

## Poster session I: Teaching resources

- |      |                    |  |
|------|--------------------|--|
| 1.01 | Markus Pössel      | Relative motion in general relativity: The case of cosmic expansion  |
| 1.02 | Lorenzo Galante    | From the EP to the curved space  |
| 1.03 | Hans-Peter Nollert | Teaching General Relativity using ruler and calculator: An interactive workshop based on the Shapiro effect      |
| 1.04 | Richard Toellner   | The Milne universe   |
| 1.05 | Matěj Ryston       | Embedding diagrams and other hands-on activities for teaching curvature  |
| 1.06 | Efstratios Kapotis | Educational experimentation and simulations for teaching General Relativity. Implementation and Evaluation       |
| 1.07 | Sven Weissenborn   | Virtual sector models (ViSeMo)   |
| 1.08 | Stuart Farmer      | Developing a teacher professional learning workshop on General Relativity  |
| 1.09 | Michael Schultz    | Teaching 2nd year undergraduates how to derive and study the geodesic equations for the Schwarzschild black hole |
| 1.10 | Aroonkumar Beesham | Teaching of general relativity at the University of Zululand   |
| 1.11 | Eugene Kogan       | Derivation of Schwarzschild metrics using differential forms   |
| 1.12 | Yurii Dumin        | A quasi-newtonian basis for studying the relativistic cosmology  |
| 1.13 | Floor Kamphorst    | Event diagrams – supporting student reasoning in space-time  |
| 1.14 | Essam Zoabi        | Simple mechanical model for explaining the increase of the relativistic mass                                     |
| 1.15 | Roberto Salgado    | Relativity on rotated graph paper  |

## Poster session II: Design, evaluation, programs

- |      |   |  |
|------|---|--|
| 2.01 | Shachar Boubilil  | Analysis and reflection on the teaching of Einstein's theory of gravity in Quebec  |
| 2.02 | Stanley Delhaye   | Design of a prototype for teaching general relativity to upper secondary students  |
| 2.03 | Ian Lawrence  | Light cones for reasoning about space and time   |
| 2.04 | Li Ju   | Gravitational waves: A vehicle for the integrated teaching of Einsteinian physics  |
| 2.05 | Chris North   | Increasing the relevance of high school studies to cutting edge gravitational wave research                                |
| 2.06 | Rahul Choudhary   | Integrating Einstein-first resources with international collaboration on Einsteinian physics                               |
| 2.07 | Gary Foster   | Teaching Einsteinian science at Guildford Grammar  |
| 2.08 | Richard Meagher   | Do modern high school students want to study modern physics?   |
| 2.09 | Fadeel Joubran  | Comparison between Israeli and Hungarian physics high school teachers' attitudes towards GR assimilation in the curriculum |
| 2.10 | Stephan Preiß   | A comparison between standard courses about general relativity and a model-based approach                                  |
| 2.11 | Thomas Reiber   | Flying through a Kerr black hole – Visualizations  |
| 2.12 | Pierre Martin-Dussaud   | L'Agape: Renewing conferences format   |
| 2.13 | Amber Strunk  | Supporting general relativity curriculum through teacher professional development  |
| 2.14 | Magdalena Kersting (presentation)<br>Jacqueline Bondell/<br>Mark Myers<br>(authors) | Bringing the Virtual Universe Into the STEM Classroom  |