# Meeting Schedule
## The 2016 R-Matrix Workshop on Methods and Applications
### June 27, 2016—July 1, 2016
### Inn & Spa at Loretto
### Santa Fe, New Mexico USA

*All talks, breakfast and breaks will take place in the **Zuni Ballroom** room, Inn & Spa at Loretto. Lunches are outside in the **Garden**.*

| Day/Time | Speaker/ *Moderator* | Title |
|---|---|---|
| **Sunday** | | |
| 17:00—19:00 | | Registration |
| **Monday** | | |
| 07:00—08:30 | | Breakfast |
| 08:00—09:00 | | Registration |
| 09:00—09:30 | deBoer & Paris | Welcome |
| 09:30—10:30 | Hale | Reflections on the History of R-Matrix Theory and its Application—Light Nuclear Reactions |
| 10:30—11:00 | | Break |
| 11:00—12:00 | Thompson | Introduction to R-matrix theory |
| 12:30—14:00 | | Lunch |
| 14:00—15:00 | Thompson | Introduction to R-matrix theory (cont.) |
| 15:00—15:30 | | Break |
| 15:30—16:00 | Arbanas | SAMMY: An R-matrix Bayesian Nuclear Data Evaluation Code |
| 16:00—16:30 | Paris | R-matrix Methods & Applications with EDA |
| 16:30—18:00 | deBoer | AZURE2: Tutorial |
| 18:30—20:00 | | Reception (Garden) |
| **Tuesday** | | |
| 07:00—08:30 | | Breakfast |
| 08:30—09:00 | Pigni | Reich-Moore R-matrix parameters for n+$^{16}$O |
| 09:00—09:30 | Lauer | Study of states in $^{38}$Ca that are important for the $^{34}$Ar($\alpha$,p)$^{37}$K reaction rate through $^{37}$K+p elastic scattering |
| 09:30—10:00 | Dell'Aquila | Analysis of $^{13}$C excited states above the $\alpha$-threshold by R-matrix analysis of $\alpha$ +$^{9}$Be elastic and inelastic scattering |
| 10:00—10:45 | *Thompson* | Discussion/break: R-matrix analyses of scattering |
| 10:45—11:15 | Connolly | Commissioning the SONIK (Scattering of Nuclei in Inverse Kinematics) scattering chamber |

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| 11:15—11:45 | Ahn | Study of O-14 through resonant alpha scattering |
| 11:45—12:30 | *Arbanas* | Discussion: R-matrix analyses of scattering (cont.) |
| 12:30—14:00 | | Lunch |
| 14:00—14:30 | Lynn | R-matrix theory in the analysis of fission cross-sections |
| 14:30—15:00 | Kopecky | Analysis of experimental data and uncertainty evaluation |
| 15:00—15:45 | *deBoer* | Discussion/break: Neutron induced fission on heavy nuclei |
| 15:45—16:15 | Strieder | Underground Nuclear Astrophysics |
| 16:15—16:45 | Riley | R-matrix analysis and indirect measurement of $^{19}$Ne states relevant—novae explosions |
| 16:45—17:15 | Wagner | New data on $^{14}$N$(p,\gamma)^{15}$O at 0.4—1.4 MeV for improved R-Matrix fits |
| 17:15—18:00 | *Brune* | Discussion: R-matrix in Nuclear Astrophysics |
| 19:00—21:00 | | Banquet dinner (Garden) |
| **Wednesday** | | |
| 07:00—08:30 | | Breakfast |
| 08:30—09:00 | Fynbo | R-matrix for beta-decay and three-body decays |
| 09:00—09:30 | Sayre | R-matrix analysis of the $^{3}$H$(t,2n)$ neutron spectrum produced by inertial confinement fusion experiments |
| 09:30—10:00 | Forrest | Neutron-Induced Breakup Reactions Using 100-ps Pulses from Direct-Drive D-T Implosions on OMEGA |
| 10:00—10:45 | *Hale* | Discussion/break: Three-body break-up in light systems |
| 10:45—11:15 | Neudecker | Estimating experimental covariances... and the uncertainties within |
| 11:15—11:45 | Leeb | Consideration of model defects associated with R-matrix based evaluations |
| 11:45—12:30 | *White* | Discussion: R-matrix uncertainty quantification and covariance |
| 12:30—14:00 | | Lunch |
| 14:00—14:30 | Freer | Cluster structures and what we can learn from resonant scattering |
| 14:30—15:00 | Brune | Overview of $^{12}$C$(\alpha,\gamma)^{16}$O |
| 15:00—15:30 | Gai | Can R-Matrix Results be More Accurate Than the Data Itself?; The case of $^{12}$C$(\alpha,\gamma)$ |
| 15:30—16:00 | Gialenella | Error analysis in extrapolations |
| 16:00—16:45 | *Paris* | Discussion: $^{12}$C$(\alpha,\gamma)$ |

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| **Thursday** | | |
| 07:00—08:30 | | Breakfast |

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| 08:30—09:00 | Srdinko | R-matrix approach based on hybrid representation |
| 09:00—09:30 | Mukham-edzhanov | R matrix for Trojan Horse method as indirect technique in nuclear astrophysics |
| 09:30—10:00 | Dohet-Eraly | Resonance and virtual states from a calculable R-matrix approach |
| 10:00—10:45 | *Kawano* | Discussion/break: Theory advances in R-matrix methods |
| 10:45—11:15 | Nollett | Linking *ab initio* models, phenomenology, and data |
| 11:15—11:45 | Quaglioni | R-matrix theory and *ab initio* calculations of light-nucleus reactions |
| 11:45—12:30 | *Leeb* | Discussion: *Ab initio* and phenomenology |
| 12:30—14:00 | | Lunch |
| 14:00—14:30 | LaCognata | Experimental application of the generalized R-matrix approach ($^{19}$F(p,$\alpha$) and $^{13}$C($\alpha$,n)) |
| 14:30—15:00 | deBoer & Febbraro | New measurements of excited state cross sections of $^{13}$C($\alpha$,n) |
| 15:00—15:30 | Lee | Determining the $^{16}$O(n,$\alpha$) reaction cross section via a forward-propagating analysis |
| 15:30—16:15 | *Quaglioni* | Discussion/break: $^{13}$C($\alpha$,n) |
| 16:15—16:45 | Massimi | Spin parity determination of unbound states in $^{26}$Mg from neutron spectroscopy |
| 16:45—17:15 | Sobes | Calculated Resonance Properties from the New Resolved Resonance Region Evaluations of Copper |
| 17:15—18:00 | *Lee* | Discussion: Neutron induced reactions |
| **Friday** | | |
| 07:00—08:30 | | Breakfast |
| 08:30—09:00 | Sobes | Casting R-matrix into S-matrix pole expansion for efficient Doppler broadening in neutron transport applications |
| 09:00—09:30 | Massey | Constraining R-Matrix Fits with the Shell Model |
| 09:30—10:00 | Gurbich | Evaluation of the differential cross-sections for Ion Beam Analysis |
| 10:00—10:45 | *Nollett* | Discussion/break: Potential models and R-matrix |
| 10:45—11:15 | Kunieda | An R-matrix code AMUR for the cross-section evaluation and preliminary approaches to open issues in the analysis |
| 11:15—12:00 | *Streider* | Discussion: R-matrix codes |
| 12:00—12:05 | deBoer | Closing |