Supercomputing Challenge Judging Criteria (Finalists)

Evaluation Criterion	How to Score (0 to 10 points)
Problem Statement (Weight 15%) ❑ Was a scientific or mathematical problem clearly defined? ❑ Was the problem clearly thought out and well researched? ❑ Was appropriate background information presented to understand the context of the problem? ❑ Is the proposed solution clever and well thought out? ❑ Is it a complex problem or could it be solved on a calculator or with off-the-shelf applications? ❑ Was the problem appropriately simplified?	0 – problem not defined 5 – problem clearly defined, but lacks background or simplification or is not complex 10 – complex problem clearly defined with appropriate background and simplification
Computational, Mathematical and/or Agent-Based Model (Weight 20%) ❑ Is the computational model appropriate for the project? Are the assumptions/limitations of the model documented? Does the model require multiple iterations or samples to identify an optimum solution or range of solutions? ❑ Is the mathematical model accurate (or a reasonable approximation)? Is the model correctly applied to the problem and its solution? Does the team understand the model, its equations, and variables? ❑ Is the agent-based model a reasonable representation of the problem? Does the model correspond to a well-known mathematical model? If so, was the mathematical model used to validate the agent-based model? Does the model provide insight into the problem? Can anything be learned from the model? Does the team understand the agent's states and behaviors, and the role of the environment? In particular, does the team understand how the agents affect each other and/or modify their environment?	0 – no model 5 – basic understanding of model(s), but unable to answer questions; only one model 10 – thorough understanding of both models (computational and mathematical or computational and agent-based)
Code (Weight 10%) ❑ Is the code original or borrowed? (Note: no penalty for using borrowed code.) ❑ If the code was borrowed: Is the originator acknowledged? Does the team understand the borrowed code? Were any modifications made? Why? ❑ Extra points for: original code or combination of original code with borrowed code; real-time demo; graphical display of results; parallel computing; multiple languages; elegance.	0 – none 5 – clean, documented code 10 – clean, documented code with extras
Results & Conclusions (Weight 15%) ❑ Are the results reasonable and verifiable? ❑ Were logical conclusions drawn from the results? ❑ Do the conclusions relate to the stated problem?	0 – no results or conclusions 5 – results, but conclusions are incomplete or illogical 10 – reasonable results with logical conclusions that relate to the stated problem
Presentation (Weight 10%) ❑ Are the project's goals, objectives, and expected and actual results clearly articulated? ❑ Is the presentation professional? Is the layout logical and well organized? Was there good contrast between text and background? Were the slides too busy? Is the presentation free of spelling and grammatical errors? Were questions handled gracefully?	0 – presentation does not support the project, is incomplete, or is not visually pleasing 5 – a good presentation with some minor problems 10 – a professional presentation
Teamwork (Weight 10%) ❑ Do all members of the team understand the problem and conclusions? ❑ Was the work divided among the team members to take advantage of each member's skills? (Note: not all members need to contribute equally in all phases of the project.) ❑ Did the team consider differences of opinion and come to an amiable solution?	0 – a dysfunctional team 5 – at least 50% of team participated or only one participant 10 – 100% of team participated, team dynamics were excellent
Integrity (Weight 10%) ❑ Was the work original (i.e., not plagiarized)? ❑ Were references cited and proper attribution given? ❑ Were graphics, figures, and equations cited and proper attribution given?	0 – evidence of plagiarism 5 – no plagiarism, but attribution not complete 10 – no plagiarism, complete and accurate attribution, complete and proper citing of references
Level of Effort (Weight 10%) ❑ Was significant research performed? Was at least one print source used? ❑ Is this a first year project? Was a full year of work done? ❑ Is this a continuation of a previous year's work? Was the previous work acknowledged and compared to the new work? Was the new work a significant extension or merely a refinement of the previous work?	0 – less than a full year's effort 5 – a full year's effort, but research was lacking 10 – a full year's effort with significant research and at least one print source

Supercomputing Challenge Project Evaluation (Finalists)

Team #: _____ **Judge:** _____

Comments	Score (0 to 10)
Problem Statement (Weight 15%)	
Computational, Mathematical and/or Agent-Based Model (Weight 20%)	
Code (Weight 10%)	
Results & Conclusions (Weight 15%)	
Presentation (Weight 10%)	
Teamwork (Weight 10%)	
Integrity (Weight 10%)	
Level of Effort (Weight 10%)	

Note: A copy of the completed form will be provided to each team.