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surface shape; 3.2.6. Alterations; 3.2.7. Properties of the projection; 3.3. Projection of the sphere on cylinders; 3.3.1. Central projection on the cylinder; 3.3.2. Lambert equal-area projection; 3.3.3. Mercator projection; 3.4. Projection on the plane; 3.4.1. Parallel projection; 3.4.2. Central projection; 3.4.3. Gnomonic projection; 3.4.4. Stereographic projection; 3.4.5. Stereography versus Mercator projection; 3.4.6. Postel projection; 3.4.7. Lambert projection; 3.4.8. Direct computation of azimuthal projections 3.5. Pseudocylindrical projections 3.5.1. Coordinates transformation from direct to transversal aspect; 3.5.2. Hammer projection; 3.5.3. Mollweide projection, another pseudo-cylindrical projection; 3.6. Hemisphere tiling; 3.6.1. Presentation of the method; 3.6.2. Exact fulfillment of the aspect ratio constraint; 3.6.3. Approximate fulfillment of the aspect ratio constraint; 3.6.4. Equal-area cells and constant aspect ratio on the hemisphere; 3.6.5. Conclusion; Chapter 4. Geometry And Physics: Radiative Exchanges; 4.1. Geometric wave propagation; 4.2. The radiosity equation 4.2.1. Surface sources 4.2.2. Lambert diffuse reflection; 4.2.3. Interactions between surfaces; 4.2.4. Discretization of the radiosity equation; 4.2.5. Properties of the radiosity matrix; 4.3. View factors; 4.4. Ray tracing; 4.4.1. Mesh quality; 4.4.2. Solid angle or view factor; 4.5. Specular reflection of light and sound; Conclusion; Bibliography; Index

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## Sommario/riassunto

Reconciliation of Geometry and Perception in Radiation Physics approaches the topic of projective geometry as it applies to radiation physics and attempts to negate its negative reputation. With an original outlook and transversal approach, the book emphasizes common geometric properties and their potential transposition between domains. After defining both radiation and geometric properties, authors Benoit and Pierre Beckers explain the necessity of reconciling geometry and perception in fields like architectural and urban physics, which are notable for the regularity of their forms an

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