

Thermoeconomic Analysis Toolbox

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TaesLab Utility Funtions

Import/Export Functions

| Function | Description |
|---------------------------|--|
| exportCSV | Save a cell array as a CSV file. |
| exportMAT | Save a cTaesLab object as a MAT file |
| importCSV | Read a CSV file and return its contents as a cell array. |
| importMAT | Create a cTaesLab object from a previously saved MAT file. |

Validation Functions

| Function | Description |
|-------------------------------------|---|
| isFilename | Check if file name is valid for read/write mode. |
| isIndex | Check if a number belongs to an index range. |
| isInteger | Check if the value is an integer number. |
| isMatlab | Identifies if the function has been executed in MATLAB. |
| isOctave | Identifies if the function has been executed in Octave. |
| isObject | Check if a cTaesLab object belongs to a specific class. |
| isValid | Check if it is a valid cTaesLab object. |
| isSquareMatrix | Check if the matrix is square. |
| isNonNegativeMatrix | Check if the matrix is non-negative. |
| isNonSingularMatrix | Check if the matrix I-A is non-singular. |

Matrix Operations

| Function | Description |
|---|--|
| divideCol | Divide each column of matrix A by the corresponding element of vector x. |
| divideRow | Divide each row of matrix A by the corresponding element of vector x. |
| scaleCol | Multiplies each column of matrix A by the corresponding element of vector x. |
| scaleRow | Multiplies each row of matrix A by the corresponding element of vector x. |
| vDivide | Element-wise right division. Overload operator rdivide when 0/0. |
| zerotol | Sets to zero the matrix values near to zero. |
| logicalMatrix | Convert a real matrix to logical with zero tolerance. |
| similarDemandMatrix | Compute the demand-driven adjacency matrix from the resource-driven matrix. |
| similarDemandOperator | Compute the demand-driven operator from the resource-driven operator. |
| similarResourceMatrix | Compute the resource-driven adjacency matrix from the demand-driven matrix. |
| similarResourceOperator | Compute the resource-driven operator from the demand-drive operator. |
| transitiveClosure | Compute the transitive closure of a digraph. |
| inverseMatrixOperator | Calculate the inverse of the M-Matrix I-A |

Miscellaneous Functions

| Function | Description |
|------------------------------|---|
| fdisplay | Display a matrix A using C-like formatting. |
| buildMessage | Build error messages for TaesLab functions |