEC, Noordwijk, 27–29 October 2015
- Meeting INAF-Macroarea 2: Stelle, popolazioni stellari e mezzo interstellare, Bologna, June 15–16, 2016.
- “La missione e le prospettive scientifiche di TNG nell’astrofisica del 2020”, Padova, March 1–3, 2017.
- “Astrophysical Masers: Unlocking the Mysteries of the Universe”, IAU Symposium 336, Cagliari, September 4–8, 2017.
- “JETSET FP6, ‘Jet Simulation, Experiments, Theory’ 10 years later, what next?”, Meudon, May 22–24, 2018.

Talks and seminars at Scientific Institutes:

- *Formazione stellare nelle nubi molecolari di Vela*, July 24, 1997, Osservatorio Astronomico di Roma, Italy
- *Formazione di stelle di massa intermedia: un approccio osservativo multifrequenza (dall’infrarosso al millimetro)*, March 16, 1999, Osservatorio astronomico di Roma, Italy
- *Formazione di stelle di massa intermedia: un approccio osservativo multifrequenza (dall’infrarosso al millimetro)*, March 18, 1999, Osservatorio astrofisico di Arcetri, Italy
- *Immagini infrarosse: trattamento e analisi dei dati*, November 23, 1999, Osservatorio astronomico di Teramo
- *Formazione di stelle in ammassi*, February 21, 2001, Osservatorio astronomico di Collurania-Teramo
- *NIR photometry and spectroscopy of jets from YSOs in the Vela molecular clouds*, June 26, 2001, Osservatorio astrofisico di Arcetri
- *Formation of star clusters: an observational approach*, November 26, 2002, Osservatorio astrofisico di Arcetri
- *Il ruolo delle osservazioni infrarosse nello studio dei processi di formazione stellare*, June 9, 2004, Osservatorio astronomico di Collurania-Teramo (for students of the “master universitario di I livello in astrofisica”, Dipartimento di scienze della comunicazione dell’Università di Teramo)
- *Fotometria infrarossa di stelle estinte con IRAF*, June 9, 2004, Osservatorio astronomico di Collurania-Teramo (for students of the “master universitario di I livello in astrofisica”, Dipartimento di scienze della comunicazione dell’Università di Teramo)
- *Massive star formation in the S235 region*, June 29, 2004, Osservatorio as-

trofisico di Arcetri

- *Star Formation in the Vela Molecular Ridge: from Molecular Clouds to Young Embedded Clusters*, May 25, 2006, Departament d'Astronomia i Meteorologia, Facultat de Fisica, Universitat de Barcelona
- *Star Formation in the Vela Molecular Ridge: from Molecular Clouds to Young Embedded Clusters*, June 22, 2006, Osservatorio astrofisico di Arcetri
- *Star Formation in the Vela Molecular Ridge: from Molecular Clouds to Young Embedded Clusters*, July 6, 2006, Osservatorio astronomico di Collurania-Teramo
- *Optical Interferometry with the VLTI and Arcetri's Program on Young Stars*, November 3, 2011, Osservatorio astrofisico di Arcetri
- *Optical Interferometry with the VLTI and Arcetri's Program on Young Stars*, December 12, 2011, Istituto di Radioastronomia, Bologna
- *Optical Interferometry with the VLTI and Arcetri's Program on Young Stars*, April 11, 2012, ASI-ASDC, Roma
- *Optical Interferometry with the VLTI and Arcetri's Program on Young Stars*, April 12, 2012, Osservatorio Astronomico di Collurania-Teramo
- *INTERFEROMETRIA OTTICA: dalla nascita ai recenti risultati ottenuti con il Very Large Telescope Interferometer di ESO*, June 12, 2012, Università del Salento, Dipartimento di Matematica e Fisica
- *Optical Interferometry with the VLTI and Arcetri's Program on Young Stars*, July 25, 2013, Fundación Galileo Galilei, La Palma (Spagna)