# The 19th ADAS Workshop
# 30th Sept – 2nd Oct 2015
# INAF – Osservatorio Astrofisico di Catania, Sicily

## Wednesday 30th September

18:00 Evening gathering at NH Catania Centro hotel

## Thursday 1st October

**Opening general session**

| | | |
|---|---|---|
| 09:30 – 09:40 | A Lanzafame | Welcome on behalf of Osservatorio Astrofisico di Catania |

**Session 1: Astrophysics and fusion overview (Chair: M O'Mullane)**

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|---|---|---|
| 09:40 – 10:05 | D Spadaro | EUV spectroscopy in view of the Solar Orbiter and Solar Probe Plus space missions |
| 10:05 – 10:30 | H Summers | Features of atomic emission in fusion and astrophysical plasmas |

10:30 – 11:00 Coffee break

**Session 2: Talks from the laboratories and universities: Part I (Chair: K Behringer)**

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|---|---|---|
| 11:00 – 11:25 | A Lanzafame | Differential emission measure signatures of coronal heating |
| 11:25 – 11:50 | F Leone | Astrophysical Landé factors |
| 11:50 – 12:15 | A Giunta | Solar Orbiter SPICE: Composition studies |

12:15– 14:00 Lunch

**Session 3: Talks from the laboratories and universities: Part II (Chair: K Behringer)**

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|---|---|---|
| 14:00 – 14:25 | R Guirlet | TBC |
| 14:25 – 14:50 | A Foster | Atomic data needs for high resolution X-ray astronomy |
| 14:50 – 15:15 | M Y Song | TBC |

15:15– 15:45 Coffee break

**Session 4: Integrating and evaluating atomic data for key elements (Chair: R Guirlet)**

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|---|---|---|
| 15:45 – 16:10 | T Pütterich | A consistent set of atomic data for various elements in a fusion reactor |
| 16:10 – 16:35 | S Henderson | Uncertainty of medium-weight and heavy element line power coefficients |

**Session 5: Fundamental data for complex species: Part I (Chair: M O'Mullane)**

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|---|---|---|
| 16:35 – 17:00 | M Bautista | Neutral and singly ionised iron |
| 17:00 – 17:25 | K Aggarwal | Energy levels and radiative rates for transitions in Cr-like Co IV and Ni V |
| 17:25 – 17:50 | L Fernandez | Validity of the ICFT *R*-matrix method |

**18:00 – 19:00 ADAS steering committee meeting**

19:30 Dinner

## Friday 2nd October

**Session 6: Molecular data and modelling for astrophysics and fusion (Chair: H Summers)**

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|---|---|---|
| 09:30 – 09:50 | A Lanzafame | TBC |
| 09:50 – 10:15 | K Behringer | Basic programs for C2 and N2 band spectra simulation |
| 10:15 – 10:40 | D Borodin | An updated modelling of Be and BeD spectroscopy at JET ILW |

10:40 – 11:10 Coffee break

**Session 7: Fundamental data for complex species: Part II (Chair: M O'Mullane)**

| | | |
|---|---|---|
| 11:10 – 11:35 | S Preval | The Tungsten Project: Partial and Total Dielectronic/Radiative Recombination Rate Coefficients for $W^{74+}$ to $W^{56+}$ |
| 11:35 – 11:45 | M Bluteau | Collision data and population modelling for $W^{44+}$: Dirac *R*-Matrix and non close-coupling electron impact calculations |
| 11:45 – 12:10 | C Ramsbottom | A selection of atomic collision calculations from QUB |
| 12:10 – 12:20 | M Turkington | The electron-impact excitation of $W^{63+}$ |

12:20 – 14:00 Lunch

**Session 8: High precision GCR modelling (Chair: A Lanzafame)**

| | | |
|---|---|---|
| 14:00 – 14:25 | A Giunta | Overview of GCR: Moving towards Fe and enabling transient modelling |
| 14:25 – 14:50 | M Bluteau | Ion-impact excitation data for high accuracy GCR: improvements for the semi-classical, impact parameter approach |
| 14:50 – 15:15 | M O'Mullane | Advanced spectral fitting with GCR data |
| 15:15 – 16:00 | M O'Mullane | ADAS matters |